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Navigating the 4th Industrial Revolution with a Sustainable Development Mindset

International Conference on Business, Accounting, Finance and Economics 2020

E-Proceeding



International Conference on Business, Accounting, Finance and Economics 2020

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Message from UTAR President

Welcome to the 8th International Conference on Business, Accounting, Finance and Economics (BAFE) 2020. It is also our first time organising this BAFE 2020 as a virtual conference due to the Covid-19 pandemic. On behalf of Universiti Tunku Abdul Rahman (UTAR), it is truly an honour to welcome all the erudite speakers, presenters and participants to this conference.

I would like to extend my appreciation to the conference's keynote speakers, Assoc Prof Dr Sean James Sands from Swinburne University of Technology and Prof Dr Lai Yew Wah from UTAR for sharing your research insights and knowledge with the participants. I would also like to thank all participants of BAFE 2020 for your time and participation in this conference.

Having organised this conference since 2013 by Faculty of Business and Finance (FBF); Centre for Accounting, Banking and Finance; Centre for Business and Management; and Centre for Economic Studies of Kampar Campus, this year's eighth conference will continue to bring together researchers to present updated works that will contribute to new theoretical, methodological and empirical knowledge on all aspects of business management, accounting, finance and economics. I am very pleased to see the continuous success of this international conference.

With the theme 'Navigating the 4th Industrial Revolution with a Sustainable Development Mindset', BAFE 2020 will further promote research development, linkages and knowledge mobilisation among disciplines and across institutions, sectors, and regions. It will also be an intellectual platform for scholars and researchers to exchange ideas and information on critical research issues.

I was informed that more than 49 papers, including six international papers were received for the conference this year with participation for the first time from India, China, Taiwan and Indonesia. We are very pleased to welcome them and look forward to their input and continued participation in the years ahead.

I hope the conference will stimulate profound discussions to bring forward ideas for progress and improvements for further research in the various areas of business, accounting, finance and economics. I am also impressed to see the conference making progress over the years as it truly echoes UTAR's commitment to engage in research and practice at international standards which will enable the widest variety of people to develop their capabilities in shaping the future of the society and nation.

I hope everyone will have an engaging time sharing knowledge and immersing in interactive discussions.

Lastly, I would like to thank the organisers, speakers, sponsors and participants for joining hands with us for making this year's BAFE another round of success.

Thank you.

Ir. Prof. Dr. Ewe Hong Tat



Message from Dean, Faculty of Business and Finance (FBF)

The Faculty of Business and Finance (FBF) would like to welcome you to The 8th International Conference on Business, Accounting, Finance and Economics (BAFE) 2020.

The world economy is experiencing more challenging times with market uncertainties especially in the midst of the COVID-19 pandemic outbreak. In environment front, the environment problems the human kind facing is climate change. Technology wise, the forth industry revolution is changing the business landscape and operations. Digital financial services industry is undergoing explosive development. The rise of finance technology (FinTech) is redefining the financial services.

These processes are clearly interrelated, for globalisation would make little sense if it did not involve consideration of global digital interchanges and environmental problems. These illustrate just three of the many significant challenges to the society in defining the things which should be studied. In the Conference, I hope the presenters and participants will learn how to manage uncertainties through sustainable development mindset.

I was told that the Conferences received encouraging submissions from ASEAN, East Asian, South Asian and African countries across regions, which were reviewed and selected for presentation and publication. The Conference is a great platform to share ideas, views, findings and research outcomes and to assimilate the business, accounting, finance and economics studies. I hope you will find the Conference to be useful and that the Conference can provide an excellent platform for academic deliberation. Our field is enriched by the dialogue among scholars from around the world. I hope this will be a memorable, valuable, and enjoyable experience.

I would like to extend my appreciation to the Organising Chairman Dr. Choong Yuen Onn, Organising Committee members and reviewers for their great dedication in making this Conference a reality. Your high competence, enthusiasm, time and expertise knowledge, enabled us to prepare the high-quality programme. I believe that all presenters and participants will benefit from the proceedings and also find it stimulating in this process. I would like to wish you success in your technical presentations.

My special thanks to the Keynote Speakers, Adjunct Professor Dr. Lai Yew Wah and Associate Professor Dr. Sean James Sands (Swinburne University of Technology) for your valuable sharing, and sponsors who have granted your support to the conference.

Once again, I hope all of you will have effective and fruitful discussions. Thank you.

Assistant Professor Dr. Au Yong Hui Nee
Dean, Faculty of Business and Finance
Universiti Tunku Abdul Rahman



Message from the Conference Chairperson, International Conference on BAFE 2020

On behalf of the organizing committee, I am honored and delighted to welcome you to the 8th International Conference on Business, Accounting, Finance and Economics (BAFE) 2020. With the post of COVID-19 pandemic, this year BAFE Conference will be held virtually and organized by UTAR's Faculty of Business and Finance, together with our Faculty's research centres namely: Centre for Accounting, Banking and Finance (CABF), Centre for Business Management (CBM), and Centre for Economic Studies (CES).

The theme for this year is "Navigating the 4th Industrial Revolution with a Sustainable Development Mindset" as there is a number of innovative technologies that humankind can only dream of in the last century has now become a reality. This conference aims to bring together researchers to present up-to-date works that contribute to new theoretical, methodological and empirical knowledge. The conference invites theoretical and empirical papers on ALL aspects of business management, accounting, finance, and economics.

The outbreak of coronavirus disease (COVID-19) has created a global health crisis that has had a deep impact on the new way we perceive our world and our everyday lives. However, this would not discourage us to share our research findings with others. BAFE 2020 Virtual conference will be the new norm gathering platform for all researchers from Malaysia and abroad to present and share new research findings and ideas. Apart from this, this will be a regular form of interactions among researchers to establish possible research collaborations. I believe that every one of us will gain new experience by attending a virtual conference.

We look forward to meeting you virtually. Thank you.

Best regards and wishes,

Assistant Professor Dr. Choong Yuen Onn
Chairperson of BAFE 2020
Deputy Dean of Research & Development and Postgraduate Programme
Faculty of Business and Finance
Universiti Tunku Abdul Rahman

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BAFE006:
**FACTORS THAT INFLUENCE THE E-WALLET ADOPTION AMONG
UNDERGRADUATES DURING COVID-19 PERIOD**

Jiun Hian Ng^a, Seng Chee Lim^b, Seng Poh Lim^c, Chen Kang Lee^d, Joi San Tan^e, Jit Theam Lim^f

Faculty of Information and Communication Technology, Universiti Tunku Abdul Rahman,
Jalan University Bandar Barat, 31900 Kampar Perak, Malaysia

Emails: ^ahian966@1utar.my; ^bsclim@utar.edu.my; ^climsp@utar.edu.my; ^dlckang@utar.edu.my;
^ejstan@utar.edu.my; ^flimjt@utar.edu.my

Abstract

The sudden outbreak of pandemic COVID-19 has brought enormous impact to the world's economy. Most of the businesses are forced to close down temporarily due to the Movement Control Order (MCO) imposed by the government of Malaysia. It is to control the spread of the Coronavirus which infected through respiratory droplets by closed contact between individuals. As concerned, the adoption of E-wallet might be affected as the money transactions are uncertain due to the current phenomenon. Hence, the purpose of this research is to study the intention of E-wallet application among the undergraduates in Malaysia during the COVID-19 period. The target audiences of research are focused on the current Universiti Tunku Abdul Rahman (UTAR) students. The research outcomes will not represent the overall view of E-wallet adoption among all undergraduate students in Malaysia. Various factors are examined on the acceptance of E-wallet application on undergraduates in previous works. In this research, five factors such as attitude, subjective norms, perceived ease of use, perceived usefulness, and perceived security are integrated with Technology Acceptance Model (TAM) in order to explore the relationship between E-wallet adoption among undergraduates in Malaysia. Mix methods, deductive and semi-structured interview are implemented as the methodologies to conduct the research. In additions, this research will also recommend some advices on the E-wallet's user experience design (UX) and user interface design (UI) for mobile application platform.

Keyword: e-wallet, adoption, COVID-19, impact, undergraduates

INTRODUCTION

Corona-virus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. On 9 March 2020, World Health Organization (WHO) released a statement recommending that people turn to cashless transactions to fight the spread of Covid-19. The number of cashless transactions is raising as the pandemic COVID-19 limits the use of physical cash (Saigal, 2020). Peoples are becoming more cautious about shopping in public places, and since many people are working from home, it is causing changes to how they shop and how they make payments.

An electronic wallet (E-wallet) sometimes called as a digital wallet, can be defined as a virtual cashless service which can replace cash. E-wallet was produced for convenience and for people to make quick transactions thereby discouraging people to make use of cash. E-wallet needs to be linked with the individual's bank account to make payments. For making purchases, the person just needs to scan the Quick Response (QR) codes provided by the seller and the transaction can be done there and then in a few seconds. During COVID-19 period, E-wallet has become an upcoming way of purchasing goods and services without any physical movement of cash.

There are varieties of E-wallet applications in Malaysia that are famous for the consumers to choose such as Touch 'n Go Digital, WeChat Pay, GrabPay, Boost, BigPay, and AEON Wallet (Oh, 2018). Each of these E-wallet applications has their own competitive advantages. For example, WeChat Pay allows the user to send "red packet" (a.k.a angpow), Boost have introduce a cash-back

reward called shake rewards for each transaction made and also Touch 'n Go Digital allow the user to top up touch n go card with their E-wallet application.

On 15 January 2020, government has organized a program which is the "e-Tunai rakyat" program. The purpose of this program is to encourage Malaysian to increase their adoption of E-wallet by sending out RM30 digital money to the user's E-wallet who has been qualified (TheStar, 2020). By the encouragement from government, the more people adopt digital payments and more shops and merchants accept them, then more people will decide to adopt E-wallet and protect themselves during COVID-19 period.

A report from Bank Negara Malaysia (BNM) has shown that people using mobile phones to make payment could be a trend for people to make payments. Consumers in Malaysia are getting more familiar with mobile payments. The number of electronic banking (e-banking) accounts in 2011 had risen sharply from 1.6 million to 11.5 million in 2018 (Lee & Peng Tsu, 2018). Within the same report from BNM, the adoption level of E-wallet has significantly increased from 0.8 million subscribers in 2017 to 3.4 million subscribers at the end of June 2018 (Lee & Peng Tsu, 2018). This could show that the people in Malaysia are starting to accept this new technology and are willing to try it. From news on New Straits Times has show that the usage of E-wallet has been increasing during COVID-19 period. There are 30 per cent more small, independent restaurants and hawkers opened their doors to deliver food and 25 per cent increase on people using Grabfood to order food (Emmanuel, 2020). It can show that during COVID-19 period there are improvement on electronic commerce (e-commerce) and changes on how people purchase food.

According to a study from Peter Thornton, countries such as Mexico, India and Thailand rely more on using cash to make payment whereas in China, it's very common to see their people using E-wallet such as Alipay to make payment instead of using cash (Thornton, 2018). The *Chief Executive Officer* of Boost Chris Tiffin has state that Malaysia has the potential to become a cashless society by encouraging the adoption of E-wallet and changing consumers' behaviour for cashless transactions (Nair, 2018). Therefore, this research is likely to conduct a study on the impact of COVID-19 and intention to use E-wallet among the undergraduates. The objectives are to determine the level of intention to use E-wallet and explore the factors that influence the intention of using E-wallet among the undergraduates in Malaysia during COVID-19.

The organization of this paper is structured as follows. Literature review is demonstrated in the second section. It is followed by the discussion on Information System Theory. Methodology is explained in the fourth section and discussions with conclusion are elaborated in the last section.

LITERATURE REVIEW

As the COVID-19 public health emergency continues to unfold, the economic and human impact of this virus is significant. The pandemic of COVID-19 has changing the way how consumers shop. A survey from Department of Statistics Malaysia has examined the effect of COVID-19 on economic and individual. The result has shows that there are significant changes in spending habits before and during COVID-19. Before COVID-19, most of the respondents will frequently go to the grocery stores to purchase raw material for cooking but during COVID-19, most of the respondents will only sometimes or seldom go to the grocery stores to purchase raw material for cooking (Tan, 2020).

A survey from Ipsos Malaysia has shown that 48% of respondents say they buy things online more now compared to one month ago, while only about 32% saying that they buy less. Another changes founded on the survey is that there are an increasing order food or groceries via an app and deliver to home (Kong, 2020). The changes in buying behaviour shows that Malaysian are starting to adapt new living style shift toward online platform due to pandemic of COVID-19. There are plenty of benefits to going cashless. Digital payments are convenient to use especially in current circumstances. Going cashless through digital payments reduces the manual processing time and **costs related to handling cash**. This provides a fast and efficient means of making and receiving payments. There are also some of the limitations on E-wallet. During COVID-19 period, News about E-wallet scamming had published on Seehua, the scammer pretend to be the worker of Boost and request the victims to click on the link to receive RM8888. Because of this issue, Boost has turn off the bank transfer function to prevent similar cases will be happen (Seehua, 2020).

The Federal Reserve's national Cash Product Office (CPO) has collected data from the Diary of Consumer Payment Choice to understand the consumer behaviour on making payment. From the finding of CPO can know that human attitude toward E-wallet are not enthusiastic and the cash payment methods are still a trend for people to make payment (Kumar & O'Brien, 2019). According to a survey from Sharma in 2018, the result indicated that the main reasons that cause people not to use E-wallet as modes of payment are the tendency of people not moving out of the comfort zone of using traditional modes of payments. (Sharma, 2018). According to (Doan, 2014) research, he found that one of the factors that cause consumer lack of using E-wallet is because paying by mobile device does not have much attraction toward them. According to an article written by Steven Bertoni on Forbes, Starbucks has a successful mobile wallet application because of its loyalty program. Starbucks designed the loyalty program excellently that enabled its customers experiencing all the available marketing campaigns directly from their mobile phones, where they are offering instant discounts for free coffee or food by linking to Starbucks' hot reward program (Bertoni, 2014).

A study from (David, 2009) had defined subjective norms as one's evaluation of what important others think one should do or the expectations from other people. A study from Wan has found that subjective norm tends to be an important factor during the introductory stages of adoption when attracting people to use a new technology (Wan, 2010). A research survey has been distributed to the public about intention to use mobile payment service. The result has indicated that encouragement from family members will let the people tend to use E-wallet followed by the influence of government and social media (Phuah, Ting, & Kelly, 2018). A study has found that subjective norms will significantly affect the intention of people to continue use of a mobile payment. The result from the research has given a suggestion that mobile payment providers can encourage consumers to influence other users through word of mouth (Zhu, Lan, & Chang, 2017). Therefore, this leads us to believe that subjective norms will be a factor that affects the adoption of E-wallet.

Perceived ease of use is an important factor for user acceptance toward new technology. Davis has stated that perceived ease of use as the extent to which an individual trusts that by using a technology, he or she will be free from effort (Davis, 1989). Amin (2009) had made a research on E-wallet acceptance toward consumers in Sabah. The result of the research has shown that design usefulness and easy to use E-wallet by cultivating favourable beliefs of usefulness and ease of use in the customers regarding E-wallet services. Another similar research from (R. Pachpande & A. Kamble, 2018) about E-wallet awareness and its usage has got a result that major factors could increase consumer adoption are convenience in ease of use, quick online transaction and usefulness of E-wallet.

Perceived usefulness refers to the degree to which an individual trusts that by using a specific technology, it will enhance the job performance of user (Davis, 1989). Most of the people decided to use the digital payment system because of the usefulness and convenience they are attaining. Debit and credit cards are the most preferred methods of digital payments followed by E-wallets and net-banking. (Kulkarni & Taj, 2019) A group of researchers has investigated the relationship between social influence and adoption of E-wallet among undergraduates. From the research, it found out that convenience, social influence and speed has a significant relationship towards adoption of E-wallet. (Chern, Kong, Lee, Lim, & Ong, 2019).

According to a research from Mekovec has found that there is a significant relationship between perceived security and perceived privacy. If the web site provides security of the online transaction and personal data then the user will be less concerned about their privacy protection problem. When the users are satisfied with security protection then they will be satisfied with overall service quality (Mekovec & Hutinski, 2012). Rana (2017) had made a study of preference towards the E-wallet among the undergraduates in India and found that security problems are the main concern of the undergraduates towards E-wallet. Besides that, privacy concerns and security issues also the reasons that affect the use of E-Wallet (Sharma, 2018). According to a research by (Madhu Chauhan, 2017), this researcher found that the most important issues that will reduce user trust on E-wallet will be security risk and privacy issues. The service provider should produce a problem free application for users or improve their service to become better for building the user trust adaption of the E-wallet application.

INFORMATION SYSTEMS THEORY

User acceptance to a new technology can be evaluated from many well-established theoretical models. There are several frameworks could used to explain the influence on users' acceptance toward new technologies which are commonly used in the theoretical model such as Theory Acceptance Model (TAM), Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB). TAM was used to explain that the usage of an information system depends on the user's belief and intention to use the system. There are two determinants of salient belief among information system which are perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989). TRA model is a widely studied model for new technology acceptance. In TRA model, the behaviour of an individual's adoption toward a new technology can be explained by their beliefs toward the behaviour that is determined by the individual's behaviour intention. The intention of TRA model could be determined by the individual's attitudes and influence of subjective norms towards the behaviour (Fishbein, Ajzen, & Flanders, 1975). In TPB model, an individual's behaviour among technology acceptance could be influenced by attitude, subjective norm and perceived behavioural control (Mat & Sentosa, 2008).

The research framework for this research will be implemented by using Theory Acceptance Model (TAM). Figure 1 shows the relationship between dependent and independent variables for the conceptual framework. The propositional statements are stated as follows:

P1: Attitude will have a positive relationship on the intention of undergraduates toward adoption of E-wallet during COVID-19 period.

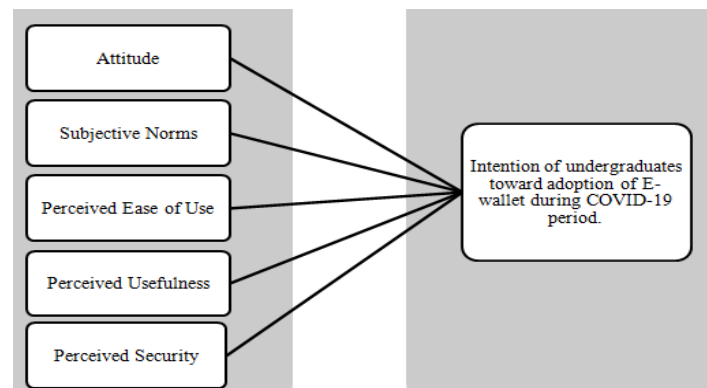
P2: Subjective Norms will have a positive relationship on the intention of undergraduates toward adoption of E-wallet during COVID-19 period.

P3: Perceived ease of use will have a positive relationship on the intention of undergraduates toward adoption of E-wallet during COVID-19 period.

P4: Perceived usefulness will have a positive relationship on the intention of undergraduates toward adoption of E-wallet during COVID-19 period.

P5: Perceived security will have a positive relationship on the intention of undergraduates toward adoption of E-wallet during COVID-19 period.

Figure 1: The proposed model for Factors Influencing the E-wallet Adoption among Undergraduates during COVID-19 period.



RESEARCH METHODOLOGY

For this study, Mix methods, hypothetico-deductive (HD) and semi-structured interview will be used as the methodologies. There are seven steps involved in the HD method of research stem from the building blocks. The details are stated as follows: First step, identifying the broad problem area in which main problem is occurring to do a research project. Second step will be defining the problem statement so that it could be the scientific research with definite aim and general objective of the research. Third step would be development of hypothesis which should be testable and falsifiable. Forth step, measuring the theoretical framework and if it not measurable then it should be qualitative. Fifth step, collection of data is based on quantitative and qualitative data. Sixth step, analysis of data is done to check if the hypotheses generated were supported. Last step will be interpreting data for finding out the meaning of the results (Sekaran, 2003).

Case Study

In this study, four undergraduates that are E-wallet users have been selected for the case study based on their education background and experience on using E-wallet. Case study research is a qualitative approach in which the investigator explores a case or cases through detailed, in-depth data collection involving multiple sources of information such as observations, interviews, and documents and reports a case description and case-based themes (Harrison, Birks, Franklin, & Mills, 2017). The result of interview from the respondent will be show on case study with word clouds to highlight important textual data points. The figure below is to highlight the overall important data points from the interview script of the respondents.

Figure 2: interview result from all respondent



Respondent 'A'

Figure 3: Result of respondent A



Respondent A is not a user of E-wallet before pandemic of COVID-19. During pandemic COVID-19, respondent A has become an E-wallet user because of the influence from family member. Respondent A is a user of Touch n Go E-wallet and GrabPay most of the time respondent A will purchase groceries and food using Grab. Based on opinion of respondent A, the reason that respondent A will start to use E-wallet is because of the influence from family member, experience of easy to use and convenience provide by E-wallet. For an example, when making payment on the groceries shop, E-wallet could reduce the process of taking out the money from wallet and make

Respondent D is a user of GrabPay and Touch n Go E-wallet. The factor that influence respondent D to adopt E-wallet is because of recommend from friend. Before pandemic of COVID-19, Respondent D will purchase groceries on physical shop. During pandemic of COVID-19 Respondent D will prefer purchase groceries from internet and reduce the chances of using food delivery application. Respondent D mentioned that it could reduce the chances of getting affection on the disease. Respondent D feels that E-wallet is not easy to use, for example, when register for Touch n Go E-wallet, user need to fill in a lot of information and account verification will take a long process. Respondent D has mentioned that the transaction of E-wallet will take longer time to process if the internet network is not stable enough. For example, respondent D wants to purchase bubble milk tea nearby the university with E-wallet because there is a discount when using E-wallet to make payment. When respondent D making payment, the E-wallet keep on showing transaction fail, at the end, respondent D decided to use cash to make payment. Using cash will be more flexible, but there is a disadvantage on cash because after making payment, the consumer needs to check back the balance from seller to prevent incorrect balance. In the opinion of respondent D, security of E-wallet will be more secure compared to cash because there may have chances of losing your wallet or stolen by others. Respondent D mentioned that government has encouraged people to download the E-wallet application but didn't teach the peoples how to use E-wallet. Respondent D thinks that government should not only put the effort on advertise E-wallet, government need to educate people how to use it to increase the adoption of E-wallet. Respondent D mentioned that there is a limitation of E-wallet which is the language, most of the E-wallet only got English language, it is not user friendly to the elders. Respondent D has provided a recommendation that E-wallet need to improve the user interface because most of the E-wallets has put a lot of effort in designing the main page but on the other pages were lacked of attraction. Besides, government and E-wallet service provider should educate the people how to use E-wallet especially for the elders. Lastly, Respondent D has concluded that ease of use is important for continuous using of E-wallet.

CONCLUSION AND DISCUSSION

The objective of this research is to study the intention of E-wallet application among the undergraduates in Malaysia during the COVID-19 period. Based on the literature review and conducted survey, the factors that will influence the undergraduates to use E-wallet is due to the attitude, subjective norms, security, ease of use and the usefulness from the E-wallet. From the interview conducted in this study and study from (Wan, 2010) can found that subjective norms are important factors when introducing the others to use a new technology. Based on the opinions from the respondents, most of the respondents were concerned about the security of E-wallet, due to the personal information and money inside the E-wallet. But actually, the E-wallet service provider has provided some functions to protect the E-wallet user such as pin number, password and also authentication before user making transaction, it would help to prevent or lower the chances for others to steal information or money from the E-wallet (TheStar, eWallet security: What users need to know, 2019). After conducting the semi-structure interview, attitude was found that less important in influencing the undergraduates to use an E-wallet. From the responses of the respondents, it can found that government has done a great job in promoting E-wallet during pandemic COVID-19, news from The Star has publish that government has implement an application that could help the Health Ministry quickly locate close contacts and take action in the event of a Covid-19 outbreak which is called as MySejahtera app, once the application is downloaded then RM50 would be credited to the person's E-wallet (Timbuong, 2020). This could help to increase adoption of E-wallet and help the government to take action during this period. The respondents have also recommended the service provider to improve their user interface such as implement more languages to the E-wallet since not all the people are familiar with English especially for the elders, so that it could engage the adoption of E-wallet in Malaysia.

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BAFE010:
FACTORS THAT INFLUENCE EMPLOYEE MOTIVATION
AT A GLOVE MANUFACTURING COMPANY IN MALAYSIA

Lim Xin^a, Chang Yin Key^b, Er Boon Hua^c, Lee Yu Mun^d, Yap Jing Fung^e, Peter Tan Sin Howe^e

^{abcde}Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: limxin981120@gmail.com, yinkey98@hotmail.com, erboonhua98@gmail.com,
ymlee9805@gmail.com, jingfungyap@yahoo.com, shtan@utar.edu.my

Abstract

Due to the outbreak of Covid-19, many of the glove manufacturing companies are facing shortage of workforce and unable to meet the increasing demand for gloves. Therefore, it is essential for the companies to motivate their employees in order to increase their performance and productivity, retain their current employees, and attract new employees join their company. Motivated employees are valuable asset for an organization, as the organization performances are led by those employees with highly motivated and highly productive. They are also essential for the organization to enhance its growth. For this research, factors that influence employee motivation at a glove manufacturing company in Malaysia are examined. However, there are many factors that can influence the employee motivation. Hence, this study proposes a model to investigate the relationship between the five independent variables (pay and benefits, achievement and recognitions, work environment, job security, training and development) toward employee motivation. A quantitative survey was conducted on the employees at a glove manufacturing company in Malaysia, 375 valid questionnaires were collected and analyzed to identify the relationship between the independent variables and employee motivation. It is concluded that the positive relationship of achievement and recognition holds the highest influence towards employee motivation. The findings provide an insight for the management not only to increase the employee motivation, performance, and productivity but also to decrease the turnover intention.

Keywords: Pay and Benefits, Achievement and Recognition, Work Environment, Job Security, Training and Development, Employee Motivation.

INTRODUCTION

This research intention is to explore and investigate the factors that influence employee motivation at a glove manufacturing company in Malaysia. In this research, the researchers will examine the relationship between 5 employee motivational factors, which include pay and benefits, achievement and recognition, work environment, job security, training and development with employee motivation.

Employee motivation is important to a company to achieve its company's objectives because motivated employees are the valuable asset for most of the organization as organization performance are led by employees with high motivation and high productivity. They are also essential for organization to maintain and enhance its business growth. Therefore, the researchers decided to study about factors that influence employee motivation.

Malaysia is one of the world's leading manufacturers of high-quality latex, rubber gloves and other rubber-related products. It also supplies latex or rubber products broadly to various overseas countries. Rubber is one of the important sectors that help Malaysia's economy become better ("*Statista Research Department*", 2020). However, the researchers found out that the manufacturing industry is facing shortage of labor. The Federation of Malaysian Manufacturers (FMM) President Datuk Soh Tian Lai also mentioned that the industry is facing the shortage of workforce ("*The Star Online*", 2019). Hence, the manufacturing companies need to emphasize on employee motivation not only to increase performance and productivity, but also to reduce the turnover intention since they are already facing labor shortage. To go into a more specific part of rubber manufacturing, the researchers had chosen glove manufacturing industry for their research.

In this research, the researchers had chosen one of the top glove manufacturing company in Malaysia as the target research company. The motive to study this company is due to the company is the world's largest and leading manufacturer producing a comprehensive range of gloves and other latex products. The company owns and operates 28 factories and 500 production lines together with more than 18,000 strong workforces in different countries (A glove manufacturing company, n.d.). This allow the researchers to collect information from different states across Malaysia as the result obtained may represent the major glove manufacturing industry employees. In order to protect the company's privacy and confidentiality, the researchers decided to conceal the company name as a glove manufacturing company in Malaysia.

The main problem that the manufacturing industry is facing shortages of employees. Borden (2019) highlighted that nearly 4.6 million manufacturing careers will become available over the next decade. An executive director from one of the Malaysia manufacturing companies also declared that their company is facing difficulties in finding those skilled workers or motivated workers. His colleagues also spot many Malaysians unwillingly to work in the manufacturing industry (Saieed, 2016). Other than that, the problem faced by many companies is they are not clear about their employees' condition. According to a news report in the UK, there are nearly a third of employees declared that they feel unmotivated for their work, which means that they do not care about their job, company vision, company success and also will not put extra time or effort in their job that will affect the company performance (Contributor, 2019; Leonard, 2019).

The Covid-19 pandemic is still raging around the world, which affected the demand for rubber gloves increased, including the glove manufacturing company that the researchers are studying in (*Continued freeze on foreign workers will worsen glove shortage: Malay Mail, 2020*). The chairman of the company mentioned that governments from various countries were approaching them and their orders have more than doubled (Kumar, 2020). He also declared that their current workforce is not sufficient to meet the demand for gloves as Malaysian companies are unable to source additional foreign workers (*Continued freeze on foreign workers will worsen glove shortage: Malay Mail, 2020*; Kumar, 2020). A Maybank research analyst also mentioned that the company's production is constrained by the shortage of workers (Alexis, 2020). An impediment for the company were the foreign workers makes up about three-quarters of the workforce (Kumar, 2020). As the government encouraging companies to hire more Malaysians but the chairman of the company said that expecting only locals to fill the vacancies is unrealistic (*Continued freeze on foreign workers will worsen glove shortage: Malay Mail, 2020*). He also highlighted that they need at least thousand more workers to match their expected output if not they will face delays in production and shipments (Kumar, 2020). Therefore, it is important for the company to realize what factors that influence their employee's motivation so that they can retain their current workers at the same time attract new workers to join their company.

This research paper is significant to provide a better sight of the factors that influence employee motivation at a glove manufacturing company in Malaysia. It contributes insight into the most critical factor that influences employee motivation in the glove manufacturing company. However, this research not only beneficial to the glove manufacturing company but also may benefit other industries. It helps the company to recognize the most important factor that influences employee motivation and understand more about its employees for making better improvement. Employee motivation is an important feature that will lead the employee's performance and lead the company towards optimistic growth.

LITERATURE REVIEW

Maslow's Hierarchy of Needs Motivational Theory

This theory is universal and fundamental which able to understand human motivation, personal development and management training (Kivuva, 2012; Odukah, 2016). Based on the satisfaction of human needs to achieve motivation, it consists of 5 levels of needs including physiological needs, safety needs, love and belongingness needs, self-esteem needs, and self-actualization needs. This theory functions in a way that once the lower level of needs was satisfied to a greater extent, then it will trigger the higher-level needs accordingly and ascendingly. Managers need to understand the levels or stages of an employee's needs in order to motivate them as different people have different needs, and different people can be motivated in different ways (Kressler, 2003).

This theory is related to the research as those dimensions cover most of the independent variables which are pay and benefits under physiological needs, achievement and recognition under esteem needs, job security and work environment under safety needs, training and development under self-actualization needs.

Employee Motivation

Employee motivation can be defined as the enthusiasm, commitment, energy level and the amount of creativity that an employee brings to the organization (Bhat, 2020). It also refers to how employees act towards their work (Donohoe, 2018). According to Peters, Chakraborty, Mahapatra and Steinhardt (2010), the key factor that can enhance employee productivity and continued success is employee motivation. Majority believe that employee motivation can affect employee performance and productivity, as motivated employees are valuable assets for a company as the company productivity and performance are led by those employees with high motivation at the same time, they are the one who assist the company to achieve its objective and goals (Kawara, 2014). Besides, employee motivation can help an organization reduces its cost as motivated employees will increase the productivity and quality of the job, which able the organization to reduce its expenses. With greater employee motivation, an organization can also reduce its turnover rate (Donohoe, 2018). In short, employee motivation is vital for every organization (Heryati, 2016).

Pay and Benefits

Pay and benefits can be described as a return that an employee expects to get from their job. It can be divided into monetary and non-monetary incentives. For monetary incentives include wages and salary which is the minimum requirement of a job (Gupta & Subramanian, 2014). For non-monetary incentives, it included the benefits that provide by the company such as medical insurance, retirement plan, sick leave, childcare and others ("The Basics of Employee Benefits", 2005). If the company provide higher pay and better benefits, it not only can motivate and retain employees, but also can recruit more skillful and capable people to join their company. When employees perceived better pay and benefits, it will increase their motivation and productivity. Hence, there is a significant relationship between pay and benefits with employee motivation.

Some past researchers had also proved that pay and benefits are having a positive influence and also impactful factors towards employee motivation (Ryan & Deci, 2000; Jayasuriya, Kumarasinghe & Perera, 2017). Furthermore, other researchers also mentioned that pay and benefits are basic needs for employees and also act as powerful tools that can improve recruiting and encourage loyalty (Kivuva, 2012; Scott, 2011; Dewitt, 2017). If they are satisfied with the pay and benefits, then they are willing to stay in the company (Leonard, 2019).

H1: There is a significant relationship between pay and benefits with employee motivation.

Achievement and Recognition

Achievement is a process of achieving something. It also can be described as when someone who has successfully done something after a lot of effort. Recognition is an act that recognizes or identifies someone ("Recognition Definition and Meaning: Collins English Dictionary," n.d.). It also a method to make the employees feel valued and appreciated for their effort. For example, promotion of jobs, increase salary and bonus, organize annual dinner to appreciate their employee and award them for their achievement (Lai, 2009). If the employees are recognized by organization, they will feel proud, trusted and motivated to continue performing their job. If employee perceived better achievement and recognition, then the employee will have higher motivation. Therefore, there is a significant relationship between achievement and recognition with employee motivation.

Other researchers also declared that both achievement and recognition with employee motivation are positively influence (Kamalian, Yaghoubi & Moloudi, 2010). According to psychologists Abraham Maslow, Fredrick Herzberg and David McClelland, they highlighted that needs for achievement is a psychological motivator towards employees (Chinn, 2016; Luthans, 2011). As employees will feel proud when they get respect and appreciation from employers (Burton, 2012). They will feel that their hard works are valued and will have the motivation to continue doing their job.

H2: There is a significant relationship between achievement and recognition with employee motivation.

Work Environment

Work environment contains lots of elements such as level of noise, stress, colleague's cooperation, comfort and so on. It has two major components which are physical and behavioral (Chin et al., 2016). Physical environment is the atmosphere or ambience in a workplace. A work environment should be pleasant, comfortable and safe to improve employees working effectiveness and efficiencies at the same time finish their work without any stress (McCoy & Evans, 2005). Behavioral environment is about how well the employees interact or the relations with their supervisors and workmate or colleagues (Safiullah, 2015). According to Chandrasekar (2011) and Stup (2003), they stated that work environment will highly affect employee motivation. If work environment is comfort and pleasant, it will help to motivate employees and make the workplace be less stressful and more productivity (Chin et al., 2016). Hence, there is a significant relationship between work environment with employee motivation.

Some other researchers also stated that work environment is a significant factors and positive influence with employee motivation (Rafikul & Ahmad, 2008; Tan & Waheed, 2011). This is because, most of the people spent their life time in the workplace, therefore the work environment should be pleasant and not that stressful, then the employees will feel happy, motivated and enjoy doing their daily work (Olusadum & Anulika, 2018; Kivuva, 2012).

H3: There is a significant relationship between work environment with employee motivation.

Job Security

Job security can be defined as one's expectation about the permanency towards their current job (Abdullah & Ramay, 2012). It also describes how much a person feels protected from losing their job involuntarily (Kraja, 2015). Financial situation of an employee is nearly depending on his or her job, therefore, job security plays a critical role for the employees (De Witte, 1999). Majority employees wish to have a secure job (Abdullah & Ramay, 2012). If employees feel secure, they will be more committed in performing their job well because they will devote full attention in doing their tasks without worrying about their job security. Hence, there is a significant relationship between job security with employee motivation.

In Senol's research, job security was graded as one of the three most important motivational tools in all subcategories (Senol, 2011). Other researchers also mentioned that job security has positive impact with employee motivation (Rafikul & Ahmad, 2008; Gabris & Simo, 1995). Job security is a motivational factor that influence the employee motivation to perform their jobs (Abdullah & Ramay, 2012; Gallup, 2016; Miller et al., 2001). If employees feel that their job is secured, they will pay full attention in performing their job without worry of losing their job (Akpan, 2013; Kraja, 2015).

H4: There is a significant relationship between job security with employee motivation.

Training and Development

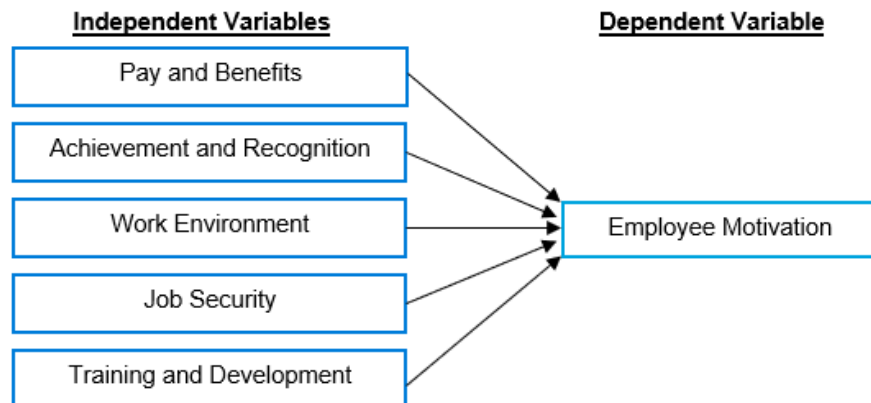
Training and development refer to the process of improvement on the performance of the employees. It not only can improve an employee's knowledge, skills, abilities and attitude to perform their job, but also can improve their understanding about how their job fits well into the organization's objectives, mission and structure (Armstrong, 2001; Aswathappa, 2000). Employees will feel motivated when they understand that their jobs are important to the organization's success. Hence, there is a significant relationship between training and development with employee motivation.

Willis-Shattuck and other researchers (2008) also revealed that training and development with employee motivation are positively influencing each other. By providing training and development, the company not only can identify their employee's ability, but also can improve their skills and be more capable to perform better (Springer, 2011; Cao et. al., 2013; Dibble, 1999).

H5: There is a significant relationship between training and development with employee motivation.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework



Source: Developed for research

The conceptual framework is derived according to some previous models and Maslow's Hierarchy of Needs Motivational Theory helps to support the relationship between both independent and dependent variables. The framework had been constructed and to investigate the relationship between the five independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) and dependent variable (employee motivation) at a glove manufacturing company in Malaysia.

RESEARCH METHODOLOGY

Sampling Design

In this research, researchers used primary data collection, by distributing the questionnaires to the employees of one of the top glove manufacturing company in Malaysia. The company suggested the researchers to use Google form to collect data as it is convenient, time-saving and cost-saving. The researchers contacted the human resource department of the company to clarify the purpose and ask for permission for conducting the survey. Then, the human resource department helps the researchers to blast an email with the Google form link to every employees of their company in Malaysia. This helps the researchers to achieve high effectiveness, high efficiency and less time constraint.

Besides, quantitative research design is used in this study in order to gather data easily in numerical form and shorter time (McLeod, 2019; Setia, 2016). Causal research and cross-sectional study also be used in this study because it able the researchers to recognize the cause-and-effect relationship between the independent variables and dependent variable, at the same time the data are collected only at one point of time.

The estimated employees in Malaysia are 13,950, hence the suitable sample size for this research is 375 respondents. The sampling frame and location are the number of employees at a glove manufacturing company from different factories, differentiated by state in Malaysia; while the sampling element are those permanent or part time employees that above 21 years old.

Research Procedure

The questionnaire consists of three sections, Section A is about the demographic information of the respondents, Section B is about the dependent variable (employee motivation), and Section C is about the how five independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) will influence employee motivation. The questions are quantified through a five-point Likert scale. The results of Section B and C are interpreted from the range of strongly disagree to strongly agree.

The data collected from the questionnaires are being coded in SPSS software (Version 25). Coding for Section B and C of questionnaire, a 5-point Likert Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree and 99=Missing Data. In addition, the researchers had run a pilot test before the actual distribution of questionnaire to the employees. 30 sets of questionnaires have been filled in and the results are generated. It shows that all the results are above 0.7 which are having a good and excellent reliability. Therefore, the researchers can proceed with the research on a larger scale of respondents.

DATA ANALYSIS

Descriptive Analysis

The demographic profile of 375 respondents is collected such as gender, age, ethnic group, education level, position in the organization, years of employment, and their current working location.

The majority respondents are female which is 54.7%. Most of them are 21-29 years old as it represents 60.5% in the survey, however there are no respondent below the age of 20 years old. Moreover, the result showed that a greater part of Chinese respondents, which is 40.5% are involved in this survey. Most of the respondents from this study are belongs to the Degree which consist of 62.9% of the 375 respondents. Furthermore, there are almost half of the total respondents are from the MM Level which is 50.1%, and have working experience of 3 years or below which is 52%. Lastly, most of the respondents are from the state of Selangor as it represents 65.9% in this survey.

Inferential Analysis

Reliability Test was conducted to show the reliability for the questionnaire survey. The result from Pearson Correlation Coefficient and Multiple Linear Regression (MLR) Analysis that were calculated by using SPSS software (Version 25) to show the relationship between the dependent variable (employee motivation) and the five independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development). P-value and Cronbach's Alpha Value were identified to determine the effect of variables. Besides, the adjusted R Square determined the strength of overall result.

Reliability Test

Table 4.1: Cronbach's Alpha Value

Variables	Cronbach's Alpha Value
Dependent Variable:	
Employee Motivation	0.859
Independent Variables:	
Pay and Benefits	0.852
Achievement and Recognition	0.893
Work Environment	0.858
Job Security	0.862
Training and Development	0.866

Source: Developed for this research

Based on Table 4.1, the Coefficient Alpha Value for the dependent variable (employee motivation) is 0.859. While for Coefficient Alpha Value for the independent variables, achievement and recognition get the highest value of 0.893, following by training and development which is 0.866, whereas job security is 0.862 and work environment is 0.858, as well as pay and benefits get the lowest value which is 0.852. In conclusion, the Coefficient Alpha Value for every variable is within the range of 0.80 to 0.95, it shows that all the variables have excellent reliability.

R-Value and P-Value

Table 4.2: R-Value and P-Value

Independent Variables:	R-value	P-value
Pay and Benefits	0.541	0.000
Achievement and Recognition	0.669	0.000
Work Environment	0.592	0.000
Job Security	0.602	0.000
Training and Development	0.514	0.000

Source: Developed for this research

Based on Table 4.2, there is a positive relationship between the independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) and dependent variable (employee motivation) because of the positive value for correlation coefficient. The r-value for achievement and recognition is 0.669 based on the Pearson Correlation Coefficient test, job security is 0.602, following by work environment which is 0.592 whereas pay and benefits is 0.541 and training and development is 0.514. Therefore, when the independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) is high, employee motivation is high. Since all the correlation coefficient of the variables are fall under coefficient range from ± 0.41 to ± 0.70 . Therefore, the relationship between the independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) and dependent variable (employee motivation) is moderate.

The relationship between the independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development) and dependent variable (employee motivation) is significant. It is because the p-value (0.000) is less than the alpha value (0.05).

R-Square

Table 4.3: R-Square and Adjusted R-Square Value

R-Square	0.509
Adjusted R-Square	0.502

Source: Developed for this research

Table 4.3 shows that the coefficient of determination, R^2 and adjusted R^2 is 0.509 and 0.502 respectively. Hence, 50.2% of the dependent variable can be explained by the five independent variables (pay and benefits, achievement and recognition, work environment, job security, training and development), which also shows that there is a moderate relationship.

Multiple Regression Equation

Employee Motivation = 1.715 – 0.055 (Pay and Benefits) + 0.305 (Achievement and Recognition) + 0.099 (Work Environment) + 0.148 (Job Security) + 0.141 (Training and Development)

Table 4.4: Beta Value

Independent Variable:	Beta Value
Pay and Benefits	-0.071
Achievement and Recognition	0.393
Work Environment	0.147
Job Security	0.209
Training and Development	0.139

Source: Developed for this research

Achievement and recognition are the independent variables that contribute the highest to the variation of the dependent variable (employee motivation) because beta value (under standardized coefficients) for this independent variable is the largest which is 0.393, following by job security which is 0.209, work environment is 0.147 and training and development 0.139, as well as pay and benefits get the lowest beta value which is -0.071.

CONCLUSION AND DISCUSSION

This study is designed to identify the factors that influence employee motivation through its five variables include pay and benefits, achievement and recognition, work environment, job security, training and development. Pearson Correlation Coefficient Analysis and Multiple Linear Regression Model tests were conducted to identify the connection between the independent variables and employee motivation. All the variables showed a significant relationship with employee motivation and all the hypothesis is supported.

The results can provide the management and supervisors a helpful understanding on factors that influence employee motivation. Every employee is different and had their own different needs, therefore, managers also need to take this into account when motivating their employees (Burton, 2012; Doyle, 2004). The management can create a motivated workplace by hiring motivated people into their company. Besides, the management can also consider the variables that had studied in this research into their strategy or decision making as well as when they are forming company policy. This will help them to motivate their employees as motivated employees can perform effectively and efficiently simultaneously it also able to increase productivity, lead company to achieve higher profitability, objective and goals, have better reputation and turnover intention will be reduced. Hence, top management, managers and supervisors must work together on employee motivation as it is important for the company (Singh et. al., 2013).

While conducting this research, the researchers had faced some limitation. This research is limited in its research scope only covering a glove manufacturing company in Malaysia due to limited costs and time. Future researchers are recommended to widen the research scope and expand their target respondents to cover more glove manufacturing company in Malaysia in order to develop a more comprehensive research and the results could be more representable and generalizable. Besides, this research takes a longer time to reach the target respondents due to the researchers collect data by using email as people nowadays are less active in email. Future researchers are suggested to consider using WhatsApp or other social media platform to collect data. Moreover, the researchers received partly neutral answers that may affect the results to be less reliability and validity, thus, future researchers need to clearly explain not only to their managers but also the respondents or employees about the purpose of the study and it will not affect their actual job. Lastly, in this research, cross-sectional approach is been used to only collect data in one given point of time. Hence, future researchers are recommended to use longitudinal approach to collect data in different time as the factors may change time to time.

In conclusion, the researchers had achieved our research objective. The results from the research permit a further understanding of the variables and its influence towards employee motivation at a glove manufacturing company in Malaysia. All independent variables are significantly affecting employee motivation, and we found out that achievement and recognition have the highest contribution. However, the result of this study is only shown for the given point of time, thus, future research on factors that influence employee motivation could take into consideration of the five independent variables that used in this model and also consider other factors to further improve on it at the same time develop a more comprehensive model as the factors will change time to time.

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BAFE011:
DEPRESSION, ANXIETY, AND STRESS SCALE (DASS-21) AMONG
QUANTITY SURVEYING STUDENTS: A PRELIMINARY STUDY

Ooi Kean Thong

Department of Surveying, Faculty of Science and Engineering, Universiti Tunku Abdul Rahman,
Malaysia

Email: ooikt@utar.edu.my

ABSTRACT

This research aimed to determine the correlation between level of depression, anxiety and stress among Quantity Surveying (QS) students in a private university in Malaysia. This research adopted a correlation study with a quantitative approach in order to observe the correlation between depression with anxiety, depression with stress, anxiety with stress. Three hundred and forty-three (343) respondents participated in this study. The research instrument that using for this research is Depression, Anxiety and Stress Scale (DASS-21). The result shows that First Year students experience with higher level of depression, anxiety and stress. First Year students have to adapted to new environment ad they lack companionship and felt loneliness. Final year students had developed the self-confidence and able to cope with the academic pressure to balance the life. The result showed that there was a significant relationship between the level of depression, anxiety and stress among QS students in the private university. This research also provides awareness towards the QS students on the level of depression, anxiety and stress. The finding helps the universities and lecturers to be aware of the emotional of student and take more effective preventive and control measure in order to improve students' mental health.

Keywords: DASS-21, depression, anxiety, stress, Quantity Surveying

INTRODUCTION

Students in universities are not aware about self-care. Due to the low awareness of mental health which lead to a number of psychological issues and become more and more serious (Chartterjee, Saha, Mukhopadhyay, Misra, Chakraborty, & Bhattacharya, 2014). Students are more concern about the academic achievement especially the Medical course students tend to sleep late in order to complete the assignment or practical. Other courses like Engineering, Science, Business, Accounting also required students to complete multitask in one time until students cannot paying attention to their self-care. Self-care is about the ability of an individual to look after themselves and fulfil their needs in life (Asai & Kato, 2014; Mohmoud, Staten, Hall, & Lennie, 2014). Thus, it is important to remind students in university to put the self-care as priority above academic performance in order to maintain the balance of life.

Quantity Surveying (QS) course is one of the courses that have big number of students enrol in every semester. Quantity Surveyors have new an aforementioned roles and functions which required to be multi-disciplinary in nature. QS studies encompass varies elements which include law, economic management, administration, technology, ICT, manufacturing, mathematic, operational research etc. Students in program Quantity Surveying facing a lot of academic pressure and it is utmost necessity to observe relationship of depression, anxiety and stress among the vulnerable QS students at a private university. Most of the QS students need to achieve good standard for academic. They need to be in the classroom and learn more by theoretical approach. They are required to complete the practical and training outside the classroom in order to fulfil the requirement of the course. Both academic and practicum fields are important in order to achieve the standard and accreditation by Royal Institute of Surveyors Malaysia (RISM). Hence, this study is to determine whether the QS students at the private university is mentally ready for both fields, as mentioned.

PROBLEM STATEMENT

Nowadays, mental health issues become one of the serious problems for university students. They used to face depression, anxiety and stress during their years of study in university (Chatterjee et al., 2014; Chernomas & Shapiro, 2013; Kittu & Patil, 2013). Depression, anxiety and stress had badly influenced their academic performance and the lifestyle (Amalia Madihie, Mohd Saizam Said, 2015). Many university students have the problems like headache, extreme fatigue and feeling worthlessness in coping with their daily lifestyle (Busari, 2014). Many researches had showed that high depression, anxiety and stress were negatively impacting on their academic performance (Amalia Madihie, Mohd Saizam Said, 2015). Besides academic pressure, university students must adapt to various psychological changes and social demands at the university (Uehara, Takeuchi, Kubota, Oshima, and Ishikawa, 2010). If the problem of psychological mental left untreated, many health issues will occur and finally will lead to suicide. The National Health and Morbidity Survey III reported that young Malaysians aged between 16 to 24 years had the highest prevalence of acute and chronic suicidal ideation (Amalia Madihie, Mohd Saizam Said, 2015).

OBJECTIVES

To ascertain whether the level of depression, anxiety and stress among QS students at a private university correlates with each other.

1. To identify the level of depression among QS students which correlated with anxiety.
2. To identify the level of depression among QS students which correlated with stress.
3. To identify the level of anxiety among QS students which correlates with stress.

HYPOTHESES

There were three hypotheses in this study as shown below:

- H₀1: There is no significant correlation between level of depression and anxiety among QS students.
H₀2: There is no significant correlation between level of depression and stress among QS students.
H₀3: There is no significant correlation between level of anxiety with stress among QS students.

LITERATURE REVIEW

Depression Among Students

Depression is defined by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) as a disorder that is characterised by either a depressed mood or markedly diminished pleasure in all activities in addition to at least four other symptoms within a duration of at least two weeks, these symptoms include, significant weight loss/weight gain, disturbed sleep, diminished concentration, fatigability, psychomotor agitation or retardation, feeling of worthlessness or inappropriate guilt, thoughts of death or recurrent suicidal ideation (American Psychiatric Association, 2013).

Chatterjee et al. (2014) conducted a research and showed the result that more than half of nursing students participating in their research slightly high level of depression. The level of depression also showed different in year of study. The result revealed that the first-year student was the most affected among all (Chatterjee, 2014). Besides the year of study, gender also shows the significant different. Iqbal, Gupta, and Venkatarao (2015) state that female medical students are more affected than male students. The reason why female students experienced higher depression when they fear not achieving their goal and wish to get better academic performance (Iqbal, Gupta, and Venkatarao, 2015). There are some other reasons that cause the depression among the university students. Daniel (2013) states that loneliness is one of the main factors causing the student to be depressed. Students forced to leave their hometown and travel to other states to continue their study, they must face the different environment and knowing new friends. Daniel (2013) was pointed out that level of attachments is highly correlated to the level of depression among students. Students with preoccupied and insecure attachment styles is said to be more depressed than the secure attachment styles. On the other hand, depression of students also causes by inner issues like the personality

traits (Chang, Law, and Chang, 2011). Personality traits such as fear of being offended and self-depreciation are some of the high potential traits that are associated with depression.

Anxiety Among Students

Anxiety is a condition that is characterised by intense feeling of dread, accompanied by somatic symptoms that indicate a hyperactive autonomic nervous system, also it impairs cognition and may produce distortions of perception (Sadock, B.J., Sadock, V.A., 2005).

University students face high anxiety level because they not able to implement the coping strategies because they are less expose to the coping strategies (Amalia, M., Mohd, S.S., 2015). It shows that the students in the universities need proper guidance from expertise to reduce their anxiety level (Amalia, M., Mohd, S.S., 2015). Anxiety can be caused by feeling less support from others like family, lecturer or friends, feeling of not accepted by others caused the high anxiety (Amalia, M., Mohd, S.S., 2015). This statement was aligned with Jensen and Nutt (2015) that unlikeable emotional response or loneliness can increase individual levels of anxiety. On the other hand, students that live or belong to a social group will be less anxious (Mohmoud et al., 2014). Level of anxiety will decrease as the students have constantly adapted with the environment (Amalia, M., Mohd, S.S., 2015). Female have more anxious than male students (Amalia, M., Mohd, S.S., 2015).

Stress Among Students

Stress can be defined as the physiological and psychological response to events that are appraised as threatening or challenging that require adjustment (Wood, S.E., Wood, E.G., Boyd, D., 2004).

Kittu and Patil (2013) stated that medical students often facing higher stress compare to other students due to the competition among them. Competitiveness always appear as one of the important factors that caused the high stress level. Kumaraswamy (2013) shows that sudden change from high school environment towards college life and separation from the family are some of the stress factors towards students nowadays. Mahmoud et al. (2014) found that students with high dissatisfaction are seen to be more stressful in facing their daily life. Female students are likely to be more stressful than male students (Amalia, M., Mohd, S.S., 2015). Chemomas and Shapiro (2013) claim that high level of stress among students is caused by ineffective coping strategies. Hence, coping strategies are very important for university students to maintain and balance their psychological well-being.

METHODOLOGY

The key issue in the present study is to examine the level of depression, anxiety and stress among Quantity Surveying students in a private university. Identified the correlation between depression, anxiety and stress in order to propose effective solving methods. This was followed by the design of a survey instrument and testing the reliability and validity of the same. Finally, the survey instrument was administered amongst the respondents.

RESEARCH DESIGN

This research was a correlational study. The important of correlational studies are used to observe the correlation between two variables (Ary, Jacobs, & Sorensen, 2010). This study emphasizes on quantitative analysis and questionnaire was use as tool to collect the data. Questionnaires are distributed to the respective participants to collect the data.

Population And Sample

This study was focus on the QS students in a private university in Klang Valley area. There are a total three hundred and forty-three students in the first, second, third- and fourth-year students involved in this research. A random sampling is utilized to collect the data from the respondents. All the respondents are volunteer to participate in this research. The questionnaire was distributed by hand in the lecture hall during their lesson. Participants spend about 10 minutes to complete the questionnaire and return to the researcher. All the questionnaire that collected was key into SPSS software to analyses.

Research Instrument

The instrument that using to collect the data is Depression Anxiety, Stress Scale (DASS-21) which is a short version. Students filled up the questionnaire by self-rated to assess the severity of the symptoms of depression, anxiety and stress. It consists of statements referring to the past week. Each item is scored on a 4point scale (0 = Did not apply to me at all, 1 = Applied to me to some degree, 2 = Applied to me to a considerable degree, 3 = Applied to me very much or most of the time) (Lovibond, B.H., Lovibond, P.F., 1995). Students being asked to rethink back over the past week had experienced any depression, anxiety and stress by using 4-point severity/ frequency scales. Scores for depression, anxiety and stress are calculated for the relevant items. Each subscale was categorized into normal, mild, moderate, severe and extremely severe.

The questionnaire was divided into two sections; Section A – Demographic Information (Gender, Year of Study, CGPA score); Section B – DASS-21 (Depression, Anxiety and Stress Scale). DASS-21 consists of 21 items; every seven items emphasize on each scale of depression, anxiety and stress, respectively.

Reliability Test for Pre-Research

Reliability test used to measure the consistency and precision of the respective research instrument (Sidek, 2005). Thirty students are chosen to participate in pilot test. The reliability values for pilot test for Depression (0.85), Anxiety (0.82) and Stress (0.76), which is over 0.70 and considered reliable based on the value derived from the Cronbach's Alpha.

FINDINGS AND DISCUSSION

Demographic Characteristic of Samples

The demographic characteristics of the respondents in this study were gender, year of study and CGPA scores. The questionnaires were distributed to year one, two, three and four QS students in the university.

The total number of respondents in the sample was 343. From the survey, the majority of sample were male 189 (55%), while 154 is female (45%) participated in this study. Based on the population, the QS courses have more male students compared to female students.

As shown in Table 1, most respondents were in year one 130 (38%), followed by year two students 84 (25%), year three students 77 (23%) and the least is year four 50 (14%).

For the CGPA scores for QS students, according to the Table 1, CGPA score within 1.500-2.500 is 83 (24%), majority of students are in the range of 2.501-3.500 which is 196 (57%), and least of students in the range of 3.501-4.000 is about 66 (19%).

Table 1: Distribution of Study Sample according to Demographic Characteristics

Demographic Characteristic		QS Students at Private University	
		Frequency	Percentage (%)
Gender	Male	189	55%
	Female	154	45%
	Total	343	100%
Year of Study	Year One	130	38%
	Year Two	86	25%
	Year Three	77	23%
	Year Four	50	14%
	Total	343	100%
CGPA Score	1.500-2.500	83	24%
	2.501-3.500	196	57%
	3.501-4.000	66	19%
	Total	343	100%

Reliability Test for Post-Research

Table 2 shows the reliability values for post-research which involved 343 QS students. The reliability values for Depression is 0.90, the value for Anxiety is 0.86 and value for Stress is 0.79. All the values are over 0.70 which means the research instrument is considered reliable and allowed for further analysis.

Table 2: Reliability Test for Post-Research

Scale	Item	Cronbach's Alpha
Depression	7	0.90
Anxiety	7	0.86
Stress	7	0.79

Distribution of Study Sample according to DASS-21 Score in Different Year of Study

Table 3 shows the distribution of study sample according to DASS-21 score among the QS students. Specifically, for year one QS students, 11 students scored severe and 27 scored extremely severe in level of depression. 17 respondents scored severe in anxiety as well as 57 scored extremely severe. Meanwhile, 37 respondents scored severe and 8 scored extremely severe in stress, respectively. Obviously, there were 130 QS students who had participated in this study. Logically, some students might both high in anxiety and stress or vice versa.

Table 4 shows the distribution of study sample according to DASS-21 score among year four QS students. 4 QS students scored severe and 4 cored extremely severe in level of depression. 5 respondents scored severe and 5 scored extremely severe in level of anxiety. Meanwhile, 2 respondents scored severe and 3 scored extremely severe in stress. There were 44 year four QS students who had participated in this study.

In a nutshell, first year students were seen to be more depressed, anxious and stressed compare to the year four QS students. This result aligns with precious researcher Priyadarshini, V.R. (2016) that first year students have obtained higher stress score compare to the final year student. Similarly, first year students also experienced more anxiety than final year students. The reason of final year students has lower emotional disturbance is they develop the self-confidence and understand about the technical subjects and able to prepare themselves for self-study during these four years (Priyadarshini, V.R., Rubeena, J.A., 2016).

Table 3: Distribution of Study Sample according to DASS-21 Score in First Year QS Students

First Year QS Students (133 Participants)						
Scale	Score Level					DASS-21 Score M+- SD
	Normal	Mild	Moderate	Severe	Extremely Severe	
Depression	61 (47.3%)	20 (15.3%)	11 (8.2%)	11 (8.3%)	27 (20.9%)	2.58 (1.28)
Anxiety	20 (15.3%)	17 (12.7%)	20 (15%)	17 (13%)	57 (44%)	3.23 (1.42)
Stress	59 (45.5%)	13 (10.3%)	13 (10%)	37 (28.3%)	8 (5.9%)	2.42 (1.50)

Table 4: Distribution of Study Sample according to DASS-21 Score in Year Four QS Students

Scale	Year Four QS Students (44 Participants)					DASS-21 Score M+-(SD)
	Score Level					
	Normal	Mild	Moderate	Severe	Extremely Severe	
Depression	24 (53%)	6 (12.5%)	6 (13.8%)	5 (8.4%)	4 (12.3%)	1.74 (1.36)
Anxiety	18 (40.8%)	6 (13%)	10 (22.6%)	5 (10.3%)	5 (13.3%)	2.67 (1.53)
Stress	26 (58.2%)	7 (15.4%)	6 (12.6%)	2 (3.8%)	3 (10%)	1.68 (1.32)

The Relationship between Level of Depression and Anxiety among QS Students

H₀1: There is no significant relationship between level of depression and anxiety among QS students at the private university Malaysia.

The Person Correlation was used to determine the relationship between the level of depression and anxiety among QS students in a private university in Malaysia. Table 5 shows that the result of the analysis. The result shows that the relationship between level of depression and anxiety was found to be statistically significant, ($r=.72$, $p<0.05$). From the result, a strong positive relationship between level of depression and anxiety among QS students at the private university. Hence, H₀1 is rejected.

The result has the same track with Amalia, M. (2015) shows that level of depression is seen to be associated with level of anxiety among QS students. Undergraduate students need to face new learning environment which is much different from high school. Hence, they need to get more guideline from university and parents in their university life. Jensen & Nutt (2015) and Daniel (2013) had further explain the relationship between depression and anxiety, they said the loneliness and lack of companionship may cause the depression and anxiety among the individual themselves. Iqbal et al. (2015) had view from different aspect and mentioned that students found depression and anxiety when they are facing the problem in achieving their academic goals. Hence, it is advised students to be aware and moderately knowledgeable in preventing and minimizing their level of depression and anxiety.

Table 5: The Relationship between Level of Depression and Anxiety

Variable	Pearson Correlation (r)	Significant (2-tailed), (p).
Level of Depression - Anxiety	.72**	.000

**Correlation is significant at the 0.01 level (2-tailed)

The Relationship between Level of Depression and Stress among QS Students

H₀2: There is no significant relationship between level of depression and stress among QS students at the private university Malaysia.

The Pearson Correlation was used to analyse the relationship between level of depression and stress among QS students in a private university in Malaysia. Table 6 shows that the relationship between level of depression and stress was found to be statistically significant, ($r=0.68$, $P<0.05$). The result shows that there is a positive relationship between level of depression and stress among QS students in a private university in Malaysia. Hence, H₀2 is rejected.

Based on the result, level of depression is highly associated with stress (Amalia, M., Mohd, S.S., 2015). Kittu & Patil (2013) had given the explanation the causes of stress are because of competitiveness among the students in the class. Chemomas and Shapiro (2013) had view from personal aspect and conclude that high dissatisfaction proportionally results in high depression and stress.

Table 6: The Relationship between Level of Depression and Stress

Variable	Pearson Correlation (r)	Significant (2-tailed), (p).
Level of Depression - Stress	.68**	.000

**Correlation is significant at the 0.01 level (2-tailed)

The Relationship between Level of Anxiety and Stress among QS Students

H₀3: There is no significant relationship between level of anxiety and stress among QS students at the private university Malaysia.

The Pearson Correlation was used to analyse the relationship between level of anxiety and stress among QS students in a private university in Malaysia. Table 7 shows the result of the analysis.

The result indicated that there was a strong positive relationship between level of anxiety and stress ($r=0.82$, $p<0.05$) among QS student in a private university. Hence, H_{03} is rejected.

Based on the result, anxiety highly correlates with stress among QS students. Due to the big number of students in the course, QS students fear not achieving their respective goal in the study. QS students always being required to performing theoretically and practically, simultaneously. QS students need to do measurement, design and so on as practical, and they need to study theoretical subjects like project management, construction law etc. at the same time. Hence, they had facing much stress. This was supported by researcher Kumaraswamy (2013) that stated theoretical and practical is one of the main factors of stress. Chernomas and Shapiro (2013) agree that anxiety and stress highly correlate with lack of coping strategies among students. QS students not joining any co-curriculum or community society as they willing to spend more time to study. Majority of the QS students are from other states and they have to leave home and stay in the hostel. Daniel (2013) and Jensen and Nutt (2015) strongly agree that loneliness and lack of companionship may result in inclination of anxiety and stress. Hence, it is important for QS to students to balance their university life and find more friends to reduce the feeling of anxiety and stress.

Table 7: The Relationship between Level of Anxiety and Stress

Variable	Pearson Correlation (r)	Significant (2-tailed), (p).
Level of Anxiety - Stress	.82**	.000

**Correlation is significant at the 0.01 level (2-tailed)

Implication of Depression, Anxiety, and Stress among QS Students

Depression is one of the main reasons that cause the poor performance of students in the classroom (Arslan, Ayrance, Unsal, & Arslantas, 2009). Due to the depression, their ability to perceive understanding towards courses taught in the classroom might be influence. Arslan et al. (2009) mentioned that students that have high depression when they not aware of the balance of life and lack of knowledge in dealing with their own self-care.

Similarly, students that experienced high anxiety may not perform very well in their study. This is agreed by the researcher Vitasari, Muhammad, Ahmad, and Muhammad (2010). The reason that given by Vitasari et al. (2010) is the anxiety causes students to have lack of preparation during the examination. Besides, Amalia, M., Mohd, S.S. (2015) had comment that students that not proper prepare in the class presentation might also cause the anxiety.

Busari (2014) had proven that stress influence students either in physical or emotional. Stress had brought grate impact to students and cause poor performance in achieving better grade in their study. From physical view, students suffer headache, fatigue and muscle tightness. From emotional view, they frequently suffer from increasingly felt of frustration and felt hopelessness in coping with daily routine (Amalia, M., Mohd, S.S., 2015).

The impact of depression, anxiety and stress could influence students' performance in class as well as their health. Thus, more effective way needs to propose in order to reduce the level of depression, anxiety and stress of students in university.

Solution to Reduce Level of Depression, Anxiety and Stress

University and lecturers play a very important roles in reducing students' emotional disturbance. Initiation of stress management programs such as expanding counselling activities, providing adequate facilities and resources should be highly prioritized by authorities. Besides, faculty or department in university can provide sharing session on study techniques and coping skills workshop for targeted groups. Lecturers may help the students to overcome their difficulties in their academic life by enhancing the mentor/ mentee programs.

CONCLUSION

This research might help QS students to have a better understanding about how high their level of depression, anxiety and stress are. Base on the findings, the result statistically proven the level of

emotional disturbance of QS students. Descriptively, Year One students are most affected compare to Year Four students. Inferentially, all null hypotheses were rejected. The result shows that there is a significant relationship between level of depression and anxiety; level of depression and stress; level of anxiety and stress among QS students in a private university.

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BAFE012: **WILL EDUCATOR'S AWARENESS INFLUENCE THEIR INTENTION TO ADOPT AUGMENTED REALITY (AR) FOR TEACHING?**

Wei, Chooi-Yi^a, Kuah, Yoke-Chin^b, Ng, Chee-Pung^c, Lau, Wai-Kwan^{*d}

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: weicy@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: kuahyc@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngcp@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lauwk@utar.edu.my

Abstract

The phenomenon of emergency online teaching and learning from home with effect from the COVID-19 pandemic has served as a wakeup call for all educators to conduct their teaching creatively online. This condition has applied to all categories of education regardless of the pre-school, primary, secondary, or tertiary education level. Nowadays, the rapid growth in technological advancement and revolution has watched the transformation of the educational era for quality enhancement in the process of teaching and learning. Augmented Reality (AR) technology has recently popular for its application to develop a creative way of educating students via online and offline teaching platforms. In addition, AR potentially able to grab students' attention to be immersed in realistic experiences during their learning process. Thus, this study aims to identify either the educator's awareness will influence their intention to adopt AR as an enhancement teaching tool for their teaching. The research finding predicted to be in line with the theme of Industrial Revolution 4.0 and able to motivate educators to embrace AR as an enhancement teaching tool. In addition, this paper might also be an interest to the government, learning institutions, educators and others on the implementation of AR in Malaysia.

Keywords: Educator's awareness, Educator's intention, Augmented reality, Teaching and learning

INTRODUCTION

In conjunction with the technological era and the enhancement of the teaching and learning process in the recent years, digital materials and e-learning tools have been receiving remarkable attention and incorporation in the education industry (Al-Fraihat, Joy, & Sinclair, 2020; Wong, Hwang, Choo Goh, & Mohd Arrif, 2020). Moreover, the run-up to the COVID-19 pandemic recently has hindered the normal functioning of schools and universities. The use of digital teaching and learning platforms during this disruptive period has lead an opportunity to the educators to try out new teaching platform. This phenomena believed to further increase awareness among educators of the importance of technology adoption in the teaching and learning process.

According to previous results, the impact of embedded technology on education has been positive and constructive, especially when technology is combined with adequate pedagogical foundations. In addition to it, a recent research has also proved that technology-embedded education contributes to the rises on more innovative and interactive forms of teaching and learning process and thus increases students' motivations (Bursali & Yilmaz, 2019; Ebenezer, Kaya, & Kassab, 2018; Kaewunruen, 2019; Lin, Tang, Shen & Tsai, 2020; Shapley, Sheehan, Maloney & Caranikas-Walker, 2011).

As to date, various technologies such as multimedia, internet, mobile devices, Internet of things (IoT), virtual reality and augmented reality are adopted in the context of education (Alalwan, Cheng, Al-Samarraie, Yousef, Alzahrani, & Sarsam, 2020; Kiryakova, Angelova, & Yordanova, 2018). Furthermore, augmented reality (AR) has lately gained extensive attention and thus, increasingly

attracts the interest of many educational researchers. Augmented reality (AR) refers to a technology that enables the experience of visualizing the virtual object that coexist as an object in the actual world (Azuma, 1997). It is an emerging and prominent technology with great potential and impact in the educational arena. On the contrary, AR can also be further defined as the integration of virtual components in real life that are real-time interactive (Azuma, 1997).

Development of AR

Sutherland (1968) was the pioneer in developing and introducing the AR interface, which used head-mounted display to depict 3D graphics. However, only several works relevant to AR has been done over the last decade. Thereafter, Azuma conducted a survey on AR in 1997 (Azuma, 1997). Since then, the advancement of AR has been noticeable and remarkable. Numerous conferences on AR were then began in late 1990s, such as the International Symposium on Mixed Reality, the International Workshop and Symposium on Augmented Reality, and the Designing Augmented Reality Environments workshop.

Up to the present time, the research has tended to focus on virtual reality rather than AR. The creation of AR environments requires a design of virtual representation of a relatively small part of these environments. A significant part of AR environments consists of real objects. Thus, AR does not requires creating detailed 3D models as a result of AR in offering the highest possible level of reality. AR users are able to interact with virtual objects in a direct and natural way by manipulating real objects without the need of sophisticated and expensive input devices (Wojciechowski, Walczak, White, & Cellary, 2004). In contrast to virtual environments, the users in AR environments are able to have a direct face-to-face contact with each other. Therefore, this issue has grown a limelight in AR, but the major problems with this kind of applications as an enhancement teaching tool is still unknown and yet to discover.

AR in Education

AR environments offer better opportunities of learning-by-doing through physical movements in rich sensory spatial contexts (Dalim, Sunar, Dey, & Billinghamurst, 2020; Dunleavy, Dede, & Mitchell, 2009). Therefore, users have an opportunity to perform actual experiments on virtual objects by having hands-on experiences in real environments as this features of AR also supports situated learning (Lave & Wenger, 1991). The core benefits of AR applications especially in education are: practical skills, spatial ability, conceptual understanding, as well as inquiry-based activities (Cheng & Tsai, 2013). As we know, there are really expensive cost involved in the teaching resources such as laboratory equipment and supplies. Therefore, AR might help to reduce the cost by substituting these resources with the virtual counterparts. Another issue which is always faced in the practical education industry is that in laboratory works, unskilled learners might explore potentially hazardous environments and thus, accidentally damages costly equipment. Therefore, AR technology might be a positive alternative in resolving this costly damaging issue.

Past studies on AR which includes Bujak et al. (2013) where they believe that AR technology has great potential for positive educational outcomes. They have analyzed the potential advantages as well as the considerations of designing in AR technology which is applied to learning. Therefore, they believe AR technology will further furnish educators' competency in teaching. Moreover, AR is also able to transform boring and uninteresting instructions to a more entertaining learning environment (Kim, Jeong, Park, Ryu, & Oh, 2018; Savelle, Oksanen, Kaakinen, Noreikis, & Xiao, 2020; Ibáñez, Di Serio, Villarán, & Kloos, 2014; Lu & Liu, 2015). In addition, adopting AR technology through AR-based games leads learning more fun (Bressler & Bodzin, 2013; Mohd Yusof, Daniel, Low & Ab Aziz, 2014; Pellas, Fotaris, Kazanidis, & Wells, 2019). Furthermore, via AR guidance, students might be more engaged as well as increases their performances (Akçayır, & Akçayır, 2017; Squires, 2017; Liu & Tsai, 2013). Besides that, AR also permits educators in assigning responsibility to the students which allows them to make their own decisions. Therefore, these contributions further improves student engagement (Munoz-Cristobal et al., 2015).

On the other hands, Garzón and Acevedo (2019) conducted a study by contrasting the usage between AR and other pedagogical tools. The study shows that learners are better at exploring and understanding the concepts when AR is adopted and implemented as the medium of delivery. Besides, it also demonstrates in several researches that the implementation of AR technology has positive feedback and results in a number of areas, especially in the education sector (Abrar et al.,

2019; Garzón & Acevedo, 2019; Kerr & Lawson; 2020; Tekedere & Göker, 2016). Nevertheless, it was also discovered that AR allows students to comprehend the abstract concepts better, as it helps teachers to deliver the contents more efficiently in terms of physical, cognitive and contextual views (Bujak et al., 2013).

AR able to contribute significantly benefits towards educators in teaching. In heading towards Education 4.0 on digitalized teaching and learning scenario, the research findings expect to create educator awareness on AR and leading them to adopt AR as their teaching tools in the future.

LITERATURE REVIEW

The advancement of the teaching and learning by integrating technology has transformed the learning process into a more engaging, interactive, authentic and joyful environment (Gan & Balakrishnan, 2018; Pellas, Fotaris, Kazanidis, & Wells, 2019). It is highly recommended to make use of information and communication technologies like AR in order to raise and maintain the attention of students throughout a course, not to mention its further benefits for understanding and visualizing the topics.

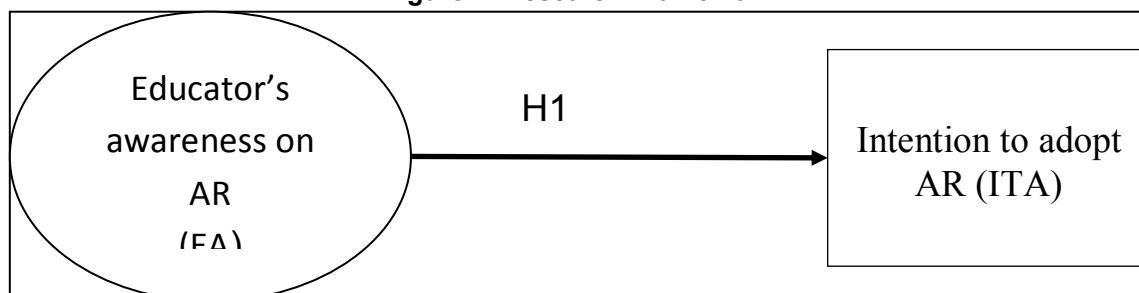
The past studies shown that AR technology offers a range of advantages, particularly when it is applied in educational environments (Garzón, Pavón, & Baldiris, 2019; Hockly, 2019; Masmuzidin, & Aziz, 2018; Kiryakova et al., 2018; Richardson, 2016; Yip, Wong, Yick, Chan, & Wong, 2019). In addition, previous studies have obviously demonstrated that the AR-assisted teaching proposition further illustrates the feasibility of AR use and is strongly encouraged in the teaching setting to improve student learning process (Lin et al., 2015). Johnson, Levine, Smith, and Stone (2010) claimed that AR has a considerable potential to provide on-site experiences to close the information gap about real world.

Some studies highlighted that issue of educator awareness and intention to adopt AR (Arashpour, M., & Aranda-Mena, 2017; Behzadan & Kamat 2007; Fotouhi-Ghazvini et al., 2009; Vähä et al., 2013). Lee & Goo (2013) reported that videoconferencing increase awareness of traditional dances. Educators attempt to incorporate the Google Earth with an AR tool to create a 3D virtual image is one of example of AR awareness and implementation in education (Ab Halim, Muda, Zakaria, & Samad, 2020).

This study aims to identify either the educator's awareness will influence their intention to adopt AR as an enhancement teaching tool for their teaching. Educator awareness served as independent variable whereas intention to adopt AR as dependent variable. Research framework was developed as shown in Figure 1. Hypothesis H₁ was developed as below to answer the research objective.

H₁: Educator's awareness will influence their intention to adopt AR as an enhancement teaching tool.

Figure 1: Research Framework



METHODOLOGY

This quantitative study employs questionnaire survey as the research instrument to obtain data from the educators teaching in private tertiary institutions in Klang Valley area. Research locations consist of five private universities include Universiti Tunku Abdul Rahman (UTAR), Multimedia University (MMU), Management and Science University (MSU), HELP University and KDU University College. A total of 223 completed questionnaires has been successfully obtained and has been key in to the Statistical Package for the Social Sciences (SPSS) version 23.0 to generate

descriptive and inferential analysis. The questionnaire is available in English language which comprises of two sections. Section A consists of demographic questions such as gender, ethnic, age, marital status and highest educational level. Whereas section B consists of items to measure each variable used in this study via 5-points Likert scale labeled as “strongly agree” represented by five and “strongly disagree” represented by one.

RESULTS

Descriptive Analysis

There are 223 valid data obtained and analysed accordingly. As shown in Table 1, majority participants were female (66.37%), with the age ranging from 31-35 years old. More than half of the participants are married (65.92%). There are Malay (39.91%), Chinese (39.91%) and Indian (16.59%). The majority of the participants are with Master Degree qualification (63.68%), while 22.87% with Doctorate Degree qualification. More than 65% of the participants have come across the idea of Augmented Reality prior to this study conducted.

Table 1: Respondent's Profile

	N	Percentage
Gender		
Male	75	33.63
Female	148	66.37
Ethnic		
Malay	89	39.91
Chinese	89	39.91
Indian	37	16.59
Others	8	3.59
Age		
21-25	3	1.35
26-30	44	19.73
31-35	70	31.39
36-40	51	22.87
41-45	26	11.66
46 and above	29	13.00
Marital Status		
Single	76	34.08
Married	147	65.92
Highest education level		
Bachelor	23	10.31
Master	142	63.68
PHD	51	22.87
Professional Certificate	7	3.14
Have you ever heard about AR?		
Yes	154	69.06
No	69	30.94

Sources: Developed for research

Frequency of Heard or Never Heard about AR based on Gender and Age Group

Figure 2 shows that there are 154 respondents (58 male and 96 female) heard about AR before. Furthermore, female lecturers more active in hearing about AR compare to male lecturers. Majority of positive responses came from the age group ranged 31 to 35 as shown in Figure 3.

Figure 2: Heard or Never Heard about AR based on Gender

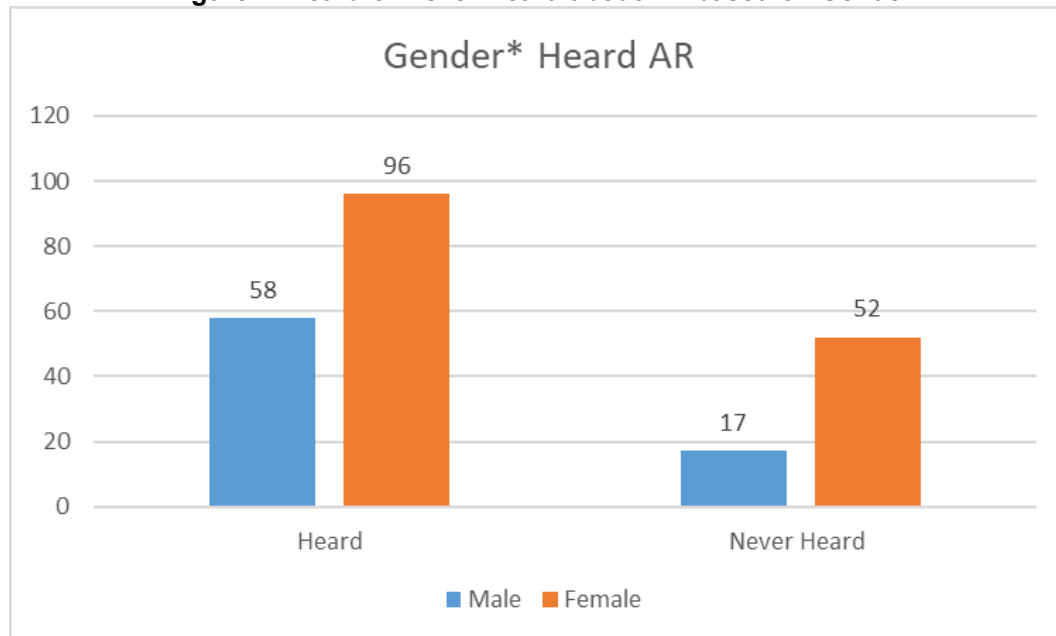
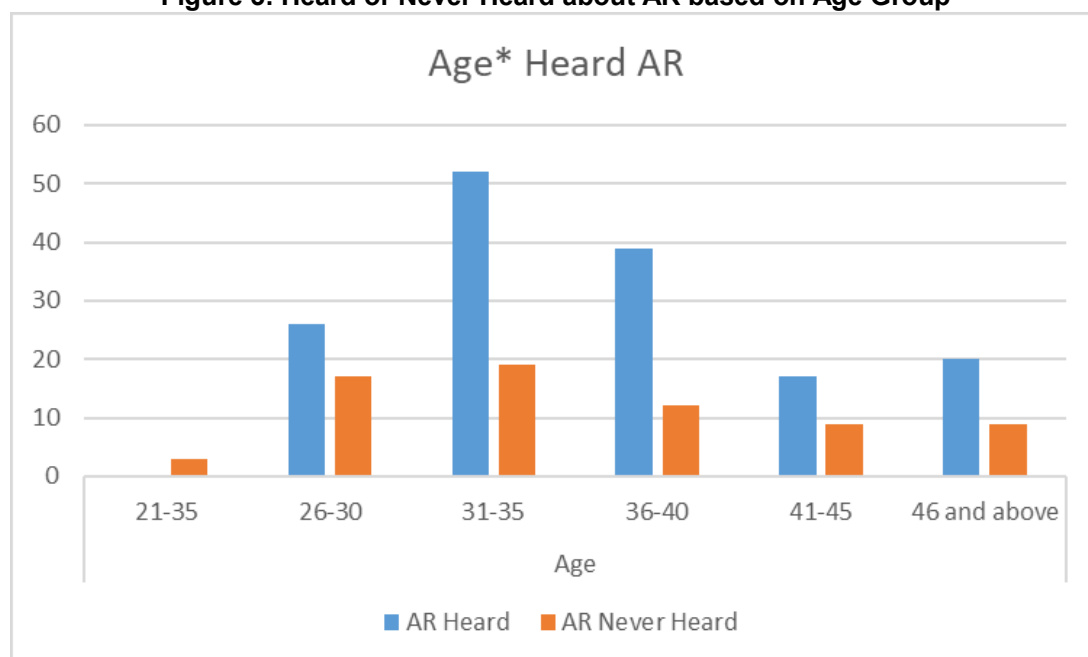


Figure 3: Heard or Never Heard about AR based on Age Group



Educator's Awareness on AR and Intention to Adopt AR

There are six items designed to measure the educator's awareness on AR and their intention to adopt AR as an enhancement teaching tool across five private universities in Klang Valley. Table 2 shows that there are less than 100 respondents aware on AR that could be used as teaching aid and its application in various fields. Furthermore, only few respondents obtained information about AR through social media and peers. As shown in Table 3, the educator's intention level seems to be the same as their awareness level on AR which is less than 50 percent of respondents intend to adopt AR as teaching tools.

Table 2: Educator's Awareness on AR

Awareness on AR	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I aware that AR could be used as a teaching aid.	5	8	54	112	44
I obtain information about AR through social media. (eg. Facebook, Twitter and Instagram)	21	29	55	93	25
I know that TV/ radio advertise about AR	22	47	78	67	8
I obtain information about AR from my peers	17	31	69	86	20
I know AR enable us to see the image in 3D model.	6	12	41	99	65
I know AR can be applied in various fields.	5	10	43	101	64

Sources: Developed for research

Table 3: Educator's Intention to Adopt AR

Intention to adopt AR	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would intend to use AR as my teaching aid.	1	10	47	135	30
I would intend to use AR in my daily teaching.	3	13	76	105	26
I would intend to include AR in teaching plan.	2	12	56	119	33
I would intend to adopt AR in my teaching materials.	1	11	51	128	32
I would apply AR in the near future.	7	12	51	119	34
I would recommend my colleague to use AR as their teaching aid.	7	8	61	115	32

Sources: Developed for research

Hypothesis 1 proposed that educator awareness on AR have a positive influence on intention to adopt AR. A simple regression analysis was conducted to verify and explore how much variation in intention adopting could be explained by the variability in awareness on AR. The result shown in Table 4 indicates that the educator's awareness on AR significantly influence their adoption of AR as the enhancement teaching tools. Thus, it failed to reject hypothesis 1.

Table 4: Awareness on AR towards Intention to Adopt AR

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.293	.199		1.472	.142
1 Awareness	.880	.050	.763	17.486	.000

a. Dependent Variable: Intention

CONCLUSION

Emergency online teaching from home in conjunction with Movement Control Order (MCO) since 18 March 2020 in Malaysia might change the educator's perception on the process of transferring knowledge to their students digitally online. The educator might have explored more online platform and online tools for their teaching. As conclusion, a further investigation on the educator's awareness on AR across level of education and comprehensive inferential analysis will be conducted to enrich the current study. The evidence gained from this study might be an interest to the government, learning institutions, educators and others on the implementation of AR in Malaysia.

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BAFE013: ORGANISATIONAL CULTURE TOWARDS EMPLOYEE VOICE IN MALAYSIA: A PROPOSED CONCEPTUAL FRAMEWORK

Lom, Hui Shan^a, Lily, Suriani Mohd Arif^b, Chang, Mui Ling Dyana^c, Chue, Kar Wen^d

^aAzman Hashim International Business School, Universiti Teknologi, Malaysia,
Email: lomhuishan@gmail.com

^bFaculty of Social Science and Humanities, Universiti Teknologi, Malaysia,
Email: lily@utm.my

^cCentre for The Promotion of Knowledge and Language Learning, Universiti Malaysia Sabah,
Malaysia,

Email: dyana@ums.edu.my

^dGraduate School of Business, Universiti Sains Malaysia, Malaysia,
Email: kwchue@gmail.com

Abstract

Obtaining employee opinions and suggestions is very important to an organisation. Organisational culture is one of the factors that have been identified to stimulate and encourage employee voice. Organisational culture is argued to exert a lot of influence in encouraging employee voice in an organisation. This study is aimed to examine how organisational culture that embeds power distance and collectivism can affect the employee voice, namely Acquiescent voice, Defensive voice, and ProSocial voice. In order to ensure the research instrument is suitable in the Malaysian context, a questionnaire was adopted and adapted which underwent a pilot test to affirm it was feasible for model testing and hypothesis checking. The pilot study results reflected that the reliability and discriminant validity of the instrument was well established and this instrument could be applied in the future. Overall, the expected findings could assist the human resource practitioner or superior to nurture a more open and transparent communication culture in an organisation. This could be effective for them to deal with their employees and may consequently stimulate and encourage employees to be more daring in voicing their opinions or ideas within the organisation.

Keywords: Employee Voice, Acquiescent Voice, Defensive Voice, ProSocial Voice, Collectivism, Power Distance, Organisational Culture

INTRODUCTION

Employees are regarded as a major source of change, creativity, learning and innovation, all of which are critical to the success of an organisations (Constantin and Baias, 2015). Nowadays, the employee voice is slowly gaining much interest among human resource practitioners and organisations alike. The employee voice is now being recognised as bringing various benefits, not only to the employees but to the organisation as well (Allan and Lu, 2020). Hence, it is not surprising that the employee voice is now becoming of significant research interest in academia. According to Dwonmoh (2012), researchers are now placing considerable attention on the way employees express their concerns regarding workplace issues to the management, which is argued to consequently improve communication between the organisation and its employees.

Employee voice is a whole variety of processes and structures which enable, and at times empower, employees to directly or indirectly participate in the decision-making process (Wilton, 2019). In other words, the "direct" way is when an employee expresses their concern straight to the management (e.g. a face to face conversation), while the "indirect" way is when employee concerns are communicated through a particular platform such as a trade union (Emelifeonwu Jude and Valk, 2019). Various examples in the literature claim that using the union produces a higher level of voice among the employees (Morrison, 2011; Sablok *et al.*, 2013; Wilkinson and Fay, 2011). In fact, employee unions help to provide a formal platform whereby employees can convey their grievances or points of view to the organisation and this is particularly useful for those employees who are

incapable of independently and personally voicing out their opinions (Kwon *et al.*, 2016). The employee unions help to ensure that the management will seriously consider and take action rather than ignore the issues raised by the employees. Nevertheless, even though the collective voice remains important, the paradigm of the employee voice appears to be slowly shifting and is now more focused on the individual voice (Goldberg *et al.*, 2011; IPA, 2012). Therefore, this research study limits its scope to focus on the individual level of employee voice.

The main principle behind employee voice is to provide a platform for the employee to positively enhance their workplace experiences not just through their labour but also through their views (Selvaraj and Joseph, 2020). In fact, employee voice is a tool for the employees to bring on positive changes such as further improve the organisational process rather than merely complain or penalise the organisation (Emelifeonwu Jude and Valk, 2019). Hence if there is a good voice mechanism available it could be very helpful for the organisation to respond and deal with the issues arising (e.g. disputes, dissatisfaction) brought up by its employees (Hunjra *et al.*, 2010). Numerous studies in the literature further assert that the failure of an organisation to address issues raised by the employees may result in the organisation losing its talent (Frazier and Bowler, 2012; Kim *et al.*, 2010; Kulkarni, 2010; Pauksztat *et al.*, 2011). It is believed that through providing an employee voice platform, the message and content being conveyed could be a way to improve the performance of the organisation by breaking from the status quo with a view to improve the organisational process (Moasa, 2013).

However, when discussing employee voice, the researchers and academicians alike seem to agree that the issues are not just about the lack of a particular platform provided by the organisation, or the issue of an organisation not permitting its employees to express themselves nor allowing them to voice out their opinion or grievances, but the issue of why the employees are not sufficiently voicing out or expressing their point of views to the organisation. A situation where employees choose to remain silent and are reluctant to express their views is an unhealthy phenomenon that could be detrimental and impede the growth of the organisation (Constantin and Baias, 2015). Tell-tale signs of employee dissatisfaction are when employees refuse to reveal useful information or feedback to the company and this often leads to expression of this dissatisfaction in undesirable behaviours such as high absenteeism and turnover rate (Kim *et al.*, 2010). Thus, if an organisation fails to address the employee voice positively, the above unwanted consequences may possibly occur in the workplace.

The linkage between employee voice and organisational culture has been found out in numerous studies (Junchao *et al.*, 2010; Kowtha *et al.*, 2001; Kwon and Farndale, 2020; Liping and Kan, 2010; Liu and Cho, 2011). These studies have pointed out that culture values might affect how the employees express themselves. Voice behaviour is the result of a calculative cognition process, however the potential risk (e.g. being perceived as a troublemaker, fear of negative feedback) associated with employee voice tends to impede them from doing so (Boichuk and Menguc, 2013). Briefly, the cultural dimension will help to understand how employees map their motive before it is reflected in their voice behaviour in an organisation.

LITERATURE REVIEW

Organisational Culture

Studying the culture in an organisation will help to understand and be aware of employee voice evidence and its impact in the way it is presented. In this study, the term "organisational culture" is modelled using the research study done by Hofstede who is an expert in cultural research and who developed the most influential national cultural framework which has been used by many scholars (Terlutter *et al.*, 2006). Initially, Hofstede defined four types of culture which included power distance, uncertainty avoidance, individualism versus collectivism, masculinity versus femininity that held between 1967 and 1973 (Hofstede and Bond, 1984). These four dimensions formed the basis of Hofstede's book *Culture's Consequences* in 1980. A fifth cultural dimension was added later for short term orientation versus long term orientation in 1988 (Peterson and Sondergaard, 2008). However, in 2010 data from a World Value Survey had added a new cultural dimension namely, indulgence versus restraint (Hofstede, 2011). In this study, the researcher selected power distance and collectivism from the six cultural dimensions suggested by the Hofstede cultural dimensions. The rationale of selecting just two dimensions of the cultural aspect is due to Malaysia ranking top in the power distance dimension and ranking 23rd in the collectivism dimension (Hofstede *et al.*, 2010). Furthermore, the

ranking indexes for the other four dimensions do not show significant results to indicate that Malaysia is associated with the remaining four dimensions. Hofstede (1990) determined that Malaysians have a high power distance, high collectivism, moderate masculinity, and are relatively weak in uncertainty avoidance scores (Selvarajah and Meyer, 2008). The fifth and six cultural dimensions have still not received much attention in Malaysian culture studies because up to date, no research has pointed out that Malaysia is strongly influenced by the fifth and the sixth cultural dimensions. Hence the current researcher did not embrace these two cultural dimensions in this study.

i. Power Distance

Power distance is been defined as “the extent to which the less powerful members of organisations and institutions accept and expect that power is distributed unequally” (Hofstede, 2011, p. 61). For those superiors who have high authority power, subordinate is very likely to not challenge or dare to question them for the fear of being perceived as rude and impolite to their superiors (Ahmad, 2004; Kremer *et al.*, 2019). Large power distance cultures can also called respect culture which determines the role of respect for authority in organisation (Hober *et al.*, 2019; Hofstede, 2007). In other words, power distance is cultural dimension that reflects the extent to which a community accepts and endorses authority, power differences and status privileges (Tavanti, 2012). In organisations, power distance will influence the degree of formal hierarchy, the degree of centralization, and the amount of participation in decision-making (Kwon *et al.*, 2016).

According to Khatri (2009), most of the superiors in high power distance organisation would ensure their subordinate to exactly carry the instruction as the way they are told. To voice out one's opinion and suggestions is not encouraged in a large power distance organisation (Hober *et al.*, 2019). This is because to express ideas that may be dissimilar from the management and superior is considered challenging the status quo and work routine at the workplace (Kees *et al.*, 2013). This behaviour is not favoured because it shows distrust and disrespect towards the management.

Hierarchy is very much emphasised in high power distance organisation, it is believed that there is a line between superiors and subordinates (Wu, 2006). The great emphasis on hierarchical difference between the manager and other organisational member cause employees to perceive the management to be unapproachable and unresponsive. Moreover, superiors are also perceived to be inaccessible which then creates a barrier for employees to communicate often with their superior (Ahmad, 1993). In addition, in a large power distance culture, the leaders are more autocratic, hence communication is likely to be conducted through leader's chain command rather than directly (Hober *et al.*, 2019). Jones (2007) further asserted that this is due to the effect of power centralization in the power distance culture. Decision making process would be over centralized because superiors perceive and treat it as their sole responsibility (Lim, 2001).

ii. Collectivism

Collectivism is been defined as “its opposite pertains to societies in which people from birth onward are integrated into strong, cohesive in – groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty” (Hofstede, 2011, p. 92). Organisations are often viewed as mini – societies with a distinct set of meanings, values and symbols shared by the employees (Ashkanasy *et al.*, 2010). Shared meaning among employees does not ensure or guarantee a decision being made by every organisational members (Alvesson, 2012). Collectivism is strongly emphasised in loyalty towards their organisation (Sumaco *et al.*, 2014). This is in line with Asma and Koh (2010) who indicated that Malaysian is very loyal to their leaders and will follow instruction accordingly. When collectivism is strong, employees tend to be loyalty to their leaders hence the decision making from their employer would be much supported from employees (Hofstede *et al.*, 2010). In brief, employees would perceive that their management is the person who trustworthy.

When a newbie entered a new working environment, they have to learn most of the specific practices of their present organisation hence they need to be able to adapt themselves and be willing to learn particularly about the culture manifested in the organisation. Malaysians tend to be reserved and not outspoken and expressive due to the cultural influence in the way they value the employer and employee's relationship (Amir, 2009). Harmony and consensus in organisations are significant because one of the main characteristics of collectivism is “relationship prevails over task” (Hofstede *et al.*, 2010). It might result in a decision-making process; even though some of the employees do not

agree on it, they just follow leaders' point of view in order to maintain the good relationship with their superiors. Moreover, the in-group relationship should be valued to not spoil the harmony.

Furthermore, Asma contended that Malaysians work extremely well in a team environment as they like to have a sense of belonging hence being an employee accepted in the work group is very important (Asma and Koh, 2010). The spirit of collectivism is more important than individualism, and this is often translated in the willingness to give priority to group interests ahead of individual concerns (Soares *et al.*, 2007). Group interest is the main priority in the organisations. Employees in collectivism culture will be expected to give up their goals in order to benefit group success (Ashkanasy *et al.*, 2010). Managers also promote group loyalty even if individual goals are sacrificed because employees in organisation should take group welfare as the main priority (Dorfman and Howell, 1988).

Employee Voice

Voice has been defined as "promotive behaviour that emphasises expression of constructive challenge intended to improve rather than criticise" (Dyne and LePine, 1998). Voice is a communication behaviour, that can be defined as employee expression of constructive ideas, information, and opinion about the change in an organisation (Dyne *et al.*, 2003). According to Dyne *et al.* (2003), they defined employee voice can be referred to acquiescent voice, defensive voice and ProSocial voice based on their behaviour expression.

i. Acquiescent Voice

Acquiescent voice is defined as "the verbal expression of work related ideas, information, or opinions which are based on feelings of resignation" (Dyne *et al.*, 2003, p. 1373). Dyne *et al.* (2003, p. 1363), had point out that acquiescent voice had taken place because the employees are "agreeing with the group due to low self-efficacy to make a difference". Efficacy means "the belief that performing a particular behaviour will achieve a desired outcome" (Neuwirth *et al.*, 2007). In the work domain, self-efficacy is referring to how an employee self-assures his work capability to execute the task effectively (Janssen and Gao, 2013). Self-efficacy for voice will largely be influenced by supervisor's responsiveness and self-perceived status (Yusoff, 2012).

If the employer is willing to implement changes or do modification requested after receiving the input from employees, this will trigger and strengthen employees to have a more positive self-efficacy (Janssen and Gao, 2013). Moreover, self-efficacy would affect employees to address many stressful situations effectively. If an employee had low self-efficacy, it might be difficult and he would be hesitant to utilise any invitation for input of his feedback which could influence work related decisions (Tangirala and Ramanujam, 2012). If the employees are under negative self-efficacy beliefs, they might perceive themselves as having lacked requisite capability and skills to provide voice input which could affect efficaciousness in organisation functioning and outcomes.

This is in line with the finding by Neuwirth and Frederick (2004), which stated that sometimes employees not speaking up is not merely because they do not have the capability to do so. In addition, they further added that, a low efficacy person sometimes chooses to remain silent, believing that, even if they have the courage to express themselves, it will not bring any changes. In brief, when employees feel resigned, they are likely to follow the majority's decision rather than opposing on the issues because objection also would not bring any significant changes.

In fact, acquiescent voice might happen when an individual experiences a fear of isolation when face with a situation where the majority's voice is in contrast with their opinions (Moreno-Riaño, 2002). When an environment is dominated by a majority pressures, individuals conform to the majority's opinion or face isolation", hence resulting in individuals to often hide their "true" opinions when their opinions conflicts with the prevailing views. This is suitable the indicator that the superiors have the absolute power over subordinate, in order to eliminate those risk taking such as fear or isolation, subordinate should accept the decision made by their superiors (Kremer *et al.*, 2019). Power distance able to decrease the likelihood of taking others perspectives especially those high power individual (i.e. superior) towards the low power individual (i.e. subordinate) (Magee, 2020). This kind of behaviour is parallel with the condition in Malaysia. This happens because Malaysia is a country that adopted high power distance culture and high collectivism, which refers that unequal power distribution between superior and subordinate (Asma and Low, 2001). Thus, high power distance is

assumed to having the positive relationship with acquiescent voice. Furthermore, collectivism indicated when employees belong to a group, they are supposed to look after them in exchange for loyalty (Schermerhorn and Bond, 1997). High collectivism calls out the employees not be willing to share personal opinion which differs from the majority or superior because members should bind in the group in order to deal with things in consistent way (Kwon and Farndale, 2020). Building on these argumentations, the below hypothesis is proposed:

H1: Power Distance has a positive relationship with the acquiescent voice in employee voice.

H2: Collectivism has a positive relationship with the acquiescent voice in employee voice.

ii. Defensive Voice

Defensive voice is a voice behaviour which aims to protect oneself (Dyne *et al.*, 2003). Defensive voice is based on fear and often will shift others attention elsewhere in order to self-protect (Gambiarotto and Cammozzo, 2009). When people have great fear of isolation, their level of opinion expressed is lowered (Moasa, 2013). Emelifeonwu Jude and Valk (2019) contended that we can remain silent in some issues, which we do not agree on; for the sake of saving faces, we prefer interactions which could minimize the disagreement. Hence, apart from keeping silence, there are other ways for employees to express their disagreement, such as dodge the questions to other subjects, express the opinion using everyone else's rather than yours, express ambivalence and even include presenting the opinion which you do not actually hold (Hayes, 2007).

As pointed out by Milliken and Morrison (2003), many organisations are caught in a paradox in which most employees know the truth about certain issues and problems within the organisation, yet dare not to speak that truth to their superiors. Voice can be risky to employees, for instance, it could possibility damage personal image and reputation, and causes loss of social standing, negative impression to superiors, possible demotion and termination (Junchao *et al.*, 2010).

It is only natural to be more willing to express oneself when one perceived others' support for own beliefs, however living in a pluralistic society, having a diverse viewpoint which are different from ours is unavoidable. Although we may not agree with our colleagues or superiors, we may feel that it is not appropriate to question their judgements hence we tend to withhold our true opinions or express it indirectly and tactfully about that particular issue (Hayes *et al.*, 2005). Avoiding argument by changing the topic and without answering the question properly is the most frequent behaviour observed among individuals that use defensive voice (Botero and Van Dyne, 2009). Thus, defensive voice is a voice that employees use to avoid potential threats which might affect their future career development

Voice behaviours may benefit organisations however it is also accompanied with risks and cost for individuals. Since Malaysia management is adopted high power distances, thus they will have role expectations bind employees to show deference, respect, loyalty, and dutifulness to authority figure (Asma and Low, 2001). Employees Malaysia might look for cues that allow them to assess whether their voice will be effective, without negative consequences for themselves (Pauksztat *et al.*, 2011). This is due to superiors in high power distance culture are very unlikely to seek for the employee's opinion or suggestion in decision making (Magee, 2020). Therefore, the employees might tend to apply defensive voice because they afraid to express their point of views that might lead to negative impressions from their superiors. Furthermore, according to Hofstede *et al.* (2010), a high correlation between power distance and collectivism dimension. This means if the organisation is having a high power distance culture, it is also likely to adopt the collectivism culture as well. Collectivism cultures tend to value on group identities, group benefit rather than individualistic culture (Kwon and Farndale, 2020). If the employee dare to challenge organisational interest or pursue their self-interest, it can be seen as harmful the organisational interest that lead to minimize the group cohesiveness (Junchao *et al.*, 2010; Schermerhorn and Bond, 1997). It is assumed that Malaysian employee might tends to do a lot of supporting, hence the culture inhibits assertive, confrontational behaviour and gives priority to maintaining harmony. Therefore, they might not be so brave to voice out because direct confrontations are not welcome in collectivism culture. Based on the logical reasoning, the study hypothesizes that power distance and collectivism will strengthen the positive effect of defensive voice among the Malaysian employees.

H3: Power Distance has a positive relationship with the defensive voice in employee voice.

H4: Collectivism has a positive relationship with the defensive voice in employee voice.

iii. ProSocial Voice

ProSocial voice can be conceptualised as a “non-required behaviour where a motive is to improve rather than merely criticise the situation” (Dyne *et al.*, 2003, p. 1371). This term has been defined as expressing work-related ideas, information, or opinions based on cooperative motives. It aims for the benefit of other people and protection for the organisation (Gambiarotto and Cammozzo, 2009). ProSocial voice is aimed to give constructive ideas for changes which could help organisations reap benefits, the intention is not to benefit solely the employee, but it also targets to provide solution for the organisation cooperatively (Allan and Lu, 2020). Usually, the employees who exercise ProSocial voice is those employees who have more proactive behaviour, it is totally voluntary behaviour to voice the concern even though the organisation did not require them to do so (Botero and Van Dyne, 2009).

According to Perlow and Williams (2003), employees should recognize their power; it should be equal for employees within the organisation to speak freely even though our superiors certainly have formal power over us. However, the level of how well the employees execute their task also will also indirectly affect their performance. Sometimes employee should defence their “right to voice”, because the acts of deviant will be helpful in pointing the areas of problems which need to be changed and is believed to result in fruitful alternatives (Goldberg *et al.*, 2011; Travis *et al.*, 2011). In addition, LePine and Dyne (1998) and Selvaraj and Joseph (2020), also stated despite the power asymmetry between employer and employees might reduce the tendency for the employee to voice out. However, if the employees who hold high self-esteem would still dare to challenge the status quo, because they believe through their voices able to facilitate the greater innovation for the organisation. In general, through practicing the ProSocial voice can be considered as the most rational voice towards organisation because the main motive is to make the organisation gets better.

It is undeniable voice behaviour would somehow challenge the status quo and hurt the relationship between employers and employees especially when the organisation practising large power distance. In fact, power relations play important moderating roles because the lower power positions seem to inhibit voice (Harlos, 2010). The higher the speaker's position in the organisational hierarchy, the more likely for them to speak up than those with lower positions (Pauksztat *et al.*, 2011). This viewpoint is agreed by Milliken *et al.* (2003), as they contended that job position will decrease the likelihood for those employees with low power and less self-efficacy within the work group. Since Malaysia is high in power distance culture, thus ProSocial voice will not be favourable because it does not encourage employees to be expressive, hence it would limit the upward communication because the hierarchy serves as a barrier that limits them from voicing. Thus, it was logically to explain that power distance is negatively skewed toward ProSocial voice among the employees.

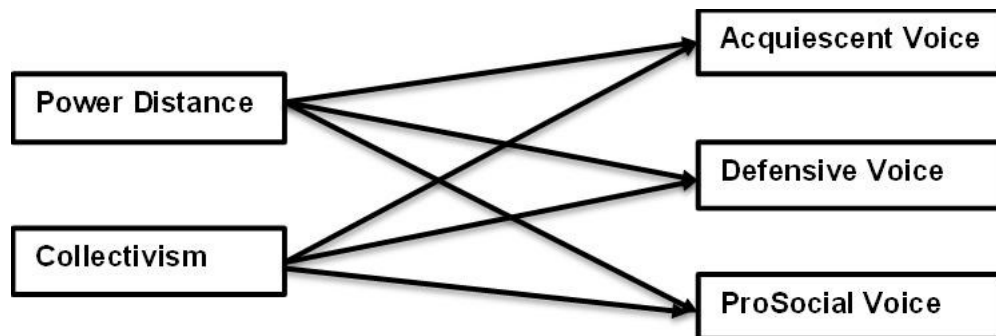
According to Emelifeonwu Jude and Valk (2019), culture is a significant factor in workplace because it can affect how the employee either by voicing or keeping silent over work processes or managerial decisions. Collectivism culture will make employees reluctant to speak up their personal opinions because the collectivism culture gives great emphasis on group harmony and maintenance contribution (i.e. actions that promote harmony) over task contribution (Junchao *et al.*, 2010). As majority Malaysian employees aware the collectivism emphasis in the working culture, hence the employees would tend to avoid conflict or any confrontation among groups (Asma and Low, 2001). Collectivism culture practice often created the feeling of togetherness also impedes them to share their opinion that is different from the majority. This kind of voice behaviour is totally different with ProSocial voice that always emphasized to speak the issues or problem happened in organisation. In short, the suggested hypotheses proposed as below:

H5: Power Distance has a negative relationship with the ProSocial voice in employee voice.

H6: Collectivism has a negative relationship with the ProSocial voice in employee voice.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework



The proposed conceptual model connecting the constructs studied in this paper is exhibited in Figure 1. Power Distance and collectivism both having direct relationship towards acquiescent voice, defensive voice and ProSocial voice respectively. There are total 6 hypothesis in this framework, which is H₁: Power Distance → Acquiescent Voice; H₂ : Collectivism → Acquiescent Voice; H₃: Power Distance → Defensive Voice; H₄: Collectivism → Defensive Voice; H₅: Power Distance → ProSocial Voice; H₆: Collectivism → ProSocial Voice

RESEARCH METHODOLOGY

Sampling Design and Analysis Method

Descriptive research method is employed in this study. Quantitative research method can be statistically analysed and the results could be expressed numerically. This study chooses a survey research method to analyse data collected from the employees who are working in the Malaysian tertiary education institutions. The survey is using self-administrative questionnaires because it is easily distributed to a large group of respondents and there is no interview bias hence response rates would be easier to generate. This research is categorized as correlational investigation because it has the intention to see there is a relationship does exist among the variables. In this study, two types of variables are involved: a dependent variable and independent variable. The dependent variable is the employee voice while the independent variable is the organisational culture. The extent of researcher interference is minimal because it just studies how the organisational culture affects the employee voice. Lastly, this study is a cross sectional study because the data gathered just once to complete this research.

This study adopts the non-probability sampling method, which is purposive sampling to select those respondents who has less than 3 years working experience in the tertiary education. The underlying reason is because the newcomers' employees always need to attend assorted training for the new employees. From here, it can be easier to detect the culture difference because employees usually will have new insights regarding how this organisation value the culture itself. While the data analysis method will be using Statistical Package for Social Science (i.e. SPSS – Version 25) software to process the raw data before using Smart PLS-SEM for further analysis the direct relationship between the organisational culture and the employee voice.

Research Instrument

The questions in the survey used close-ended questions. Part A referred to the screening question that asked the duration of employment in the current tertiary organisation. Those who answer three years and above will be eliminated in this study. Part B included demographic questions such as gender, age, race, and education level. Part C asked questions related to the dimensions that are investigated in the study which included power distance, collectivism, acquiescent voice, defensive voice and ProSocial voice. The table 3.1 shows the overall constructs of the questionnaire for Part C, while the details indicate from where the measurement items were adapted and adopted.

In order to ensure the pilot study and actual study could be more relevant in the context of Malaysia, a pilot study was conducted to check the feasibility of the measurement instruments used in this research. An important purpose of the pilot study is to test the reliability and validity of the instrument before applying in the final version of the hypothesis testing situation. This study recruited 50 volunteer respondents to answer the pilot test. The composite reliability value of each of the variables is presented in Table 3.1. As suggested by Hair *et al.* (2011), all the constructs exceed 0.70 and this confirms the reliability is satisfactory. Also, Table 3.2 shows that Fornell and Larcker (1981) criterion was achieved because the root square of the value (Table 3.2 in bold) for each variable should be greater than the correlation with any other latent variable. The analytical view framework was presented in Figure 2.

Table 3.1 Constructs of Questionnaires

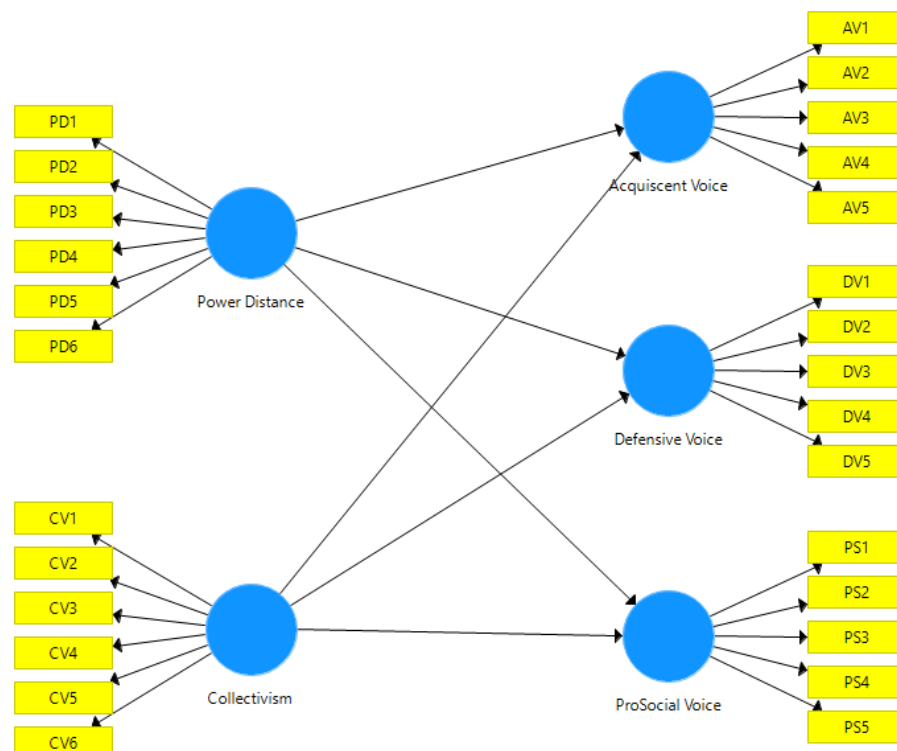
Construct	Items	Items Code	Composite Reliability
Power Distance (Wu, 2006)	Managers should make most decision without consulting subordinates	PD1	0.904
	It is frequently necessary for a manager to use authority and power when dealing with subordinates	PD2	
	Managers should seldom ask for the opinions of employees	PD3	
	Managers should avoid of the job social contacts with employees (i.e. draw the line between employee and management relationship, conversation limit in work affairs only)	PD4	
	Managers should not delegate important tasks to employees	PD5	
	Employees should not disagree with management's decisions	PD6	
Collectivism (Wu, 2006)	Group welfare is more important than individual rewards	CV1	0.890
	Group success is more important than individual success	CV2	
	Being accepted by members of your work group is very important	CV3	
	Employees should only pursue their goals after considering the welfare of the group	CV4	
	Managers should encourage group loyalty even if individual goals suffer	CV5	
	Individuals may be expected to give up their goals in order to benefit group success	CV6	
Acquiescent Voice (Dyne <i>et al.</i> , 2003)	I would passively support the ideas of others because I am disengaged with my job	AV1	0.976
	I would passively express agreement and rarely offer a new idea	AV2	
	I would agree and go along with the group, based on resignation (i.e. complying with other / giving up)	AV3	
	I would expresses agreement with the group due to low self - efficacy to make suggestions	AV4	
	I would passively agree with others about solutions to problems	AV5	

Defensive Voice (Dyne <i>et al.</i> , 2003)	I would not express anything except agreement with my supervisor, based on fear	DV1	0.957
	I would express ideas that shift attention to others, because I would be afraid	DV2	
	I would provide explanations that focus the discussion on others in order to protect myself	DV3	
	I would go along and communicate support for my supervisor, based on self - protection	DV4	
	I would express agreement with my manager, because I would be motivated by fear	DV5	
ProSocial Voice (Dyne <i>et al.</i> , 2003)	I would give solutions to problems that will benefit my organisation	PV1	0.844
	I would develop and make recommendations concerning my organisations	PV2	
	I would communicate my opinions about my organisation even if my supervisor disagrees	PV3	
	I would speak up with ideas for new projects that might benefit my organisation	PV4	
	I would suggest ideas for change, based on constructive concerning for my organisation	PV5	

Table 3.2 Assessment of Discriminant Validity (Fornell & Larcker)

Construct	Acquiescent Voice	Collectivism	Defensive Voice	Power Distance	ProSocial Voice
Acquiescent Voice	0.943				
Collectivism	0.558	0.765			
Defensive Voice	0.819	0.483	0.905		
Power Distance	0.721	0.544	0.792	0.816	
ProSocial Voice	-0.235	0.170	-0.347	-0.366	0.817

Figure 2: Analytical View Framework



CONCLUSION AND DISCUSSION

Based on the literature reviews conducted and the proposed framework, discussions of the employee voice mostly taken place in the western countries. Many of the literatures used in this study are mostly contributed by western scholars especially from the Europe. Employee voice is an area of significant research interest to academics and an issue of great importance to many human resource practitioners. Nowadays many researchers believe that if the organisations ignoring the voice or suggestions made by employees is one of the main contributing factors that leads to low productivity. Hence, to encourage employee voice, there is a crucial need for employers to know which type of organisational culture is more helpful in building an atmosphere that encourages employee voice. Although research on voice behaviour is growing, to date, research examining the role of culture in predicting voice behaviour in different culture settings is still very much lacking. By addressing the gap, in its own small way the study contributes to a deeper understanding of employee voice behaviour that take place in Malaysian context.

Hofstede's cultural framework is the most widely used in a work-related context that applies his framework to psychology, sociology, marketing, and management studies. This current study uses the culture dimension defined by Hofstede's study in 1980 - 2010. He has proven that Malaysia is one of the countries that maintain a high-power distance dimension and is also relatively high in the collectivism dimension. However, Hofstede's study has not been updated to reflect current culture trends. Hence, there is a crucial need for a more current and updated review of the present Malaysian culture to determine if Hofstede's findings still hold true today. In order to enhance the workplace relationship, it is significance to nurture organisational culture that support employee voice mechanisms in the workplace especially through identify the possible factors that motivate or impede the employees to speak up their suggestions, information or opinions. Employee voice can provide positive impact towards the organisational process, but only if there is a genuine opinion or information sharing.

Overall, this research intends to generate awareness within the management to help them become mindful of how to promote proactive voice behaviour and establish a free climate to encourage the employee's voice without assertion or influence by a high power distance and collectivism dimensions that constrain and limit the voice behaviour of the employees. The Malaysia organisation might be able to gain the benefit from this research through improving a more comprehensive voice mechanism that secure those employees who provided their constructive views upwards without worry the possible risk taking.

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BAFE015: UNIVERSITY STUDENTS SATISFACTION FOR BUDGET HOTELS IN MALAYSIA

Lim, Kok Oon^a, Chu, Kai Yuan^b, Law, Kah Chun^c, Teo, Boon Keng^d, Yong, Eng Jun^e,
Chin, Yoon Mei^f, Foo, Pik Yin^g, Loh, Chun T'ing^h

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: okl070329@1utar.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: dororo20@1utar.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: kahchunlaw@1utar.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: jltty96@gmail.com

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: yongejcharles@1utar.my

^fFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ymchin@utar.edu.my

^gFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: foopy@utar.edu.my

^hFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ctloh@utar.edu.my

Abstract

Competition from homestay through the online platform of Airbnb is adversely affecting the profitability of the budget hotel industry in Malaysia. Previous studies primarily focused on the impact of earnings in the short term and do not focus on the impact of personality traits on customer satisfaction. Yet, behavioural effects such as customer satisfaction and loyalty can influence revenues in the long-term. This study is carried out to address these insufficiencies by examining customer's personality traits influence on customer satisfaction in the Malaysian budget hotel industry. Derived from the Five Factor Model, the independent variables comprise of Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism while the dependent variable is Customer Satisfaction. Using non-probability sampling, data was collected from students of two universities in Malaysia. The five-point Likert scale was used to measure the variables for the study in which five hypotheses were tested. Results indicate that only the variable of Agreeableness is positively related to customer satisfaction for budget hotels. The variables of Openness to experience, Conscientiousness, Extraversion, and Neuroticism do not have a significant relationship to customer satisfaction. Based on the findings from the research, operators of budget hotels in Malaysia may do well to adopt strategies which emphasise the trait of Agreeableness in order to maintain their profitability.

Keywords: budget hotels; homestay; five factor model; customer satisfaction; university students; customer loyalty; personality traits

INTRODUCTION

Homestay has become a thriving business in Malaysia and this affects the hotel industry's profitability (Yuen, 2016). With homestay, visitors can experience the local culture while homeowners have the opportunity to profit from their properties through online platforms such as Airbnb (Loh, 2016). Airbnb is an online platform that allows homeowners to rent out their homes to tourists. According to Henry (2013), homestay room rates are less expensive compared with hotel rates allowing tourists to save up to 50% accommodation costs. Additionally, homestays give tourists the opportunity to have a more personalized experience and allow them to experience the local culture (Prasher, 2016). These are some of the features which make homestays more attractive and cause

more people to choose homestay over hotels as accommodations thus affecting the hotelier's long term profits (Yuen, 2016).

Budget hoteliers claim that competition from homestays have eroded their profits by about 5% to 15%. In New York, for example, Airbnb has caused annual revenues for the city's budget hotels to drop by approximately \$450 million. Such impact on profits is expected to be similar in the other countries too, including Malaysia (Zervas, Proserpio, & Byers, 2017). Furthermore, the cost of operating a hotel is higher than a homestay. For instance, hotel operators pay certain expenses such as goods and services tax, wages and utilities at the commercial rates while homestay owners pay these expenses at the lower residential rates (Augustin, 2017).

This study is conducted to assist operators of budget hotels by researching customer loyalty towards budget hotels. By examining a customer's personality, budget hotel operators can adjust their services to satisfy their customers. Maintaining a customer's loyalty can thus go towards maintaining the hotel's profitability.

A personality trait describes an individual through his characteristics which are made up of his feelings, thoughts and behavior (Allik & McCrae, 2002). For the service industry, studies by Gountas and Gountas (2007) and Haghi and Ooshaksaraie (2015) show a relationship between customer satisfaction and personality traits. Customer satisfaction can influence a budget hotel's profitability as satisfied and loyal customers are positive when it comes to reviews (Carev, 2008; Reshidi, Zeqiri, & Kajtazi, 2017). A research by Siddiqui (2012) shows that personality traits may have predictive strength to customer satisfaction because the traits can characterize a customer's spending behavior. Thus, to maintain its profitability and customer satisfaction, the budget hotelier should understand a customer's personality traits.

LITERATURE REVIEW

Five Factor Model

Developed by Donald Fiske in 1949, the Five Factor Model (FFM) outlines the dimensions of personality which comprise of openness to experience (O), conscientiousness (C), extraversion (E), agreeableness (A) and neuroticism (N). The different variables can be designated by the acronym "OCEAN" (Diener & Lucas, 2020). Psychologists agree that these five dimensions succinctly describes the variances in personality traits (Soto & Jackson, 2015). The FFM has been used to study customer expectations and satisfaction in areas such as bank services (Karbasi, Jamshidi, & Hashemi, 2014), audit firms in Taiwan (Liao, 2015), online shopping (Dobre & Milovan-Ciuta, 2015) and in the retail industry (Castillo, 2017). The current study uses the model to measure the personality traits for customer satisfaction of budget hotels in Malaysia.

Under the FFM, openness to experience (O) denotes adjusting oneself to different thinking or circumstances. Features include imagination, inquisitiveness, and resourcefulness. Conscientiousness (C) denotes regulating one's desires, developing plans and realizing goals. Extraversion (E) motivates one's societal adaptability and characteristics include chattiness and confidence. Agreeableness (A) is the inclination to trust others and willingness to relieve them. Neuroticism (N) is the propensity towards undesirable feelings such as distress, sorrow and discomfiture. Characteristics comprise anxiety and moodiness (Digman, 1990). This study applies FFM to investigate the relationship between customer satisfaction and the FFM variables of openness to experience, conscientiousness, extraversion, agreeableness and neuroticism.

Customer Satisfaction

Customer satisfaction is fulfillment reaction and judgment of a product or service (Ameer, 2014). It is the difference between anticipated and actual output. For instance, satisfaction exists when the product or service does better than anticipated (Isac & Rusu, 2014). The degree of satisfaction can be associated with increased or decreased consumption. So a rise in customer satisfaction positively influences profitability (Atiyah, 2016). Rust & Zahorik (1993), state that for a profitable business, customer satisfaction is an important component. Therefore, hotel operators who pay attention to retaining customer satisfaction gain from positive reviews from satisfied customers. This leads to greater profits (Mubiri, 2016; Whitler, 2014).

Openness to Experience (O)

Openness to experience can be indicated from an individual's characteristics such as resourcefulness, inventiveness, inquisitiveness, and gratefulness for the esthetics. Persons who have greater degree of openness is more imaginative, flexible, and daring (Fraser-Thill, 2017; Weisberg, De Young, & Hirsh, 2011). According to a study by Jani and Han (2013) on hotels, openness to experience has a positive relationship to customer satisfaction. However when it comes to the strength of the relationship, other influences such as sensitivity, sentiments, and attractiveness have more impact on customer satisfaction (Naqshbandi Muzamil & Munir, 2011). According to Jani and Han (2015) hoteliers have focused on openness to experience to increase their customer satisfaction and thus revenues. Therefore, it is hypothesized that openness to experience positively influences customer satisfaction.

Conscientiousness (C)

Conscientiousness is evidenced in a person when the individual has long-term objectives, is agreeable, and trustworthy. An individual with conscientiousness is likely to be thorough, careful, law abiding and reliable (Diener & Lucas, 2020). Eisenberg, Duckworth, Spinrad, and Valiente (2014) found that individuals with conscientiousness tend to have this characteristic in their early years and that this trait is evidenced in their school achievements.

Findings indicate that conscientiousness has a positive influence on customer satisfaction and loyalty. Jani and Han (2013) proposed that hotel operators be aware of this when determining which of their service staff be selected for training on interacting with hotel guests. Karbasi, Jamshidi and Hashemi (2014) established that the relationship between conscientiousness and customer satisfaction was significant and positive. They proposed that bank customers be differentiated based on their characteristics to strengthen customer loyalty.

Castillo (2017) demonstrated that conscientiousness has a positive and significant influence on a customer's awareness of empowerment and fulfillment in the retail industry. With their awareness of empowerment, these individuals are confident to interact with service staff. Castillo (2017) proposed that businesses can focus on such individuals to promote customer satisfaction and loyalty. Therefore, it is hypothesized that conscientiousness positively influences customer satisfaction.

Extraversion

Extraversion is evidenced by an individual's pursuit for social simulation and prospects. Individuals with extraversion are therefore outgoing and more readily to express their feelings. (Matzler, Bidmon, & Grabner-Kräuter, 2006). Matzler *et al.* (2005) found that extraversion is evident by an individual's liveliness, determination and boldness. This trait has a strong association with positive affect. Positive affect is an individual's inclination to respond positively while dealing with life problems and when relating with others. In a study of a sporting event Matzler *et al.* (2005) found that extraversion has a positive relationship to satisfaction, indicating the influence of progressive sentiments on consumer self-satisfaction. Matzler *et al.* (2005) proposed that organisers of such events create activities to nurture such progressive sentiments as people are likely to credit successful results to their skills. Studying hotels in a Korean city, Jani and Han (2014) found that extraversion was positively related to the hotel guests' satisfaction, and proposed for the hotel operators to aim their marketing campaigns towards individuals with extraversion. Therefore, it is hypothesized that extraversion positively influences customer satisfaction.

Agreeableness

Agreeableness is indicated in a person's behavior towards strangers and is determined by the person's extent of sympathy (Castillo, 2017). Persons with high degree of agreeableness are apt to be dependable, sincere, unselfish and approachable (Larsen, Buss, Wismeijer, Song, & van den Berg, 2017). In the service industry, investigations have been carried out on how agreeableness is related to satisfaction and findings indicate that agreeableness impacts customer satisfaction. Oliveira, Cherubini and Oliver (2013) found that personality effects a customer's satisfaction in their investigation of cellular phone services. Based on their findings, two individuals can exhibit diverse

response when dealing with like circumstances owing to differences in their characteristics. A study by Jani & Han (2014) on the hotel industry also indicated that agreeableness was positively related to customer satisfaction. Jani and Han (2014) found that individuals who are agreeable tend to be contented easily due to their greater degree of acceptance and patience. Therefore, it is hypothesized that agreeableness positively influences customer satisfaction.

Neuroticism

In psychology, neuroticism is indicated by unstable emotional response and reactions (Carducci, 2009). Neurotic Individuals are inclined to exhibit adverse sentiments such as suspicion, unhappiness, remorse and nervousness (Altin Gümüşsoy, 2016). According to Larsen et al. (2017), a highly neurotic individual is apt to react excessively, are negative, and unable to cope with challenging situations. Conversely, individuals with low neuroticism are inclined to be composed, assured and can deal with challenging situations. Studies show that neuroticism is related to customer satisfaction (Castillo, 2017; Moon, 2015). A study by Jani and Han (2013) shows that neuroticism is negatively related to satisfaction. Similarly, a study by Baudin, Aluja, Rolland, and Blanch (2011) indicates a significant and negative relationship between neuroticism and customer satisfaction. On the other hand, individuals exhibiting little neuroticism are easier to satisfy due to stable emotional behavior (Benjamin & Samuel, 2014). Therefore, it is hypothesized that neuroticism negatively influences customer satisfaction.

CONCEPTUAL FRAMEWORK

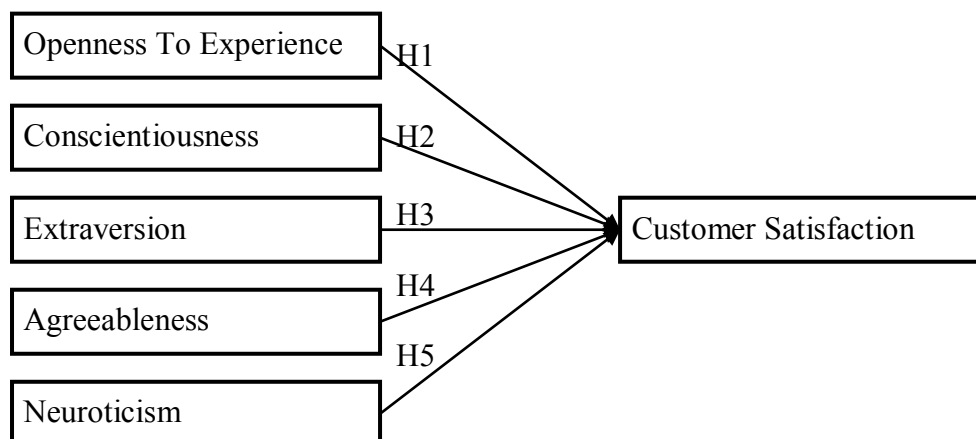


Figure 1: FFM Conceptual Framework. Adapted from Jani and Han (2014)

The conceptual framework is based on the study by Jani and Han (2014). It outlines the relationship between Customer Satisfaction and the FFM variables which comprise of openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. In the framework, the dependent variable is customer satisfaction.

RESEARCH METHODOLOGY

For the study, the sample population comprises of university students from University Tunku Abdul Rahman (UTAR) and Tunku Abdul Rahman University College (TARUC). These universities are both situated in Kampar, Perak, Malaysia. Kampar is centrally situated in Malaysia and is also a noteworthy education center in the country. Students come from various parts of the country to pursue their university studies here.

Data was collected from October to November 2017. Based on the item-to-response ratios suggested by Schwab (2004) and Ojedokun (2016), the sample population has been determined to be 440 students. As data is gathered from homogeneous groups of individuals, non-probability sampling is used (Etikan, 2017). The five-point Likert scale is used to measure the dependent and independent variables for the study.

FINDINGS

Descriptive Analysis

Data from 383 respondents were collected. Female students make up the majority at 260 (67.89%) compared to 123 (32.11%) male students. The majority of respondents were between 18 to 22 years old at 366 students or 95.56%. 17 students or 4.44% were 23 years old and above. The highest level of education is diploma / secondary education for 253 respondents (66.06%), undergraduate degree for 129 respondents (33.68%) and postgraduate degree for one (1) respondent (0.26%). Hence, most of the respondents were undergraduate students.

Reliability Test

Table 1: Reliability Statistics for Pilot Test and Full Test

Variable	Items	Cronbach Coefficient Alpha	
		Pilot test	Full Test
Openness to Experience	10	0.7597	0.7820
Conscientiousness	9	0.8111	0.7212
Extraversion	8	0.7020	0.7999
Agreeableness	9	0.8192	0.7844
Neuroticism	8	0.9000	0.7595
Customer Satisfaction	4	0.8401	0.8703

According to Table 1 above, each variable item is reliable. The highest and lowest values for the Cronbach's Alpha Pilot Test are 0.9000 (Neuroticism) and 0.7020 (Extraversion) respectively. This is followed by 0.7597 (Openness to Experience), 0.8111 (Conscientiousness), 0.8192 (Agreeableness) and 0.8401 (Customer Satisfaction). Meanwhile, highest and lowest values for the Cronbach's Alpha Full Test are 0.8703 (Customer Satisfaction) and 0.7212 (Conscientiousness) respectively. These values are followed by 0.7595 (Neuroticism), 0.7820 (Openness to Experience), 0.7844 (Agreeableness) and 0.7999 (Extraversion). The values are acceptable according to Hair, Black, and Babin (2010) as they are greater than 0.7. Therefore, the question items for each variable are considered to be reliable.

Pearson's Correlation Coefficient Analysis

Table 2: Pearson Correlation Matrix

Pearson Correlation Coefficients (N = 383)						
	Independent Variables					Dependent Variable
Variables	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Customer Satisfaction
Openness to Experience	1.0000					
Conscientiousness	0.2073 <0.0001	1.0000				
Extraversion	0.3144 <0.0001	0.2500 <0.0001	1.0000			
Agreeableness	0.2069 <0.0001	0.2247 <0.0001	0.1915 0.0002	1.0000		
Neuroticism	0.7012 <0.0001	0.1255 <0.0001	0.2108 <0.0001	0.1174 0.0216	1.0000	
Customer Satisfaction	0.1956 0.0001	0.1327 <0.0001	0.1625 0.0014	0.1612 0.0016	0.1925 0.0002	1.0000

Table 2 displays the correlation values between the independent variables and dependent variable and that the range is from 0.13268 to 0.19561. This shows that all five independent variables are positively correlated with Customer Satisfaction. Openness to Experience has the highest correlation to Customer Satisfaction at 0.19561.

Among the independent variables, the correlation between Openness to experience and Neuroticism is the highest at $r = 0.70117$ and the lowest correlation is between Agreeableness and Neuroticism at $r = 0.11735$. According to Hair et al. (2010), if the correlation between the variables is 0.90 and above, this shows a high correlation between the variables and the existence of multicollinearity. The correlation coefficients in this study are below 0.90. The p-values for all the variables are below 0.05 showing that the independent variables are significantly correlated with the dependent variable.

Multiple Linear Regression Test

Table 3: Model Summary

Root MSE	0.67407
Dependent Mean	3.33029
Coefficient Variable	20.24053
R-square	0.0720
Adjusted R-square	0.0597

Table 3 shows the R-square value at 0.0720. This shows that 7.20% of the variation in Customer Satisfaction can be explained by the independent variables. The remaining 92.80% is determined by other factors not considered in the study.

Table 4: Analysis of Variance

Source	Degree of Freedom	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	13.29710	2.65942	5.85	<.0001
Error	377	171.29657	0.45437		
Corrected Total	382	184.59367			

Table 4 shows a p-value of 0.0001 which is less than 0.50, indicating that the F-value of 5.85 is significant. This indicates that at least one independent variable has a significant relationship with the dependent variable. Therefore, the research model is determined to be fit for this study.

Table 5: Multiple Linear Regressions Test

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t-value	Pr > t	Standardized Estimate	Tolerance	Variation Inflation
Intercept	1	1.35917	0.37964	3.58	0.0004	0	-	0
O	1	0.07282	0.10471	0.70	0.4872	0.05058	0.46531	2.14911
C	1	0.09437	0.07995	1.18	0.2386	0.06197	0.89291	1.11993
E	1	0.10828	0.06778	1.60	0.1110	0.08565	0.85637	1.16772
A	1	0.15042	0.07340	2.05	0.0411	0.10646	0.91194	1.09656
N	1	0.15326	0.08994	1.70	0.0892	0.11869	0.50731	1.97120

From the standardized estimates in Table 5, Neuroticism has the highest value at 0.11869, and is therefore the dominant independent variable in this model. As such, based on the standardized estimates, Neuroticism has the greatest influence towards the Customer Satisfaction.

Table 6: Summary of Multiple Linear Regression Results

Hypotheses	Parameter Estimate	Pr > t	Hypotheses Findings
H1: Openness to Experience (O) positively influences customer satisfaction.	0.07282	0.4872 (p > 0.05)	Not Supported
H2: Conscientiousness (C) positively influences customer satisfaction.	0.09437	0.2386 (p > 0.05)	Not Supported
H3: Extraversion (E) positively influences customer satisfaction.	0.10828	0.1110 (p > 0.05)	Not Supported
H4: Agreeableness (A) positively influences customer satisfaction.	0.15042	0.0411	Supported
H5: Neuroticism (N) negatively influences customer satisfaction.	0.15326	0.0892 (p > 0.05)	Not Supported

Table 6 shows the relationship between the independent variables and dependent variable, Customer Satisfaction. Agreeableness has a significant and positive influence on Customer Satisfaction as its p-value at 0.0411 is less than 0.05. As such, Customer Satisfaction increases by 0.15042 for every increase in Agreeableness with the other independent variables remaining constant.

Openness to experience, Conscientiousness and Extraversion show positive relationship towards Customer Satisfaction. Neuroticism shows a negative relationship to Customer Satisfaction. However, their p-values are greater than 0.05 indicating their respective relationships to Customer Satisfaction are not significant and thus, the respective hypotheses are not supported.

The multiple linear equation is derived as follows:

$$\text{Customer Satisfaction} = 1.35917 + 0.07282(O) + 0.09437(C) + 0.10828(E) + 0.15042(A) + 0.15326(N)$$

All the hypotheses are not supported except for H4. Except for Agreeableness, the independent variables of Openness to Experience, Conscientiousness, Extraversion and Neuroticism are not significantly related with the Customer Satisfaction.

DISCUSSIONS

The hypothesis of openness to experience positively influencing customer satisfaction is not supported, as result shows a p-value of 0.4872. This study shows that persons with openness to experience are not affected by the presence of Airbnb when it comes to their customer satisfaction towards budget hotels. From this, university students with openness to experience do not view their accommodation at budget hotel as a novelty experience. As such openness to experience does not influence their customer satisfaction.

The hypothesis of conscientiousness positively influencing customer satisfaction is not supported as result indicates a p-value of 0.2386. Generally, persons with high conscientiousness are industrious. As regards to prices, Airbnb can be in the same price range as budget hotels since both lodgings provide to the similar segment being the economy guests. Therefore, for persons with high conscientiousness who are on a budget, the existence of alternative types of budget lodgings may not impact their customer satisfaction towards budget hotels as both types of lodgings are priced similarly. Hence, conscientiousness would not significantly influence the customer satisfaction for such individuals.

The hypothesis of extraversion positively influencing customer satisfaction is not supported as result indicates a p-value of 0.1110. Extraversion is regarded as when a person looks for social simulation, are more outgoing, and have a tendency to convey their feelings (Cherry, 2017). Findings from this study propose that the traits of extraversion for university students do not influence their

customer satisfaction to budget hotels. In other words, university students with extraversion traits may not regard their holiday lodging as a place for social interaction.

The hypothesis that agreeableness positively influences customer satisfaction is supported as indicated by a p-value of 0.0411. For the study, agreeableness amongst university students is positively related to their customer satisfaction for budget hotels. It can thus be seen that university students have a tendency to be agreeable and as a consequence, prefer to continue cordial relationships with past service providers. Such providers would comprise holiday lodgings providers such as budget hotels.

The hypothesis of neuroticism negatively influencing customer satisfaction is not supported as result indicates a p-value of 0.0892. From the findings, neuroticism of university students does not have a significant relationship to customer satisfaction for budget hotels. Findings from the study propose that university students are not affected by their emotions when deciding on their holiday lodgings.

IMPLICATIONS

Findings from this study show that the personality trait of Agreeableness influences the level of customer satisfaction for budget hotels in the midst of competition from homestay services through the online platform, Airbnb. From the five personality traits (OCEAN) of the FFM, only Agreeableness is significantly related to customer satisfaction for university students in Kampar. Individuals who have Agreeableness personality traits tend to maintain their level of customer satisfaction toward the budget hotel.

This study observes that university students in Kampar who are very agreeable tend to continue their customer satisfaction to budget hotels. This is in spite of the competitively priced homestay accommodations that come with various facilities. Findings from this study can be referred for future studies to ascertain variations in directional associations between Five Factor Model and Customer Satisfaction to preserve the profitability of the budget hotel industry. The findings can also provide for future studies as a starting point for the understanding of university students satisfaction on budget hotels.

The appearance of competitively priced lodgings provided through online platforms such as Airbnb has threatened the budget hotel industry in the country. Therefore this study can benefit budget hotel owners to further understand their customers.

Customers with high agreeableness are likely to be responsible, thoughtful and may desire to continue friendly relationships with budget hotels that they have frequented. To develop customer satisfaction, budget hotel owners can develop brand loyalty among such customers. The hotel can take part in community events while informing their guests through social media. These activities may be seem trivial, but they boost a guest's experiences and consequently profits according to Garg *et al.* (2011).

This study looks at the influence of personality traits on customer satisfaction of budget hotels in the light of competition from Airbnb. By investigating the influence of personality traits on customer satisfaction, the effect on the profitability of budget hotels is analysed on a behavioural instead of financial perspective. Strategies that make use of the behavioural influence may bring about a more lasting effect on profits.

The current study examines the impact of personality traits on budget hotels, which are frequented by economy guests who are focused on price. On the other hand, guests of expensive hotels are not as price-sensitive and are more emotionally involved to brand. Furthermore, budget hotels usually function with only a few staff, so their performance is crucial. For the current study, agreeableness is the only significant influence of customer satisfaction among university students for budget hotels.

LIMITATIONS AND RECOMMENDATIONS

However, this study is not without limitations. First, there are the weaknesses of collecting primary data using self-administered questionnaires. Respondents may not be wholly thorough and truthful when completing the questionnaires. Therefore, it is suggested that future studies consider interviewer-administered questionnaires as another way to gather the data. A more comprehensive and accurate analysis of the respondents' personalities and their satisfaction levels can be attained from interviews as interviewer-administered questionnaires can overcome the inadequacies from self-administered questionnaires (MacDonald, 2011).

Moreover, there are limitations on the sampling location and demographic profile of respondents. The sampling location is restricted to Kampar, Malaysia and comprises only students from two universities. Gathering data from one area may not be entirely representative of the population as there are more than 100 universities and colleges in the country. It is proposed that future research increase the range of location to encompass more universities so as to improve the managerial implication for studies of this nature.

CONCLUSION

The findings from the study show the independent variables of Openness to experience, Conscientiousness, Extraversion and Neuroticism are not significantly related to Customer Satisfaction towards the budget hotels among university students. Only Agreeableness is significantly and positively related to Customer Satisfaction towards the budget hotels.

This study promotes further understanding on the personality traits of university students in order that operators of budget hotel can improve or maintain customer satisfaction in the face of competition from services such as Airbnb homestays. The operators can focus on maintaining satisfaction levels among the university students with the trait of Agreeableness.

From this study, the Five Factor Model is acknowledged as an important model to understanding customer personalities. By observing the personality traits, the budget hotels can personalize their services based on the traits which are significant. This way, the hotel operators can maintain the customer satisfaction in university students in the face of competition from Airbnb homestays.

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BAFE019:
**PEDAGOGY AND TECHNOLOGY CHARACTERISTICS AS
ANTECEDENTS IN DETERMINING UNIVERSITY STUDENT'S
EXPERIENCE RESPONSE DURING THE COVID-19 PANDEMIC: AN
EXTENSION OF MOBILE TECHNOLOGY ACCEPTANCE MODEL**

Yun-Peng Yuan^{a*}, Garry Wei-Han Tan^{b,c}, Keng-Boon Ooi^{d,e} and Wei-Lee Lim^f

^{a*}Faculty of Business and Management, UCSI University, Malaysia,
Email: yunpeng_yuan@163.com

^bFaculty of Business and Management, UCSI University, Malaysia,
Email: garrytanweiha@gmail.com

^cSchool of Finance and Economics, Nanchang Institute of Technology, People's Republic of
China,

^dFaculty of Business and Management, UCSI University, Malaysia,
Email: ooikengboon@gmail.com

^eCollege of Management, Chang Jung Christian University, Taiwan,

^fFaculty of Business and Management, UCSI University, Malaysia,
Email: evalim@ucsiuniversity.edu.my

Abstract

In China, the COVID-19 pandemic makes mobile learning (m-learning) a compulsory action that must be undertaken by higher education institutions and students. Thus, the study attempts to put forth a model established from the mobile technology acceptance model (MTAM) to evaluate how pedagogy and technological factors affect students' experience response towards their compulsory m-learning. The data gathered in this study was based on an online questionnaire survey from Chinese university students. Partial Least Squares - Structural Equation Modelling (PLS-SEM) was applied to validate the offered research model. Outcomes of the analysis indicate that the learning content quality, user interface and connectivity of m-learning system affect student's perceptions of the usefulness as well as the easiness of the m-learning system. The perception then in turn affects their user experience. This study proposes a distinctive viewpoint to explain the adoption of m-learning under special contexts such as the COVID-19 pandemic.

Keywords: Mobile Learning, PLS-SEM, Malaysia, China, COVID-19

INTRODUCTION

Information communication technology (ICT) represented by the internet is one of the most wide-spread and preserved modern technologies around the world. Corresponding to statistical data from International Telecommunication Union (ITU), the figure of global internet users has touched approximately 4.1 billion, which accounts for 53.6% of the current global population (ITU, 2020). During the past two decades, the growth of mobile technologies leads to further enhanced adoption of the internet. Mobile-based ICT has been applied under different scenarios such as in mobile taxi service (Ooi et al., 2018a), mobile payment (Loh et al., 2019) along with mobile learning (Ooi, et al., 2018b). By adopting mobile devices (m-devices), users are able to perform different actions remotely. In 2020, the spread of Coronavirus Disease (COVID-19) has broken the old way of living, and forces people to observe social distancing rules. With this as the background, mobile-based ICT became an important alternative to daily tasks traditionally done physically. In education, the COVID-19 pandemic restricts the feasibility of conducting face to face classes. University students are usually come from different regions, therefore the risks for face to face classes in higher education institutions are higher than local primary schools and high schools.

In China, universities introduced compulsory mobile learning (m-learning) courses to prevent massive infection among students and staff. M-learning is a concept that is derived from distance learning and electronic learning (e-learning) (Yeap et al., 2016), and it has been described as a

learning process implemented using m-devices (Iqbal and Qureshi, 2012). Althunibat (2015) argues that m-learning suits teaching purposes because its mobility fits students' learning needs without restrictions in terms of teaching location and time scheduling. Moreover, m-learning's functionalities support the collaborative learning process by enhancing interactions within the learning group (Dyson et al., 2009; Alshalabi and Elleithy, 2012). However, m-learning, as a novel method of education is with some limitations. For example, the small screen size of devices, poor internet connections, duration of battery life as well as hazards in information security (Ally and Samaka, 2013; Ibrahim et al., 2014) limits its use. China is a substantial market for m-learning. In 2011, China was already estimated to grow and be established as the second largest market of mobile-based education (GSMA, 2011). One reason for China's large market potential for m-learning is its high mobile device penetration. Corresponding to data from the China Internet Network Information Centre (2018), approximately 900 million Chinese people can access the internet through m-devices. Besides, most of the Chinese high-tier universities are equipped with infrastructures to support wireless internet services (Hao et al., 2016). All the advantages provide a productive environment for users such as students to embrace m-learning through their devices.

Researchers have paid great interest in investigating the relationships between various factors on student's intent in adopting m-learning (Joo et al., 2014; Hamidi and Chavoshi, 2018). Such studies were mainly based on generic intention models such as Technology Acceptance Model (TAM) (Davis, 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). However, both models were not specifically designed for mobile adoption (Ooi and Tan, 2016). Hence, this study applies the Mobile Technology Acceptance Model (MTAM) proposed by Ooi and Tan (2016) to satisfy the missing gaps from past studies as the model focused specifically on mobile adoption studies. Moreover, mobile-based education during the COVID-19 pandemic is a compulsory action in China, thus students must attend their online classes. To the best knowledge, currently, there is still insufficient research that investigates m-learning adoption under an involuntary situation. Drawing from the aforementioned gaps, the study aims to investigate how students respond to their involuntary m-learning experiences under this pandemic background. The authors believe that this paper will help the designers of m-learning applications and instructors to deliver better outcomes in increasing students' willingness to study through their m-devices.

LITERATURE REVIEW

Studies in Mobile Learning Adoption

The starting point in the development of m-learning research may be traced back to the year 2000 (Fu and Yang, 2009). Due to issues such as uneven development of supportive infrastructures among urban and rural, regional poverty in addition to teacher-centered mindset (Yu et al., 2005), the expansion of m-learning seems rather slow during the first decade of this century. In recent years, since industrial stakeholders (i.e. government, enterprises and educational institutions) have made great efforts to overcome the above issues, m-learning starts to receive more attention from both public and academician society. Traditionally, the primary research interest of m-learning studies are directed on the integration of mobile technology and course content (Kukulska-Hulme, 2012), and this research interest can be further divided into three directions:

1. Studies on learners' preference for using m-devices versus desktop devices (e.g. Martin and Ertzberger, 2013; Wong et al., 2015a).
2. Studies on the integration of m-learning and contextual environments (Nguten et al., 2015).
3. Studies on m-learning's communication, information sharing and pedagogy (Sevillano-Garcia and Vazquez-Cano, 2015).

Moreover, researchers also focused on the user's behavioural intention (BI) towards m-learning adoption. Ferreira et al. (2013) argued that user's perceptions of m-learning are determined by many attributes including urgency of learning, students' mobility, learning context, alternative learning methods and student's time availability. There are also other influencing factors that drive m-learning adoption among users. For example, Almaiah et al. (2016) found that system quality attributes that include user-interface design and system functionality are strongly associated with university students' willingness to adopt and use m-learning. This result collaborates with a previous study conducted on employee's plans and intent to utilize the e-learning system under the working environment (Cheng, 2012). In addition, individual characteristics are other factors that affect a

user's intention. Joo et al. (2014) indicated that student's personal attitudes towards technological innovations positively affect their intention in accepting the use of m-learning. Such results are reinforced by other researches that investigate the adoption of mobile technologies particularly in the fields of mobile payment (Tan et al. 2013) and mobile financing (Karjaluoto et al., 2018). Apart from supportive factors, researchers also focused on barriers that restrict user's m-learning adoption. For example, researches have been conducted to examine how limitations such as small screen size (Rosman, 2008), poor connection speed (Chen et al., 2008) and concerns on information security (Toyssy and Helenius, 2006) restrict m-learning adoption. Chavoshi and Hamidi (2019) further categorized various influences that shapes an individual's intention to adopt m-learning into four categories include pedagogical factors, technological factors, social factors and individual factors. Considering the fact that the current m-learning activities under the COVID-19 pandemic are compulsory, it is more challenging to justify student's m-learning behaviour derived from the perspectives of individual differences and social influences. As a result, this study attempts to explain how pedagogy and technological features affect students' experience response under the context where m-learning is compulsory.

Theories in Mobile Technology Acceptance

In previous studies, there are many theories expended to examine various causes of an individual's commitment to adopt Information System/Information Technology (IS/IT). One of the most popularly tested models is TAM (Davis, 1989). TAM operates with two variables, specifically, perceived usefulness (PU) and perceived ease of use (PEOU) to rationalise how technological features affect user's intent in accepting the use of technology (Venkatesh et al., 2003). PU represents how the user believes that the adoption of IS will increase their task performance, and PEOU reflects the user's perceived degree of effort to handle IS (Davis, 1989). Previous researches have proved TAM as a robust model in elucidating technology acceptance. For example, Tan et al. (2014) confirm both PU and PEOU exhibits significant and positive outcome towards Malaysian university students' intention to utilize the m-learning system. Similar results also occurred in other works. For example, an early study on the intention of using a distance education system (Pituch and Lee, 2006) and a recent study on m-learning adoption (Al-Emran et al., 2020). In addition, previous studies in m-learning also extended the original TAM with new variables. For example, Cheng (2015) added constructs including compatibility, enjoyment and convince into TAM to examine user's m-learning acceptance. Almaiah et al. (2016) integrated TAM with Delone and Mclean IS success framework to observe how system quality aspects such as interactivity, functionality and user interface influences the user in his or her plan to adopt m-learning. However, as TAM was initially designed to investigate employees' technology acceptance under the working environment (Ooi and Tan, 2016), therefore it may provide less explanatory power to explain the IS/IT adoption for the non-working purpose (Kim et al., 2009).

UTAUT is another widely studied model offered by Venkatesh and Davis (2000). The UTAUT framework is comprised of four main constructs; performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating condition (FC). It should be noted that PE in UTAUT is the same as PU in TAM, which refers to the user's perceived performance increase by adopting the new IS/IT. Also, similar to PEOU, EE refers to the user's level of perceived easiness of utilizing IS/IT (Kim et al., 2010). Different from TAM, UTAUT extends the explanation of user's BI into social and resource perspectives. SI refers to an individual's perceived feelings on how others from his or her social networks believe it is important to use the IS/IT. While FC reflects an individual's perceived supports when using new IS/IT (Venkatesh et al., 2003). Researchers further extended UTAUT by adding new elements into the model. For example, Sabah (2016) integrated UTAUT with mobile limitations and found that factors such as poor internet connection, small screen size and poor navigation in application are the main obstacles preventing students from using m-learning. In addition, Ali and Arshad (2016) proposed a model to explain the influences of interactivity (i.e. interactions among instructors and students) on students' BI towards m-learning. However, since they only proposed the model without testing it, further works need to be done to reveal any of the potential relationships between elements in this UTAUT-based model. Similar to TAM, UTAUT also has its limitation. This model, again, was initially designed to investigate the user's intention to adopt novel IS/IT for working purposes (Venkatesh et al. 2012). Moreover, considering m-learning activities in higher educational institutions are compulsory, SI in UTAUT may provide less power to explain user's experience responses. Therefore, a more 'flexible' model should be employed.

With that intention to fill the gaps, MTAM (Ooi and Tan, 2016) was employed in the current study. MTAM is designed to investigate a user's intention under the mobile technology context. MTAM consists of two core constructs namely Mobile Usefulness (MU) and Mobile Ease of Use (MEU). MU has the same meaning as PU which reflects user's job performance increase by adopting a mobile IS/IT. Meanwhile, MEU is similar to PEOU which describes the perceived easiness of using a particular IS/IT. In this study, however, the two core MTAM constructs themselves are insufficient to explain university student's experience response under the m-learning scenario, because such behavior is neither voluntary nor in consumption-oriented. Therefore, this study introduces other exogenous constructs such as learning quality content (LCQ), interactivity (INT), user interface (UI) and connectivity (CO) to explain MU and MEU. As a newly revised model, MTAM has been proven to be a solid model in many previous types of research. For instance, studies conducted under topics such as mobile payment (Ooi and Tan, 2016), intention towards mobile advertising adoption within the tourism segment (Tan et al., 2018) and wearable payment adoption (Loh et al., 2019). However, to the best knowledge of the authors, this model has not been used in any m-learning related topics. Therefore m-learning context offers a chance to investigate the feasibility and credibility of MTAM.

HYPOTHESES DEVELOPMENT

Mobile Usefulness (MU)

MU shares comparable meaning with variables of PU in TAM and PE in UTAUT. For the current research, MU represents the perceived performance enhancement for a user to adopt m-devices (Ooi and Tan, 2016). Previous studies have revealed that perceived learning performance enhancement positively associates with the user's level of intent to adopt the m-learning system (Hao et al., 2016). Following this logic, if a user possesses an affirmative attitude on m-learning's usefulness during COVID-19 pandemic such as learning anywhere and anytime, he or she may also develop a positive response to the experience of using m-learning. Therefore, the hypothesis below is made:

H1: MU will positively affect the user's experience response (ER) on m-learning usage.

Mobile Ease of Use (MEU)

For the current research, MEU denotes the extent of perceived ease to learn and use for mobile-based services (Ooi and Tan, 2016). Within the context of m-learning, previous researches have revealed that easiness of m-learning is positively related to learner's attitudes towards adoption (Althunibat, 2015; Prieto et al., 2014). Therefore, it is safe to argue that an easier operation of the m-learning system shall reflect a more encouraging response on user experience during the COVID-19 pandemic. As such, the following hypothesis is made:

H2: MEU will positively affect the user's ER on m-learning usage.

Learning Content Quality (LCQ)

Learning Content Quality (LCQ) represents learner's perceived design quality of any digital learning material sources within the m-learning system (such as reading materials, course contents, images, online quizzes). In this study, the content quality reflects learners' feelings on learning materials' reliability, correctness and currentness (Almaiah et al., 2016). Cheng (2012) argues for the importance of quality of learning content to learners, because the quality will positively affect learners' perceived usefulness on learning. Similar, it is confident to argue that if the format of learning content fits with the adopted learning system during the COVID-19 pandemic, learners will feel much easier to learn. As a result, hypothesis three and four are explained as:

H3: LCQ will positively affect the user's MU.

H4: LCQ will positively affect the user's MEU.

Interactivity (INT)

Interactivity (INT) represents the interactions among students and their instructors (Almaiah et al., 2016). According to Shah (2014), joining in a group enable individuals to internalize the gained knowledge through collaborative learning effectively. As such, the interactions in a group help to foster a learning environment that facilitates an individual's learning process. Since m-devices like smartphones were initially developed for communicative purposes, m-learning should be able to

support learners with INT which in turn improves learners' PU towards m-learning (Ali et al., 2016; Almaiah et al., 2016) during the COVID-19 pandemic. Besides, when learners feel that m-learning could offer more effective interactions within their learning community, it is more likely that learner's perceived ease of use on m-learning increases (Cheng, 2012). Therefore, the findings above postulate the following hypotheses:

- H5: INT will positively affect the user's MU.
H6: INT will positively affect the user's MEU.

User Interface (UI)

User interface (UI) concerns with the perception of the user on how the design of IS's interface presents information content, supports functionalities of the system and its friendliness (Cho et al., 2009). According to Cho et al. (2009), UI design could lead to the adoption or discard of technology. Previous studies on remote learning have revealed that UI is a key element that affects a user's PU and PEOU on IS (Joo et al., 2014). In the present investigation, the construct of UI is measured through three dimensions namely visual design (Liu et al., 2010 in 2017 Nikou and Economides), layout and navigation (Lee et al., 2015). When UI design meets user's needs on navigation and visual perception during the COVID-19 pandemic, the user will likely feel the m-learning system to be useful as well as easy to manage. As such, we hypothesises that:

- H7: UI will positively affect the user's MU.
H8: UI will positively affect the user's MEU.

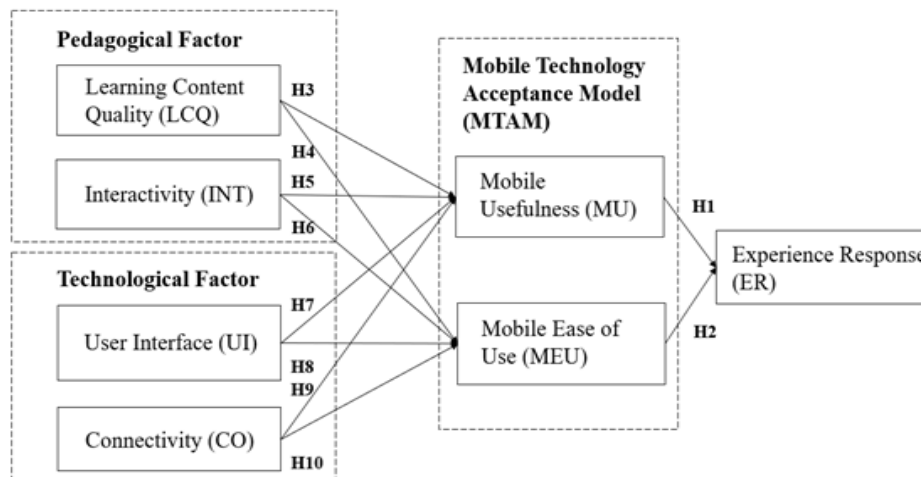
Connectivity (CO)

So far, many constructs have been used to describe how infrastructures support IS adoption. For example, availability describes the extent of how data and system services are accessible to all users without restrictions of time and place (Almaiah et al., 2016) and responsiveness describes a user's feeling towards the responsive speed and quality of IS (Pituch and Lee, 2006). Other constructs that cover similar meanings include mobility (Iqbal and Qureshi, 2012), service quality (Cheng, 2012), accessibility (Al-Debei, 2014) as well as facilitating condition (Teo et al., 2015). Regardless of the diversified descriptions, connection quality is the mutual element among the aforementioned constructs. In this study, connectivity (CO) is used to describe a user's feelings towards the quality aspects of an internet connection. Quality internet connection is among the vital determinations of the user's PU and PEOU because fast and stable internet enhances the effectiveness of the learning process (Sarrab et al., 2016). Under good connectivity, it is also much easier for the user to implement the m-learning system (Almaiah et al., 2016). Therefore, the current research inquiry hypothesises the following:

- H9: CO will positively affect the user's MU.
H10: CO will positively affect the user's MEU.

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework



In light of the above hypotheses, the current research puts forth the following conceptual model (see figure 1) to appraise the influences of pedagogy and technology on the user's (student) experience response toward utilizing the m-learning system in the period of the COVID-19 pandemic.

RESEARCH METHODOLOGY

Research Instrument

The current research is quantitative in nature that employed a self-administered questionnaire survey which is widely used in mobile studies (Sim et al., 2014; Ooi and Tan, 2016). This questionnaire consists of questions that cover all variables in the offered research model such as mobile usefulness (5 items), mobile ease of use (5 items), learning content quality (5 items), interactivity (3 items), user interface (4 items), connectivity (3 items) and experience response (3 items). The seven-point Likert scale ranged from 1 "Strongly Disagree" to 7 "Strongly Agree" has been used for rating respondent's responses. Additionally, questions that describe the respondent's demographic profile were added to the questionnaire. The questionnaire items in Table I were selected based on previous researches in relevant topics (Tan et al., 2014; Chavoshi and Hamidi, 2019), and were further revised to suit the culture and general backgrounds of the studied population.

Table I: Measurement Items

Constructs	Measurement Items	Sources
Learning Context Quality (LCQ)	LCQ1: Mobile learning apps can provide adequate content of learning material that I want. LCQ2: Mobile learning apps can provide complete content of learning material that I want. LCQ3: Mobile learning apps can provide text, audio and video content for me. LCQ4: Mobile learning apps can provide updated content for me. LCQ5: I can always access to the most updated learning materials through mobile learning apps.	Cheng (2012); Almaiah et al., (2016)
Interactivity (INT)	INT1: Discussion with instructors through mobile device is easier for me. INT2: Discussion with classmates through mobile device is easier for me. INT3: Sharing knowledge with others in mobile learning apps is easier for me.	Cheng (2012); Almaiah et al., (2016)
User Interface (UI)	UI1: Mobile learning apps use suitable colours, graphical design and attractive animations. UI2: Mobile learning apps are designed with beautiful menus and icons. UI3: Mobile learning apps have good page layout. UI4: It is easy for me to find the right function in mobile learning apps.	Lee et al., (2009); Cho et al., (2019);
Connectivity (CO)	CO1: Mobile devices have stable and fast internet connections during live teaching. CO2: Mobile devices have stable internet connections when learning with recorded online resources. CO3: The transition of moving between pages is fast when using mobile learning apps.	Sabah (2016)
Mobile Usefulness (MU)	MU1: Using mobile devices for learning enables me to accomplish my assignments/tasks more quickly. MU2: Using mobile devices for learning increases my chances of being more competent. MU3: Using mobile devices makes learning easier. MU4: Using mobile devices for learning will increase my chances of getting a pay rise in my learning community. MU5: Using mobile devices for learning saves me a lot of time.	Ooi and Tan (2016)

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Mobile Ease of Use (MEU)	MEU1: Learning how to use mobile devices for learning is easy for me. MEU2: Using mobile devices for learning does not require a lot of mental effort. MEU3: It would be easy for me to become skilful at using mobile devices for learning. MEU4: I think that I am able to use mobile devices for learning without the help of an expert. MEU5: I find mobile devices for learning easy to use.	Ooi and Tan (2016)
Mobile Experience Response (ER)	ER1: I plan to continue to use mobile devices frequently for learning after the COVID-19 pandemic. ER2: I will always try to use mobile devices for learning in my daily life. ER3: I enjoy my learning experience with mobile devices.	Almaiah et al., (2016); Hao et al., (2016)

Data Collection and Respondent Profile

The questionnaire was prepared in electronic form and distributed through the largest online poll platform in China called “Sojump” to achieve a larger sample size. 3 academic researchers specializing in learning tested the content validity of the survey. Minor adjustments were conducted on format, layout and phrasing of questions. This is followed by the pilot test to check on the scale reliability and validity. An overall of 627 effective responses was collected. The survey respondents were individuals who are university students from universities in China. The respondent profiles are presented in Table II. In general, more responses were females (61.7%) than males (38.3%). However, considering the large sample size obtained, data from the male sample can also generate statistical meaning. Most of the respondents are aged from 17-23 (94% in total), which covers the major age range of those attending university in China. In terms of educational background, 532 respondents are pursuing an undergraduate degree (84.8%), 64 are taking diploma (10.2%), and 31 respondents (5%) are acquiring postgraduate degrees. In terms of mobile usage frequency, most of the respondents use mobile devices from 1 to 8 hours (82.1%) in a day. Additionally, most of the respondents have 2 to 3 mobile devices (73.5%) for study and other purposes.

Table II: Respondent Profile

Characteristics		Number	Percentage (%)
Gender	Male	240	38.3
	Female	387	61.7
Age	Below 17	4	0.6
	17-19	146	23.3
	20-23	443	70.7
	Above 23	34	5.4
	Less than 1 hour	22	3.5
Frequency of using m devices in a day	1 - 4 hours	246	39.2
	5 - 8 hours	269	42.9
	Above 8 hours	90	14.4

Education level	Diploma	64	10.2
	Undergraduate	532	84.8
	Degree		
	Postgraduate	31	5
Number of mobile devices	Degree		
	One	141	22.5
	Two	389	62
	Three	72	11.5
	Four	14	2.2
	Five and above	11	1.8

Statistical Analysis

The conceptual model of this study is examined with Partial Least Squares-Structural Equation Modelling (PLS-SEM) via SmartPLS (version 3.2.9) software. A variance-based method is a proper approach as firstly it focuses on theory building (Yadegaridehkordi et al., 2019). The paper integrates pedagogical and technology factors with Mobile Technology Acceptance Model. Secondly, PLS-SEM is suitable to handle various sample volumes without the assumption for data normality (Ramayah et al., 2020). The multivariate skewness of the Mardia ($\beta = 28.24174$, $p < 0.001$) and the multivariate kurtosis of Mardia ($\beta = 171.13077$, $p < 0.001$) indicate that multivariate assumptions have been violated. The study using 627 samples also exceeded the minimum size of 98 according to G* Power (version 3.1.9.2) using 0.80 power level, 0.05 alpha value, 0.15 effect size and 5 predictors.

Common Method Variance

To confirm that common method variance (CMV) does not affect the study, we follow the approach by Liang et al., (2007). 28 indicators from the conceptual model were included in the common method factor. Then squared factor loading for substantive factor loading (Ra^2) and method factor loading (Rb^2) was calculated. All items in Ra^2 are empirically significant at $p < 0.001$ level and the average of 0.924 higher than the average of 0.015 for Rb^2 . As such CMV is not an issue in this study.

Table III: Common Method Factor Analysis

Latent Construct	Indicators	Substantive factor loading (Ra)	Ra^2	Method factor loading (Rb)	Rb^2
CO	CO -> CO1	1.234	1.522756***	-0.336	0.112896***
	CO -> CO2	1.092	1.192464***	-0.185	0.034225*
	CO -> CO3	0.967	0.935089***	-0.037	0.001369 NS
ER	ER -> ER1	1.056	1.115136***	-0.11*	0.0121*
	ER -> ER2	0.94	0.8836***	0.027	0.000729 NS
	ER -> ER3	0.879	0.772641***	0.082	0.006724 NS
INT	INT -> INT1	1.022	1.044484***	-0.089	0.007921*
	INT -> INT2	0.997	0.994009***	-0.033	0.001089 NS
	INT -> INT3	0.828	0.685584***	0.122	0.014884*
LCQ	LCQ -> LCQ1	1	1***	-0.136	0.018496*
	LCQ -> LCQ2	0.996	0.992016***	-0.096	0.009216 NS
	LCQ -> LCQ3	0.918	0.842724***	0.029	0.000841 NS
	LCQ -> LCQ4	0.8	0.64***	0.139	0.019321*
	LCQ -> LCQ5	0.849	0.720801***	0.056	0.003136

MEU	MEU -> MEU1	0.738	0.544644***	0.202	0.040804** 0.008281 ^N _S
	MEU -> MEU2	1.024	1.048576***	-0.091	0.006889 ^N _S
	MEU -> MEU3	1.031	1.062961***	-0.083	0.002116 ^N _S
	MEU -> MEU4	0.992	0.984064***	-0.046	0.000441 ^N _S
	MEU -> MEU5	0.87	0.7569***	0.021	0.007744 ^N _S
MU	MU -> MU1	0.852	0.725904***	0.088	0.003721 ^N _S
	MU -> MU2	0.993	0.986049***	-0.061	0.038809***
	MU -> MU3	1.142	1.304164***	-0.197	0.065025** 0.006889 ^N _S
	MU -> MU4	0.687	0.471969***	0.255	0.006889 ^N _S
	MU -> MU5	1.012	1.024144***	-0.083	0.006889 ^N _S
UI	UI -> UI1	0.859	0.737881***	0.083	0.003025 ^N _S
	UI -> UI2	1.01	1.0201***	-0.055	0.007225 ^N _S
	UI -> UI3	1.035	1.071225***	-0.085	0.003481 ^N _S
	UI -> UI4	0.895	0.801025***	0.059	
	Average	0.954214286	0.9243182 1	-0.02	0.015867

Notes:

a. *** p < 0.001; ** p < 0.01; * p < 0.05, ^{NS} insignificant.

Assessing the Outer Measurement Model

In measuring measurement model, table IV indicated that all values vary in between 0.945 to 0.975 for both composite reliability (CR) and Dijkstra-Henseler's rho (rhoA) which are beyond the minimum threshold of 0.70 (Wong et al., 2015b; Hew et al., 2019; Lee et al., 2020). Hence internal consistency reliability has been confirmed. In measuring convergent validity, Table IV also indicates that all the readings for factor loadings exceed 0.70, the recommended value (Loh et al., 2019; Al-Saedi et al., 2020). Additionally, all values in average variance extracted (AVE) were above 0.5 which is the suggested threshold (Wong et al., 2015c; Hair et al., 2016). Given both results, convergent validity has been ascertained. Discriminant validity (DV) in table V was performed using Hetero-Trait-Mono-Trait (HTMT) inference via 5000 bootstrapping samples. As none of the lower and upper bounds using a 95% confidence interval achieve the required indicator of 1, it indicates that every construct in the study is statistically distinct and as such, discriminant validity has been established (Hew et al., 2020).

Table IV: Loadings, Composite Reliability, Dijkstra Henseler and Average Variance Extracted

Constructs	Items	Loadings	rho_A (pA)	Composite Reliability (CR)	Average Variance Extracted (AVE)
CO	CO1	0.962	0.962	0.975	0.928
	CO2	0.965			
	CO3	0.963			
ER	ER1	0.953	0.955	0.971	0.918
	ER2	0.965			
	ER3	0.955			
INT	INT1	0.941	0.945	0.964	0.9
	INT2	0.967			

	INT3	0.939			
LCQ	LCQ1	0.877	0.95	0.961	0.83
	LCQ2	0.909			
	LCQ3	0.944			
	LCQ4	0.925			
	LCQ5	0.899			
MEU	MEU1	0.925	0.963	0.971	0.869
	MEU2	0.939			
	MEU3	0.954			
	MEU4	0.95			
	MEU5	0.89			
MU	MU1	0.936	0.966	0.973	0.879
	MU2	0.935			
	MU3	0.954			
	MU4	0.932			
	MU5	0.932			
UI	UI1	0.937	0.964	0.974	0.903
	UI2	0.958			
	UI3	0.955			
	UI4	0.951			

Table V: Hetero-Trait-Mono-Trait (HTMT inference)

Latent Construct	Original Sample (O)	Sample Mean (M)	Bias	2.50%	97.50%
ER -> CO	0.819	0.82	0	0.763	0.865
INT -> CO	0.826	0.826	0	0.771	0.87
INT -> ER	0.83	0.83	0	0.765	0.875
LCQ -> CO	0.758	0.758	0	0.695	0.812
LCQ -> ER	0.823	0.823	0	0.766	0.869
LCQ -> INT	0.868	0.869	0	0.812	0.909
MEU -> CO	0.823	0.823	0	0.768	0.865
MEU -> ER	0.914	0.914	0	0.879	0.942
MEU -> INT	0.813	0.813	0.001	0.749	0.859
MEU -> LCQ	0.81	0.81	0	0.758	0.853
MU -> CO	0.909	0.909	0	0.875	0.937
MU -> ER	0.928	0.928	0	0.901	0.951
MU -> INT	0.844	0.844	0	0.777	0.89
MU -> LCQ	0.828	0.828	0	0.78	0.867
MU -> MEU	0.907	0.907	0	0.871	0.934
UI -> CO	0.881	0.881	0	0.834	0.918
UI -> ER	0.882	0.882	0	0.845	0.911
UI -> INT	0.89	0.89	0	0.841	0.927
UI -> LCQ	0.853	0.853	0	0.808	0.888
UI -> MEU	0.841	0.842	0.001	0.792	0.88
UI -> MU	0.916	0.916	0	0.887	0.94

Inspecting the Inner Structural Model

The saturated and estimated models for Standardized Root Mean Square Residual (SRMR) show indicators of 0.029 and 0.038 that is below 0.08 implying the model has a good fit (Hu and Bentler, 1999). The NFI values also show a good fit as the two saturated and estimated models were 0.92 and 0.91 that is above the limit of 0.90 (Hu and Bentler, 1999). Finally, the root means square residual covariance (RMSttheta) value is also below 0.12 implying the model possessed a good fit for the sample data (Hair et al., 2016). The issue of multicollinearity does not exist in this study as all values were below the threshold of 5.0 (Ooi and Tan, 2016; Tan and Ooi, 2018). To test the hypothesized relationships, a bias-corrected and accelerated (BCa) bootstrap procedure with 5000 subsamples at a significance level of two-tailed 0.05 was employed to generate the p-value for each path coefficients. Table VI indicates that all proposed hypotheses are positive and significant at $p < 0.001$ level except for the association linking UI \rightarrow ME which is only positively significant at $p < 0.01$. The finding reveals that the association connecting INT \rightarrow MEU ($\beta = 0.111$, $P > 0.05$) and INT \rightarrow MU ($\beta = 0.018$, $P > 0.05$) could not be established.

Figure 2: Result of Hypothesis Testing

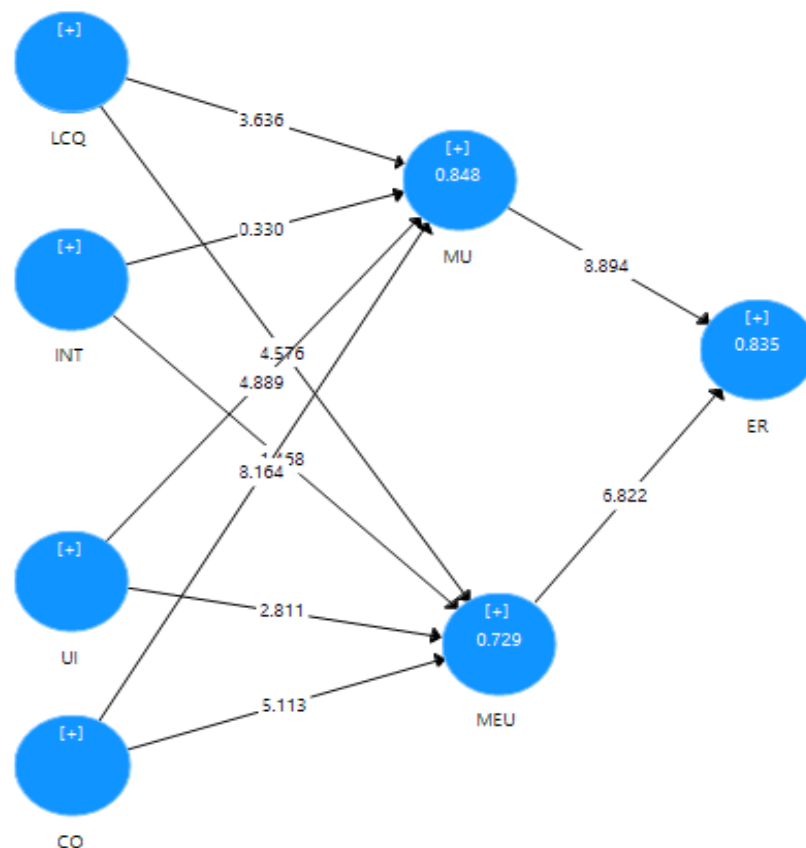


Table VI: Outcome of the Structural Model Examination

PLS Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	2.50%	97.50%	Remarks
CO -> MEU***	0.316	0.315	0.062	5.113	0	0.194	0.433	Significant
CO -> MU***	0.428	0.429	0.052	8.164	0	0.32	0.525	Significant
INT -> MEU ^{NS}	0.111	0.112	0.076	1.468	0.142	-0.028	0.268	Significant
INT -> MU ^{NS}	0.018	0.02	0.053	0.33	0.742	-0.084	0.126	Significant
LCQ -> MEU***	0.264	0.264	0.058	4.576	0	0.154	0.381	Significant
LCQ -> MU***	0.166	0.166	0.046	3.636	0	0.081	0.259	Significant
MEU -> ER***	0.411	0.414	0.06	6.822	0	0.296	0.531	Significant
MU -> ER***	0.532	0.53	0.06	8.894	0	0.414	0.647	Significant
UI -> MEU**	0.232	0.233	0.083	2.811	0.005	0.069	0.393	Significant
UI -> MU***	0.37	0.367	0.076	4.889	0	0.222	0.522	Significant

Notes

a.* Significant at 5% level, $p < 0.05$.

b.** Significant at 1% level, $p < 0.01$.

c.*** Significant at 0.1% level, $p < 0.001$.

The Predictive Relevance and Effect Size

Using f^2 effect size test, the effect sizes of the outcome variables are evaluated. According to Teo, Doleck and Bazalais (2018), thresholds of 0.35, 0.15 and 0.02 are known to be large, medium and small effects. Tan and Ooi (2018) further revealed that values below 0.02 have no effect. According to these criteria, Table VII shows the effect size of the paths ranged from no effect to large effect. Table VIII also shows that all Q^2 values are greater than zero, implying that ER, MU and MEU have predictive relevance (Bae and Lee, 2020; Wong et al., 2020). Finally, R^2 indicators of all predictor variables can be measured using the criterion proposed by Hair et al., (2016) and Ooi et al., (2018c) whereby 0.75 shows substantial, 0.50 is moderate and 0.25 is weak. The analysis shows that the indicators of ER and MU are substantial while MEU is moderate.

Table VII: Effect Size (f^2)

Predictor Constructs / Dependent Constructs	CO	ER	INT	LCQ	MEU	MU	UI
CO					0.097	0.319	
ER							
INT					0.01	0	
LCQ					0.07	0.05	
MEU		0.241					
MU		0.403					
UI					0.034	0.156	

Table VIII: Predictive Relevance (Q^2) and R^2

Endogenous Construct	SSO	SSE	$Q^2 (=1 - SSE/SSO)$	Predictive Relevance	R^2
CO	1,881.00	1881			
ER	1,881.00	448.31	0.762	$Q^2 > 0$	0.835
INT	1,881.00	1,881.00			
LCQ	3,135.00	3,135.00			
MEU	3,135.00	1166.245	0.628	$Q^2 > 0$	0.729
MU	3,135.00	815.62	0.74	$Q^2 > 0$	0.848
UI	2,508.00	2,508.00			

DISCUSSION

Both MU and MEU have significant effects on respondent's experience response towards their m-learning program in the period of the COVID-19 pandemic. The conclusion reaffirms the results of previous research on the user's intent in adopting m-learning (Tan et al., 2014). As theorized, LCQ has significant positive relationships with both MU and MEU. These conclusions are supported by past study done by Almaiah et al., (2016) in which CQ was discovered to significantly influence both PU and PEU positively. Hypotheses related to CO are also supported. The findings on CO are consistent with early studies that found strong positive relationships between a similar construct named mobility and both MU and MEU (Iqbal and Qureshi, 2012). In addition, UI also has positive and significant relationships with both MU and MEU. Similar results were obtained in previous works, for example, Hong's work on digital archives acceptance (Hong et al., 2011) and Chavoshi and Hamidi's work on m-learning acceptance among Iranian university students (Chavoshi and Hamidi, 2019). Surprisingly, no significant relationship between INT and the two core constructs of MTAM is found. The findings are partially supported by a recent work where knowledge sharing (KS) with learning group members was positively and significantly associated with MU, but no significant relationship was found between KS and MEU (Al-Emran et al., 2020). It seems that with or without interactions among students and instructors do not significantly affect students' perceptions on the m-learning system if it's useful or easy to use. A possible explanation is that Chinese pedagogy has a long tradition in terms of teacher-directed and instructive, thus interactions such as group discussion may not normally occur (Zhu and Wang, 2005; Li et al., 2012). However, considering the complexity of a real-world scenario, further investigations are necessary for providing more in-depth explanations.

IMPLICATION

Regarding theoretical contribution, the current study firstly validates the MTAM model within the area of m-learning. Moreover, this research validates the feasibility of integrating pedagogical and technological antecedents with MTAM to explain user experience response under compulsory context, which differs from past literature focused on BI. Along with theoretical implications, current research also offers implications concerning managerial perspective. With a better understanding of learner's experience feedback towards m-learning, both of m-learning application designers and course instructors can improve their system and teaching content accordingly. For example, designers can improve UI to make their m-learning applications more user-friendly while course instructors can rethink their teaching content to meet the requirement of an online m-learning environment. Additionally, the findings in this study can assist policymakers in evaluating the effectiveness of m-learning policies during the COVID-19 context. For instance, policies to encourage universities to improve their network capacity.

CONCLUSION

This research reveals that pedagogical and technological factors could affect students' experience responses in adopting the m-learning system during the period of the COVID-19 pandemic. Factors include content quality to learning, the user interface of m-learning applications, in addition to the connectivity of m-devices, all have significant influences on students and how they perceive m-learning systems which in turn affects their experience responses. Moreover, significant effects were found between the two core constructs in MTAM (i.e. MU and MEU), and student's

experience responses, thus proving MTAM's validity and potentials in m-learning topics. Under this unique period of the COVID-19 pandemic, this study focuses on the user's experience response rather than BI, which is widely studied under a normal environment, thus investigating user's attitudes on m-learning under the compulsory situation.

LIMITATION

This current study has several limitations. Firstly, this research is conducted within the university environment, thus the findings of this study may not represent the user's m-learning attitudes under other scenarios, for example, m-learning under the working environment. Moreover, the respondent profile in terms of an educational level is not evenly distributed, thus may not appropriately reflect the attitudes of students who are not at the undergraduate level. In addition, the results revealed that interactivity does not have strong relationships with MU and MEU, hence there are needs for further examinations on these constructs under different target populations. Finally, the current study provides an initiative framework on using MTAM to investigate student's intention to adopt new learning technology, therefore future works can focus on other independent, moderating or mediating variables to extend this framework.

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BAFE021: POST COVID-19: MALAYSIAN CONSUMERS' PERCEPTION TOWARDS ELECTRONIC PAYMENTS

Zulnurhaini Zolkaply^a, Mai Farhana Mior Badrul Munir^b, Hayati Yusof^c

^{abc}**Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: zulnurhaini@utar.edu.my, maif@utar.edu.my, hayati@utar.edu.my**

Abstract

COVID-19 pandemic has steepened the adoption curve of electronic payments in many countries including Malaysia. A study conducted by MasterCard in May 2020 shows that Malaysia has higher number of cashless payment transactions than the other Southeast Asia countries. This is supported by the Visa country manager for Malaysia who claims that the cashless payments has boomed within a few months only which is equivalent to three years' worth of growth. Electronic payment (e-payment) usage is believed to increase in the Post-COVID-19 and is likely to remain as the preferred payment option in the future. The government of Malaysia has also embarked on various programmes such as ePENJANA to encourage cashless transaction among Malaysians. Touch'n Go e-wallet is one of the financial initiatives by the government to help the public and businesses affected by the pandemic. This study aims to understand the factors that may influence the Malaysian customers' perception towards the e-payment now than before. Some variables from Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) have been used in this study. An additional variable, perceived security towards using the electronic payment have been included into the proposed framework as well. A cross-sectional study has been conducted and self-administered questionnaires have been distributed to the consumers in Malaysia. The results showed that perceived usefulness, perceived ease of use, attitude towards behaviour and perceived behavioural control are very significant affecting the consumers' intention to use e-payment. However, the contribution of social norm and perceived security did not affect consumers' behaviour at all. Findings from this study will then be used in a comparative study of consumer behaviour between pre- and post-COVID-19.

Keywords: e-payments, Behavioral Intention, Use Behavior, Consumers, Post-COVID19

1. INTRODUCTION

1.1 Introduction and Background of Study

The COVID-19 pandemic had interrupted life - world trade, commerce, economy, education, daily norms and other activities. World Health Organization (WHO) who had encouraged physical distancing policy has inspired consumers to do contact-less activities, including payment transactions because it helped to minimise physical handlings, touching, face-to-face conversations in order to contain the potential spread of the virus. Thus, COVID-19 pandemic has steepened the adoption curve of electronic payments (e-payments) in many countries including Malaysia. E-payment is viewed differently by many scholars as any form of fund transfer via the internet (Peter & Babatunde, 2012). This is supported by Adeoti and Osotimehin (2012) who have defined e-payment system as an electronic means of making payments for goods and services procured online or in supermarkets and shopping malls. Another definition of e-payment suggested by Kaur and Pathak (2015) is the payments made in electronic commerce environment in the form of money exchange through electronic means.

Before the outbreak, the use of cashless payment through smartphones already gained popularity in several developing countries (Capgemini, 2019) such as Thailand, Vietnam, and Indonesia (PWC, 2019). Besides, Mastercard Malaysia and Brunei country manager claimed that even prior to COVID-19 pandemic, digital payments were already on the rise in Malaysia. The pandemic intensified the necessity and adoption of digital payments due to safety concerns and the need to access essential items in light of the lockdown and movement restriction orders. The impact

can be seen from the significant decline in cash usage by 64 per cent and Malaysia reported higher cashless payment transactions compared with other Southeast Asia markets (Covid-19 pandemic accelerates adoption of cashless transactions, 2020).

Furthermore, e-payment system had led the financial institutions to offer different electronic modes of payments to their customers such as the credit cards, debit cards, on-line banking and mobile banking (Premchand & Choudhry, 2015). Besides that, the government of Malaysia has also embarked on various programs such as ePENJANA to encourage cashless transactions among Malaysians. Touch'n Go e-wallet is one of the financial initiatives by the government to help the public and businesses affected by the pandemic. In this paper, the arrangement is as follow: first is the Problem Statement, followed by Literature Review and Conceptual Framework, then, we discuss the Research Methodology, Data Analysis, and lastly, the Conclusion and Discussion.

1.2 Problem Statement

Almost 50% of global shoppers were using digital payments more than before the pandemic, and the majority plan continues doing so after the virus is contained (PRNewswire, 2020). These changes can be seen in the Malaysian consumers' behavior which was also affected due to the novel coronavirus (Nielsen, 2020). Prior to this pandemic, the expected growth for cashless transactions in Malaysia for the 2010-2015 period is only 9%, compared to 12% and 27% for Japan and China, respectively (Vinayak et al. 2012). Referring to these figures, it seems like Malaysian consumers will continue to rely heavily on cash and other paper-based payments. However, the study conducted by MasterCard in May 2020 revealed that Malaysia has higher number of cashless payment transactions than the other Southeast Asia countries. This is supported by the Visa country manager for Malaysia who claims that the cashless payments has boomed within a few months only which is equivalent to three years' worth of growth (Covid-19 pandemic accelerates adoption of cashless transactions, 2020). However, studies examining the COVID-19 pandemic effect on the way consumers make a payment remain scarce (Aji, Berakon, & Husin, 2020). Therefore, we embark on this study to analyse the variables that may lead to the significant shifts of Malaysian behavior towards e-payment.

Furthermore, a study by Kabir, Saidin, and Ahmi (2015) found that the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) are the most frequently used models in determining e-payment adoption in the past. Therefore, there is a need to adopt the other established models so that the variables are properly addressed. For this reason, the constructs from Technology Acceptance Model (TAM) are adopted along with Theory of Planned Behaviour (TPB) as independent variables in this study. In addition to the existing variables, perceived security has been included as the extended independent variable in order to determine the significant factors that can impact the usage of e-payment after the pandemic.

Due to the prediction that e-payment use will grow significantly within the next few years, consumers expect convenience and security to go hand-in-hand with the mobile payment. This is supported by the prior research that revealed perceived security is a significant factor that can affect consumers' behavioural intention to use e payment by adopting UTAUT model (Junadi, 2015; Musa, Khan & AlShare, 2015) and TAM model (Lai, 2017) for countries other than Malaysia. However, a recent study by Nielsen Malaysia on Malaysia's shifting payment landscape before the pandemic, only 8% of Malaysians had adopted the use of e-wallets ("Security fears and online frauds discourage use of e-wallets", 2019) and security is one of the major reasons highlighted as a barrier to cashless adoption where 46% of Malaysians are concerned about security measures and fraud risks related to digital payments ("Nielsen sees security concerns as main barrier to e-wallet adoption", 2019). Due to this mixed outcome, it is interesting to examine the effect of perceived security on the e-payment usage among Malaysian after the outbreak by extending the TAM and TPB model.

2. LITERATURE REVIEW

Basically, this study adopted two theories. They are Technology Acceptance Model (TAM) and Theory of Planned Behaviour.

2.1 Technology Acceptance Model (TAM)

Technology Acceptance model was developed by Fred Davis and Richard Bagozzi in 1989. TAM explains how new technologies affect users' choices to use the technologies. It predicts the technology's acceptability and helps to find out more about the modifications that need to be introduced in a system (Davis, 1989). TAM suggests that the acceptability of new technologies depend on two main factors that are perceived usefulness and perceived ease of use. Even though many studies have adopted the TAM model in the past, however, the study of online consumer behaviour is dynamics in nature and they vary from case to case as newer and better technologies emerged (Guritno & Siringoringo, 2013).

2.1.1 Perceived Usefulness (Independent Variable 1 – IV1)

Perceived usefulness is referring to the degree to which a person believes using a system would enhance that person's performance (Davis, 1989). In Pakistan, Raza, Umer and Shah (2017) carried out a study to explore the factors that can encourage the people of Pakistan towards the usage of mobile banking. They found out that perceived usefulness has a positive significant relationship with attitude and intention towards adopting mobile banking.

In a study of online airline ticketing in Indonesia, Guritno and Siringoringo (2013) adopted perceived ease of use and usefulness to test the dynamics of online consumer behaviour. They found out that perceived usefulness has a stronger influence on the attitudes towards usability of airlines ticket reservation than perceived ease of use and trust.

In Sri Lanka, as there are limited studies conducted on E-commerce, Athapaththu and Kulathunga (2018) decided to study the factors influencing online purchase intentions of customers in online retail shopping. They pursued the study from the technological and social commerce perspectives. They found out that online purchase intentions in Sri Lanka is positively and significantly related with perceived usefulness, perceived ease of use, website content and trust. Thus,

H1: There is a positive relationship between Perceived Usefulness and Consumer's Behavioural Intention to Use Electronic Payments

2.1.2 Perceived Ease of Use (IV2)

Perceived ease of use is referred to as the degree to which a person believes that a system can be used without much effort (Davis, 1989). Moslehpour, Pham, Wong, and Bilgiçli (2018) found Perceived Ease of Use as the strongest factor that has a positive impact in their e-purchase intention study. Combining TAM model with some attributes of the Big Five Personality Traits, they conducted a study in Taiwan to explore how far e-purchase intentions are influenced by one's personality traits and technological perceptions.

Another study that adopted Perceived Ease of Use as the factor that affect online attitude and behaviour is conducted by Cho and Sagynov (2015). The study indicated that Perceived Usefulness, Perceived Ease of Use and Trust had a significant effect statistically on behavioural intention to shop online. In Guritno and Siringoringo (2013) study also, Perceived Ease of Use had a positive relationship with online airlines ticketing even though the relationship is weaker than Perceived Usefulness. Hence,

H2: There is a positive relationship between Perceived Ease of Use and Consumers' Behavioural Intention to Use Electronic Payments

2.2 Theory of Planned Behaviour (TPB)

Icek Ajzen proposed the Theory of Planned Behaviour in 1985. TPB helps to understand human behaviour, as an extension to the Theory of Reasoned Action (TRA). TPB made use of an additional variable known as Perceived Behavioural Control. Many studies have shown that human behaviour is influenced by Attitudes, Subjective Norms and Perceived Behavioural Control. These attributes determine behavioural intention. Hence, apart from TAM, this study combined Perceived Usefulness and Perceived Ease of Use with three independent variables and perceived security

below as our theoretical contributions during post-COVID 19's behavioural intention to use electronic payment observation.

2.2.1 Attitude Towards Behaviour (IV3)

Attitude is a person's overall judgement of behaviour. It can also be defined as a favourable or unfavourable behaviour that represents a general feeling towards a concept (Ajzen & Fishbein, 1991). As people in Myanmar are catching up with the development of Internet technologies and the rise of the social media, Aung (2016) studied the factors that influenced its consumer attitude towards purchasing online fashion items. While adopting the Theory of Reasoned Action (TRA), he discovered that factors such as convenience, privacy risk and hedonic shopping motive did not have any influence on the customers' attitude towards online purchasing.

On the intention of online buying among students in Malaysian public universities, Hasbullah, Osman, Abdullah, Salahuddin, Ramlee and Soha (2016) focused on the students' attitude, among others, and revealed that attitude, subjective norms and website usability are significant with the youth's online behaviour.

Additionally, Albarq and Alsughayir (2013) tested the Theory of Reasoned Action in the context of Internet banking intention using the Structured Equation Modeling (SEM) in emerging non-western countries like Saudi Arabia. They claimed that the direct path of attitude to actual behaviour produced an improvement in fit (a good fit) as compared to the original application of the TRA model. As a result,

H3: There is a positive relationship between Attitude Towards Behaviour and Consumers' Behavioural Intention to Use Electronic Payments

2.2.2 Subjective Norms (IV4)

Subjective norms are referring to the attitude of a person whether to perform or not to perform certain behaviour under social influence or pressure (Ajzen & Fishbein, 1991). Deploying Roger's Diffusion of Innovation theory, Zendeheel, Paim, and Osman (2015) examined the attitude of potential Malaysian consumers to purchase online. From their SEM analysis, attitude is found to have a positive impact on the intention towards online purchasing together with other factors such as subjective norms, compatibility and relative advantage.

Another study that has a positive finding that linked subjective norms to consumer intention to use electronic money is done by Nugroho, Najib and Simanjuntak (2018). This study involved 290 undergraduate students in Indonesia who have never used server-based electronic money while the campus environment is said to be a good model for less cash society.

Examining the role of trust among the Vietnamese when they intend to shop online, Ho and Chen (2014) deployed technology beliefs, trusting beliefs and subjective norms beliefs as their variables. Even though not turning out as the strongest factor, the study admits the role of subjective norms beliefs on Vietnamese online shoppers' intentions. Thus,

H4: There is a positive relationship between Subjective Norms and Consumers' Behavioural Intention to Use Electronic Payments

2.2.3 Perceived Behavioural Control (IV5)

Perceived behaviour control refers to a person's perception that performing the behaviour of interest to the extent where the performance is easy or difficult (Ajzen & Fishbein, 1991). In the study to analyse the factors that influenced people's behaviour to use electronic payment instruments (debit and credit cards) in Indonesia, Sudibyo, Maarif, Sukmawati and Affandi (2018) adopted the Theory of Planned Behaviour consisting of attitude, subjective norms and perceived behavioural control as their variables. The results of their SEM analysis show that people's intention is influenced by perceived behavioural control the most.

Using Theory of Planned Behaviour and Locus of Control as the moderator in a study involving the intention to use E-money in Indonesia, Ayudya and Wibowo (2018) found out that the variable attitude to behaviour and control of perceptive behaviour have a positive effect on the intention to use electronic money. In contrast, subjective norms did not influence the E-money users except for rural users. Hence,

H5: There is a positive relationship between Perceived Behavioural Control and Consumers' Behavioural Intention to Use Electronic Payments

2.3 Perceived Security (IV6)

Security is involved in electronic payments in order to ensure the information integrity and privacy of consumers. Security is "a set of procedures, mechanisms and computer programmes to authenticate the source of information that provides the integrity and privacy to customers" (Junadi, 2015, p. 218). Perceptions of security is influenced by factors such as technical protection of customer privacy and legal and regulatory protections as perceived by customers, among others. Perceived security is found to have a positive effect on the intention to use electronic payment systems. Junadi (2015), however, adopted the UTAUT (Unified Theory of Acceptance and Use of Technology) model in his study.

In a Qatar's study of the factors that influenced the customers' intention in adopting the Mobile Payment Device (MPD) technology, Musa, Khan and AlShare (2015) concluded that perceived information security has direct significant effects on consumers' behavioural intention to adopt the MPD. These researchers also deployed the UTAUT model.

Extending the TAM model using security as a factor, Lai (2017) explored the use of a single platform payment system comprising of card, Internet and mobile applications in ASEAN countries. The researcher found out that security is a significant factor that contributed to consumers' intention to utilize the single platform payment system. Hence,

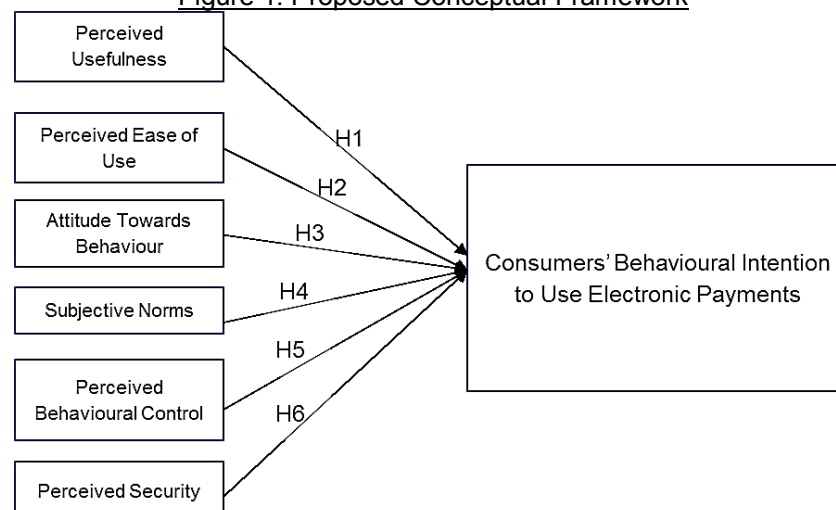
H6: There is a positive relationship between Perceived Security and Consumers' Behavioural Intention to Use Electronic Payments

2.4 Consumers' Behavioural Intention to Use Electronic Payments (Dependent Variable – DV)

In the dependent variable, our study assessed whether there is a possibility of a person to perform a specific action or behaviour in using the electronic payments when conducting online purchasing (and vice versa). Based on the factors above, we proposed the following conceptual framework:

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework



Sources Adopted from: Davis (1989) & Fishbein and Ajzen et al (1967)

3. RESEARCH METHODOLOGY

3.1 Research Design

Quantitative research design is applied in this study as it is easier to be measured and the outcome of the results can be shown clearly based on objective facts, statistics and numerical data. A cross-sectional study has been conducted and self-administered questionnaires have been distributed to the consumers in Malaysia.

3.2 Population, Sample and Sampling Procedure

The targeted respondents for this study are Malaysian consumers from the age of 18 years old to 50 years old. Quota sampling technique is used because it is a cost-effective approach and it is able to increase the level of efficiency. It is a type of non-probability sampling technique where the selection of population is in accordance to some fixed standard whereby the selected samples are assumed to have the same proportion of characteristics based on the basis of pre-specified characteristics (Crossman, 2018). According to National Census 2010, the states with the most population are Selangor, Johor, Sabah, Sarawak and Perak. Due to COVID-19 pandemic, we were not able to collect much data from Sabah and Sarawak. The data that we obtained were mainly from Perak, Johor, Pulau Pinang and Selangor. There were only a few numbers of respondents from other states as well except from Perlis. The age chosen is as such because the highest distributions of the digital native falls on the age between 20s to 50s (Internet Users Survey, 2018) in order to be able to conduct e-payments while these groups may also be the family income earners.

3.3 Data Collection Method

Online self-administered questionnaires via Google Form have been distributed randomly to the potential Malaysian consumers that aged between 18 to 50 years old. There are 35 items from construct by using a five-point likert scale interval to measure. Our questionnaire was developed to collect the required data after reviewing some previous studies that made use of TAM, TPB and perceived security as their models or construct. Our target respondents are able to select the options easier since there are only five options. When more options are available, it might discourage the respondent to answer the questions.

In total, 220 questionnaires were returned (completed and usable). Questionnaires were distributed and collected online through Google Form platform and the data were analysed by using SPSS.

4. DATA ANALYSIS

For findings and analysis, descriptive analysis and inferential analysis were chosen for this research study.

Table 1: Demographic Profile of Respondents

Demographic Criteria	Frequency	Percentage (%)
Gender		
Female	141	64.09
Male	79	35.91
Age Group		
18 to 24 years old	200	90.91
25 to 31 years old	4	1.82
32 to 38 years old	1	0.45
39 to 45 years old	5	2.27
Above 46 years old	10	4.55

Education Level		
High School	116	52.73
Diploma	19	8.64
Degree	84	38.18
Master and above	1	0.45
Location		
Perlis	0	0
Kedah	9	4.09
Pulau Pinang	33	15.00
Perak	96	43.64
Selangor	20	9.09
Kuala Lumpur	5	2.27
Negeri Sembilan	4	1.82
Melaka	5	2.27
Johor	36	16.36
Pahang	6	2.73
Terengganu	1	0.45
Kelantan	2	0.91
Sabah	2	0.91
Sarawak	1	0.45
Use of e-Payment		
Yes	206	93.64
No	14	6.36
Frequency of Use (at least)		
Once a week	91	44.17
Once a month	111	53.88
Once a year	4	1.94

Table 1 above summarised the demographic profile of 220 respondents who took part in this study. The majority respondents were female, 141 (64.09%) and 79 (35.91%) respondents were male. Most of the respondents were between 18 to 24 years old (200 respondents, 90.91%) followed by five (2.27%) respondents at the age group of 39 to 45 years old, 10 (4.55%) respondents above 46 years old and the remaining five (2.27%) respondents were aged from 25 to 38 years old. Most of the respondents participated in this study were high school graduates (116 respondents, 52.73%), followed by bachelor degree holders (84 respondents, 38.18%) and only one respondent (0.45%) had diploma qualification. In addition, most respondents (206 respondents, 93.64%) have used e-payment with the frequency of use at least once a month (111 respondents, 53.88%) and at least once a week (91 respondents, 44.17%). The respondents were mainly from Perak (96, 43.64%), Johor (36, 16.36%), Pulau Pinang (33, 15%), and Selangor (20, 9.09%). The remaining 15.91% respondents were in other states except Perlis with zero participation.

Table 2: Reliability Test

Variable	Constructs	Cronbach's Alpha	Number of Items
IV 1	Perceived Usefulness (PU)	0.912	5
IV 2	Perceived Ease of Use (PEOU)	0.849	5
IV 3	Attitude Towards Behaviour (ATB)	0.904	5
IV 4	Subjective Norm (SN)	0.862	5
IV 5	Perceived Behavioral Control (PBC)	0.894	5
IV 6	Perceived Security (PS)	0.913	5
Dependent Variable	Consumer Behavioral Intention (BI)	0.936	5

As shown in Table 2, the Cronbach's alpha values range from 0.849 to 0.936. Hence, all items are reliable as the results exceed 0.60 threshold.

Table 3: Pearson Correlation Coefficient Analysis

Variable	r	p-value
Perceived Usefulness (PU)	0.640	<.0001
Perceived Ease of Use (PEOU)	0.550	<.0001
Attitude Towards Behaviour (ATB)	0.709	<.0001
Subjective Norm (SN)	0.275	<.0001
Perceived Behavioral Control (PBC)	0.690	<.0001
Perceived Security (PS)	0.445	<.0001

Table 3 above indicates that all variables have positive correlation with Behavioural Intention (BI) to use electronic payments among consumers. Attitude Towards Behaviours (ATB) shows a strong positive linear relationship with BI while Subjective Norm (SN) shows a fairly weak relationship. Besides, there is a positive moderate correlation between the variables of Perceived Behavioral Control (PBC), Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Security (PS) and the dependent variable, Behavioral Intention to use.

Table 4: Summary of Model

	R	R ²	Adjusted R ²	Standard Error of the Estimate
BI	0.856	0.766	0.575	0.4506

In Table 4 above, 76.6% of consumers' Behavioural Intention to use electronic payment is explained by the six IVs and the remaining 23.4% can be explained by other factors that have not been discussed in this study.

Table 5: Parameter Estimates of Construct for Behaviour Intention

Construct	Parameter Estimate	Standardised Estimate	Standard Error	t	p-value
Intercept	0.713	0	0.215	3.314	0.001
PU	0.201	0.198	0.075	2.677	0.008
PEOU	-0.157	-0.148	0.077	-2.031	0.043
ATB	0.375	0.377	0.082	4.554	<.0001
SN	0.012	0.016	0.040	0.312	0.756
PBC	0.372	0.362	0.077	4.836	<.0001
PS	0.043	0.046	0.054	0.799	0.425

Table 5 indicates that the results (p-value) for four IVs (PU, PEOU, ATB, PBC) are less than 0.05 and are significantly related to consumers' Behavioural Intention to use electronic payments. Therefore, H1, H2, H3 and H5 are supported in this study. Besides that, the value of standardised estimate for all three IVs are 0.198, -0.148, 0.377 and 0.362, respectively. It can be concluded that Attitude Towards Behaviour is the most important predictor in this study, followed by Perceived Behavioural Control, Perceived Usefulness and Perceived Ease Of Use. Thus, the regression equation for four IVs is formulated as below:

$$BI = 0.713 + 0.201(PU) + -0.157(PEOU) + 0.375(ATB) + 0.372(PBC)$$

5. CONCLUSION AND DISCUSSION

This study aims to find the variables that lead to the significant shifts of Malaysian consumers' behaviour towards electronic payment method in the Post-COVID-19 era. Based on the findings above, Attitude Towards Behaviour (ATB) variable appears to be the most significant predictor on the Behavioural Intention (BI) of Malaysian consumers to use e-payment. Factors such as convenience, lifestyle and expectation may have some influence on the customers' attitude towards e-payment. E-payment is deemed as a convenient method of payment and fits the lifestyle of consumers. Consumers claim that e-payment helps to complete a transaction more quickly and is conducted in

the way they expect it to be. Businesses, financial institutions and the government should look into these factors and continue to offer different mode of electronic payments to consumers. This will encourage the consumers to keep using e-payments in a more effective manner than using the cash or paper-based payments even after the virus is contained. Hence, the use of e-payment may further boost the Malaysia's economy.

Findings also have pointed out that Subjective Norm (SN) and Perceived Security (PS) are not significant variables to consumers' Behavioural Intention (BI) of using e-payments. Consumers using the e-payment are not under the social influence or pressure from others such as families and friends. In addition, consumers are still concerned about the security issues of e-payment. Related organisations can play a part in building up a stable, secured e-payment platform which is convincing to consumers. Out of 220 respondents, 14 respondents are still not using the e-payments. The main reasons are the risky and untrustworthiness of the e-payments.

This study however has some limitations. First, this study is a cross sectional study in which the data collected can only describe current situation and it may not reflect the same outcome in the future. Second, the sample size is small and based on quota sampling, due to the Movement Control Order (MCO). It only involves the views of consumers mainly from Perak, Johor, Pulau Pinang and Selangor, and only a small number of consumers from other states in Malaysia. Thus, the outcome of this study may not represent the view of all consumers in Malaysia. Finally, the data was collected using survey questionnaires. It limits the respondents' thoughts and opinions as the questions are set beforehand. Respondents might have other opinions related to certain questions.

Future research can be carried out by including more respondents from other states in Malaysia and to include more respondents from the age group of 30 years and above. This could bring different interpretation and understanding towards the subject. This should produce a set of more accurate results which can represent the consumers' opinion. Besides, future researcher should also conduct a qualitative study to complement the quantitative study in order to get a better-quality data and to gain more complete and accurate opinions from the targeted respondents. This can be done through interviews which could develop some good insights in the subject matter. Also, future quantitative researchers can look for other better and more relevant constructs, other than Subjective Norms and Perceived Security.

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BAFE023: DETERMINANTS OF INNOVATION PERFORMANCE: CROSS- COUNTRY INVESTIGATION

Chun Hao,Yap^a, Ming Yu,Cheng^b

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: chunhaoyap@gmail.com ; yapchunhao@1utar.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: chengmy@utar.edu.my

Abstract

Innovation is a key component for nations to foster economic development and competitiveness. This research conducts cross countries investigation on the determinations of innovation performance, which examines the relationship between total R&D expenditure, government R&D expenditure, business R&D expenditure, human capital, formal institution, economy size, and innovation performance in 67 countries in the year 2017. Multiple regression analysis is used on cross-sectional data to obtain the result of Ordinary Least Square and diagnostic tests. This research reveals that human capital, business R&D expenditure, and economy size had a positive and significant relationship on innovation performance. Hence, policies to foster human capital formation and to promote business R&D expenditure are essential in promoting innovation and innovation performance.

Keywords: R&D, Innovation Performance, Institution, Cross-country, OLS

INTRODUCTION

Innovation is defined differently in different studies. Schumpeter (1934) defined innovation as the creation of a novel invention, process, approach, or system. This description emphasised the dual nature of innovation, as a procedure and a result, such as novel inventions or ideas. Also, OECD defined innovation as the execution of new or refined products, process, methods of organisation, and marketing in business uses and external relations as well as workplace organisation (OECD/Eurostat, 2005).

In recent years, the emphasis of innovation has been put on formulating a comprehensive and sound science, technology, and innovation (STI) related policies. There are few reasons for nations to emphasise on STI-related policies. First and foremost, innovation improves the growth of productivity and output by enhancing qualitative progress in products and procedures. Second, the way innovation forms the technology level influence the real revenues and the welfare of the economy. Third, innovation is dominant in creating and sustaining competitive trade that empowers domestic growth. Due to these wide-ranging effects, innovation is essential not only to economic performance, but to the financial position of the government and the welfare of the population in the long term. At the same time, innovation policy involves multiple challenges because of its multiple implications for development of each nation (OECD, 2016).

In the era of Industrial Revolution 4.0, businesses, governments, and higher learning institutions focus more on innovation because it provides better prospects for the productivity of industries and the economic development of the nations. Innovation led to more efficient production of goods and services with the use of advanced technology. This may lead to improved capacities and better utilisation of assets and resources. As productivity surge, the wages of workers rise. The people would have more income to spend, which increase the consumption of goods and services, and boost economic growth (European Central Bank, 2017).

In order to promote innovation, various efforts had been put forth to forge public research related to business, to identify the approaches to encourage internal technology transfer and the investment from the businesses, as well as to commercialise intellectual property realise from

domestic innovation. The results of the initiatives taken by developed and developing economies may be different when it comes to innovation performance and economic growth. The transition from a middle-income nation with the potential of innovation to an innovation powerhouse is challenging. Also, the glass ceiling of innovation persists among middle-income and high-income nations (Cornell University, INSEAD, & WIPO, 2019). Thus, innovation is a critical issue to address, as it has a significant role in shaping the development of nations. This study addresses these issues by identifying the factors influencing innovation performance in different economies, investigating the role of R&D expenditure and sources of R&D funding on innovation performance, analysing the association between human capital and innovation performance, and examining the importance of formal institution on innovation performance as well as investigating the influence of economy size on innovation performance.

LITERATURE REVIEW

National Innovation System (NIS) is a concept widely adopted in the studies of innovation, particularly in understanding the system that contributes to the development of a nation's innovation capability. Among the researchers involved in the studies of NIS, Lundvall and Nelson are the pioneers in NIS studies. Lundvall (1992, 2016) proposed a "national innovation system" (NIS) concept. The researcher has two assumptions. First, the model presumed that knowledge is an important resource in the current economy. In addition, learning is a significant element in the process. The development of globalisation and internationalisation have challenged the conservational role of nation-states in innovation.

Local companies intensified their collaboration with foreign companies in the increasing internationalisation and globalisation era. The firms' partnership tends to exist in the creation of new inventions and knowledge in science-based technologies like biotechnology, electronics, and pharmaceuticals. The regional system of production, industrial, and technology districts are becoming progressively crucial. Storper (1991), Camagni (1990), & Porter (1990) analysed the regional system of production, industrial, and technological districts as interconnected and mutually supporting each other. The researchers presumed that globalisation and international specialisation had intensified specialised regional networks and technological districts. Factors of the innovation process incline to become transnational and universal.

The past studies in innovation had highlighted the conflicting opinions in measuring the performance of innovation. The ideal performance indicators should indicate the efficacy in making, diffusing, and utilising knowledge. The typical indicator for innovation performance is R&D expenditure as a proportion of GDP. However, R&D expenditure indicates just an input performance and does not express anything regarding what comes out of the performance. Linking learning with routine activities may be more vital as compared to R&D expenditure. Other innovation performance indicators focusing on the output measures encompassed patents (Pavitt & Patel, 1988), percentage of new products in terms of sales (Kristensen, & Lundvall, 1991), and percentage of high-tech goods in foreign trade (Dalum, Fagerberg, & Jørgensen, 1988). The general weakness of these measures lies on their incapability in considering the diffusion of process technology, so the indicators for diffusion should consider getting a bigger picture (Edquist, & Jakobsson, 1988). Various factors that may have an impact on innovation performance. The past studies revealed that the main factors which are closely associated with the innovation performance centred around R&D expenditure, human capital, institution, and size of the economy.

R&D Expenditure and Innovation

Bilbao-Osorio & Rodríguez-Pose (2004) studied the associations between total R&D expenditure, R&D investment by the business and government as well as tertiary education, and innovation for 9 European Union (EU) nations. The researchers developed their model based on the Cobb-Douglas function and employed a cross-sectional OLS regression model to study how the different levels of R&D spending influence the regional activities of innovation in EU. They found a positive but insignificant association among the total R&D spending and innovation in the peripheral and non-peripheral region of EU. When the total R&D spending are separated into different groups, i.e. by the private and public sectors, they discovered the presence of positive and significant association between private R&D spending and innovation, whereas public R&D spending and innovation had an insignificant association. In another study, Guloglu, & Tekin (2012) studied the

causal associations between R&D spending, innovation, and economic growth in 13 advanced OECD nations from 1991 to 2007. Their findings revealed the existence of a bidirectional relationship between R&D expenditures and innovation. Also, there were positive and significant associations between R&D and innovation, and economic growth and innovation. The researchers stated that a successful investment in the R&D sector might stimulate more investment in innovative activities.

The associations among expenditures on R&D, innovation, and economic growth for twenty OECD nations and ten non-OECD nations were analysed by Ulku (2004) through panel model and GMM methodology between 1981-1997, to investigate the role of the expenditure of R&D may have on innovations, and whether innovations would lead to sustainable growth of economy. The findings revealed the presence of a positive and significant relationship between R&D expenditure and innovation. The researcher indicated that only the advanced OECD nations, which comprised the G-7 and some low-income OECD nations, seem to raise their innovation by funding its R&D expenditure. The researcher stated that R&D intensity varies across the nations with the diverse sizes of market and levels of income. The spillovers of technology had significant impacts on the innovation for nations which have inefficient R&D capability. Meliciani (2000) studied the effects of R&D, investment, and innovation for 12 nations and 15 industries in OECD nations from 1973 to 1993. There was a positive and significant association between R&D expenditure and innovation, which implied that R&D expenditures are important for the creation of patents in science-based industries.

Demir (2019) investigated the different effects of businesses, government, and tertiary education R&D investment on the innovation performance in 18 OECD nations from 1981 to 2016 by employing panel data analysis. The findings indicated the presence of positive and significant impact between business R&D funding and innovation, but an insignificant effect between government R&D funding and innovation. The study also revealed that private R&D intensity contributes to knowledge spillover between companies because their R&D efforts were made according to market and society needs. However, the public R&D did not result in stimulating knowledge spillover as their innovative activities performed based on the needs of government departments.

The study conducted by Griliches (1989) to examine the influences of R&D spending from businesses and higher learning institutions on patent applications by residents in the U.S. from 1953 to 1987, implied that an increase in R&D funding from the businesses and higher learning institutions led to significant increase in the total number of patent applications by residents in the US. The estimated coefficients depicted that the impact of business R&D spending is more significant than higher learning institutions' R&D funding. The researcher also suggested that the total patent applications decline when the cost of R&D activities rises. Prodan (2005) investigated the effects of total R&D investment and business R&D funding on patent applications. The researcher found that the total R&D and business R&D expenses had positive influences on patent applications. The researcher also stated that a surge in business R&D expenses encouraged more patent applications.

Pegkas, Staikouras, & Tsamadias (2019) studied the effects of R&D spending and innovation for 28 EU nations between 1995 and 2014. There was a co-integration association between R&D and innovation. Besides, there were positive and significant effects of R&D spending from government and businesses on innovation. They concluded that R&D spending from businesses had the most significant influence on innovation. Voutsinas, Tsamadias, Carayannis, & Staikouras (2018) investigated the causal relationship between R&D spending and innovation in Greece from 1981 to 2009. They revealed that the existence of long-run association among R&D expenses and innovation. Also, total R&D, business, and government R&D spending had positive effects on innovation performance. Barra, & Zotti (2016) examined the efficacy and determinants of Italian regional innovation system in 2000-2009. They discovered that there were positive and significant influences among government and business R&D funding and innovation.

Human Capital and Innovation

A positive and significant association between human capital and innovation was confirmed by Suseno, Standing, Kiani-Mavi, & Jackson (2018) in their study to examine the influences of human and social capital towards the performance of innovation in OECD nations. The researchers stated that the improvement of human capital in a country raises its national innovation performance. Baesu, Albulescu, Farkas, & Drăghici (2015) analysed the determinants of innovation performance in the EU nations. They employed panel data methodology and compared findings of fixed effect model

between 1994 and 2011. Their findings showed that human capital positively affected the number of patents, while the per capita R&D expenses had a negative impact on the number of patents.

Danquah, & Amankwah-Amoah (2017) examined the effect of human capital on innovation and the adoption of technology. The researchers employed panel data methodology to study 45 Sub-Saharan Africa countries between the periods of 1960 and 2010. They revealed that human capital had positive and significant impact on technology adoption, but insignificant impact on innovation. This was because of the lower level of tertiary education attainment in Sub-Saharan Africa. Dakhli, & De Clercq (2004) investigated the impacts of human capital and social capital on innovation across 59 different nations at the national level. There was a positive and significant association between human capital and innovation.

By using a panel dataset consisted of 19 OECD nations from 1960 to 2000, Benhabib, & Spiegel (2005) studied the importance of human capital for innovation and technology adoption. The researchers discovered that skilled human capital, which represented by the attainment of tertiary education influenced the growth in OECD nations. They estimated that the level of the human capital necessary to stimulate a positive impact on innovation. They also suggested that nations with a lower level of human capital may undergo slower innovation in comparison with technological advanced countries.

Institutions and Innovation

According to North (1990), institutions are “the rules of the game in a society; (and) more formally, (as) the humanly devised constraints that shape human interactions”. The formal institution consists of constitutions, laws, charters, and regulations—for instance, the rule of law and property rights. The informal institution includes conventions and behaviour codes such as culture.

d'Agostino, & Scarlato (2019) studied the connections between institutions and innovation in EU nations to examine role of the institutions on knowledge diffusion and economic growth. Their findings indicated that those good institutions had a positive influence on innovation performance, which encouraged knowledge externalities. Tebaldi, & Elmslie (2013) studied the association between institutions and innovation. The researchers discovered that the institutions positively explained the cross-country variations in patent count across nations. They also mentioned that long term accumulation of human capital is an important element in forming institutions. Sivak, Caplanova, & Hudson (2011) analysed the effect of governance on innovation. Proper governance had a significant influence on innovation. They indicated that bureaucracy such as permits discourages companies from innovating and encourages firms to obtain overseas technology license, while corruption impedes R&D activities.

In another study, Barbosa, & Faria (2011) studied the relative significance of institutional differences and innovative intensity in European nations. They found that progressive credit markets cultivated the institutions, whereas strict labour and product market rules negatively influenced innovative intensity. In addition, their findings supported the proposition that the promotion of innovative activities persists when intellectual property rights are reinforced and safeguarded. Pattit, Raj, & Wilemon (2012) explored the impact of institutions on innovation in the United States. The formal and informal institutions are crucial, specifically at beginning phase of marketing innovative products. Also, both institutions stimulated the intramural R&D lab in the twentieth century. Blind (2012) studied the influences of institutions on innovation in 21 OECD nations by employing panel data from 1998 to 2004. They found that institutional framework, particularly the legal and regulatory framework had a significant influence towards the innovative performance of OECD nations, which quantified by the intensity of global patent applications.

Rodríguez-Pose, & Di Cataldo (2015) investigated the effect of government quality on innovation capability in Europe. They discovered that positive and significant connection between the quality of government and innovative capability in EU. The inefficient and corrupted public sector is the barrier for innovation in EU. Oluwatobi, Efobi, Olurinola, & Alege (2015) examined the relationship between institutional development and innovation in 40 African nations from 1996 to 2012. They revealed that government effectiveness, regulatory quality, and control of corruption positively influenced innovation.

Economy Size and Innovation

Galindo, & Méndez (2014) analysed the associations among entrepreneurship, innovation, and economic growth to determine the feedback effects in 13 developed economies. They found the presence of positive and significant association between GDP as measured by millions of US dollar and innovation, and between entrepreneurial activity and innovation. They stated that more economic activities stimulate more entrepreneurial and innovative activities. Bilbao-Osorio, & Rodríguez-Pose (2004) included GDP per capita as one of the independent variables to study the effects of private, public, and tertiary education investment of R&D towards innovation. They discovered a positive and significant relationship between per capita GDP and patent as a proxy for innovation. The positive coefficient of the variable indicated that more advanced regions stimulate innovation. The nations with proper infrastructure enable them to well-transform R&D expenditure into innovative outcomes and well-prepare to learn and employ foreign technology. Petrariu, Bumbac, & Ciobanu (2013) investigated the association among per capita GDP and innovation. There was a positive and significant association among per capita GDP and innovation.

RESEARCH METHODOLOGY

Model Specification

This study adapts the National Innovation System (NIS) concept, as developed by Lundvall (1992, 2016) and Nelson (1993), the model is as shown in Model 1.

$$\ln INN_i = \beta_0 + \beta_1 RD_i + \beta_2 GOV_i + \beta_3 BUS_i + \beta_4 \ln HC_i + \beta_5 INST_i + \beta_6 ES_i + e_i \quad - \text{Model 1}$$

where $\ln INN$ = Innovation Performance, RD = Total R&D Expenditure (%), GOV = Government R&D Expenditure (%), BUS = Business R&D Expenditure (%), $\ln HC$ = Human Capital, $INST$ = Formal Institution, ES = Economy Size (PPP constant 2011), e_i = Stochastic error term

The innovation performance and human capital were transformed into log because the variables had huge variations. Huge variations led to the presence of diagnostic problems, especially heteroscedasticity problem.

Variables and Data Description

Innovation performance is measured by patent applications by the residents. The variable reflects the effectiveness and efficiency of the innovation performance of the nations. It provides an objective measure of new knowledge created (Walker, 1995). Patent is commonly used as a proxy for innovation performance (Barra & Zotti, 2016; Bilbao-Osorio & Rodríguez-Pose, 2004; Schmookler, 1966; Griliches, 1979). Also, Romer (2002) suggested that one can employ patents to form systematic measures of intangible innovation that drive economic growth.

Total R&D expenditure is measured by gross expenditure on R&D (GERD) as a percentage of GDP. The variable indicates a country's overall R&D investment in fostering innovative activities and commonly used as a measure of innovation input in numerous innovation-related literature (Savrul & Incekara, 2015). The effectiveness of using R&D expenditure to stimulate innovation mainly depends on how efficient the human capital, such as researchers and scientists utilise the R&D expenditure (Bilbao-Osorio & Rodríguez-Pose, 2004). Thus, R&D expenditure and human capital are key inputs to innovation performance. The expected sign between total R&D expenditure and innovation performance is positive.

Government R&D expenditure is measured by GERD financed by government as a percentage of total R&D expenditure. The variable reflects a nation's government spending on R&D in inducing innovative activities. Government R&D expenditure is crucial for enhancing innovation performance. Nations with greater amount of public R&D expenditure and a robust knowledge base have higher effectiveness on R&D disbursement (Pegkas, Staikouras & Tsamadias, 2019). Based on past researches, the expected sign between government R&D expenditure and innovation performance is positive.

Business R&D expenditure is measured by GERD financed by business enterprise as a percentage of total R&D expenditure. The variable indicates firms' R&D investment which is crucial to

the creation of new products and services in fostering innovative activities (Wei, Liu, Song & Romilly, 2001). The business R&D efforts signal involvement in the creation and formation of new ideas that produce more innovative products and services, despite that, not all private R&D investments get a positive return (Raghupathi & Raghupathi, 2019). The expected sign between business R&D expenditure and innovation performance is positive.

Human capital is measured by total R&D personnel in full-time equivalent (FTE). The variable reflects the total number of researchers involved in R&D and innovative activities. Human capital is a core component that drives the performance of innovation because without human capital, basically, no activities can be performed. Also, the skills and knowledge of an individual are crucial to influence the innovation performance (Voutsinas, Tsamadias, Carayannis & Staikouras, 2018). Thus, a higher level of human capital generates or diffuses new technologies and efficiently adapt to new technologies. Based on past researches, the expected sign between human capital and innovation performance is positive.

Formal institution is measured by institutional scores from the Global Innovation Index (GII) 2019. The variable reflects the overall composite score of three components, namely the political environment, regulatory environment, and business environment. In the component of the political environment, it includes political and operational stability, and government effectiveness. Political and operational stability measures the efficiency of government sector, the judicial and security risks that influence the operations of businesses. Government effectiveness indicates the quality of public and civil services, the level of independence of public and civil services from the pressures of politics, and the quality of policy making and execution as well as the integrity of the promise of governments towards the policies (Cornell University, INSEAD & WIPO, 2019).

In the component of regulatory environment, it is included regulatory quality, rule of law, and cost of redundancy dismissal. Regulatory quality measures the capability of the public administration to frame and execute comprehensive plans and rules that encourage the development of private sector. Rule of law indicates the extent to which agents have confidence in and comply with the society's regulations, particularly to the quality of contract implementation, property rights, police force, law courts, and the possibility of crime and violence. Redundancy costs measure the cost of advance notice stipulations and severance payments due when dismissing the worker, which denoted in weeks of wage. In the component of business environment, it consists of the ease of starting a business, and ease of resolving insolvency. The range of score is between 0 and 100 (Cornell University, INSEAD & WIPO, 2019). Edquist (1997) stated that institutional factors are critical factors affecting innovation ability. This indicated that the importance of the components of the formal institution on innovation. In this study, formal institution measures the regulations, policies, and formal structure that enhance innovation. Based on past researches, the expected sign between formal institution and innovation performance is positive.

Economy size is measured by GDP PPP in terms of constant 2011 international dollars. The variable indicates the production capacity and economic capability of a nation. The variable is a control variable for this study. The higher the economy size, the greater the utilisation of resources, the higher the economic activities, the higher the innovative activities, which lead to higher innovation performance. According to past literature, the expected sign between economy size and innovation performance is positive.

Countries List

This study included 67 countries with complete data for all the variables. The countries classified according to the World Bank classification. The classification of nations categorised based on the gross national income (GNI) per capita for the year 2017. The income classification consists of four income groups, namely low-income nations, lower middle-income nations, upper middle-income nations, and high-income nations. For the income classifications, low-income nations were those economies with GNI per capita of \$995 or less; lower-middle income nations were those with a GNI per capita between \$996 and \$3,895; upper-middle income nations were those with a GNI per capita between \$3,896 and \$12,055; high-income nations were those with a GNI per capita of \$12,056 or more in 2017 (World Bank, n.d.).

Table 1: Countries List

Countries' Income Classifications					
39 High Income Nations (GNI per capita of \$12,056 or more)					
Argentina	Austria	Bahrain	Belgium	Canada	Chile
Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland
France	Germany	Greece	Hungary	Iceland	Ireland
Israel	Italy	Japan	Latvia	Lithuania	Luxembourg
Netherlands	New Zealand	Norway	Oman	Panama	Poland
Portugal	Qatar	Republic of Korea (South Korea)	Singapore	Slovakia (Slovak Republic)	Spain
Sweden	Switzerland	United Kingdom			
18 Upper-middle Income Nations (GNI per capita between \$3,896 and \$12,055)					
Algeria	Bosnia and Herzegovina	Botswana	Brazil	Bulgaria	China
Ecuador	Kazakhstan	Malaysia	Mauritius	Mexico	Namibia
Romania	Russian Federation	Serbia	South Africa	Thailand	Turkey
9 Lower-middle Income Nations (GNI per capita between \$996 and \$3,895)					
Egypt	El Salvador	Indonesia	Philippines	Moldova (Republic of Moldova)	Sri Lanka
Tunisia	Ukraine	Viet Nam			
1 Low Income Nation (GNI per capita of \$995 or less)					
Mozambique					

Source: Developed for the research

Data Collection Methods

This research considers cross-sectional secondary data, which consists of 67 nations for the year 2017. For the variables of human capital, government, and business R&D expenditure, this study takes the average data between 2012 and 2017 because not all countries provide complete data for all the years. Thus, the average provides a proxy measure for these variables. This study evaluates the determinants of innovation performance across countries. This study collects data from several databases which include WIPO Statistics Database, UNESCO UIS Database, GII 2019 Database, Eurostat Database, OECD MSTI Database as well as World Bank Open Database.

Data Analytical Methods

This study employs descriptive analysis, correlation, multiple regression analysis, and diagnostic checking, to identify factors affecting innovation performance in the countries selected for the study.

DATA ANALYSIS

Descriptive Statistics

Table 2: Descriptive Statistics Based on Income Category

Income Category	Number	INN (Number)	RD (%)	GOV (%)	BUS (%)	HC (Number)	INST (Score)	ES (US\$)
		Mean (STD)	Mean (STD)	Mean (STD)	Mean (STD)	Mean (STD)	Mean (STD)	Mean (STD)
High Income	39	13705.49 (48270.73)	1.73 (1.18)	37.46 (13.09)	43.09 (15.72)	119988.30 (190061.50)	80.10 (9.96)	7.84E+11 (1.10E+12)
Upper middle	18	71618.89 (293065.60)	0.74 (0.51)	48.64 (20.86)	28.74 (20.61)	296834.20 (869426.00)	62.50 (6.64)	2.04E+12 (4.89E+12)
Lower middle	9	780.00 (902.15)	0.31 (0.22)	61.03 (22.58)	25.82 (15.96)	44109.29 (41326.98)	54.86 (4.14)	6.83E+11 (9.19E+11)
Low income	1	24.00 (NA)	0.30 (NA)	43.49 (NA)	0.4 (NA)	2320.04 (NA)	43.70 (NA)	3.69E+10 (NA)

Source: Eviews Output

All the variables reflected in the actual data to present distribution of each variable. The average of patent applications by residents for 18 upper middle income nations was nearly 71, 619, with a standard deviation of approximately 293,066. This indicated that 18 upper-middle income nations had greater patent applications among 67 nations. The mean of total R&D expenditure for 39 high income nations was 1.73% over proportion of GDP, with a standard deviation of 1.18%. This showed that 39 high income nations had greater R&D funding among 67 nations. Government R&D expenditure in 9 lower middle income nations had a mean of 61.03% over total R&D expenditure, with a standard deviation of 22.58%. The government of 9 lower middle income nations spent much money for their R&D activities. Business R&D expenditure in 39 high income nations had a mean of 43.09% over total R&D expenditure, with a standard deviation of 15.72%. The businesses of 39 high income nations spent additional funds on their R&D activities. The average of human capital for 18 upper middle income nations was nearly 296, 835 people, with a standard deviation of approximately 869,426 people. 18 upper middle income nations had greater number of human capital to conduct the R&D activities between 67 nations.

Correlation and Multicollinearity

Table 3: Correlation

	RD	GOV	BUS	lnHC	INST	ES
RD	1.0000	-0.5908	0.7100	0.5538	0.6991	0.1952
GOV	-0.5908	1.0000	-0.6984	-0.3109	-0.5407	-0.1721
BUS	0.7100	-0.6984	1.0000	0.6718	0.6469	0.3768
lnHC	0.5538	-0.3109	0.6718	1.0000	0.2994	0.5422
INST	0.6991	-0.5407	0.6469	0.2994	1.0000	-0.0241
ES	0.1952	-0.1721	0.3768	0.5422	-0.0241	1.0000

Source: Eviews Output

Table 4: Summary of Multicollinearity Output

Variables	VIF
RD	2.9126
GOV	2.2856
BUS	4.6316
lnHC	2.7060
INST	2.6136
ES	1.5783

Source: Eviews Output

Table 3 showed the correlation among variables. The correlation coefficients as shown in the correlation matrix indicate that the variables were not closely related. This may further prove by VIF. Table 4 presented the summary of multicollinearity output. According to the output of VIF, all variables were within the range of 5 for all centered VIFs.

Model Estimation and Presentation

$$\ln INN_i = -5.2204 + 0.2130 RD_i + 0.0100 GOV_i + 0.0268 BUS_i + 0.9889 \ln HC_i - 0.0075 INST_i + 1.27E-13 ES_i$$

$$\begin{matrix} & [1.3469^{NS}] & [1.2042^{NS}] & [2.3130^{**}] & [11.8433^{***}] & [-0.6167^{NS}] \\ [2.6795^{***}] & & & & & \\ + 41.2270 e_i & & & & & \end{matrix}$$

$$R^2 = 0.9152 \quad \text{Adjusted-}R^2 = 0.9067 \quad F\text{-statistics} = 107.8789$$

Note: t-statistics are in [], *** means statistically significant at 0.01 level, ** at 0.05 level, and ^{NS} means not significant.

Explanatory variables accounted for about 91.52% of the variation in innovation performance ($\ln INN_i$) model. Adjusted R^2 showed that 90.67% of the innovation performance explained by total R&D expenditure, government R&D expenditure, business R&D expenditure, human capital, formal institution and economy size. According to the result of F statistics, it can be concluded that there was sufficient evidence that at least one independent variable affects innovation performance at 0.05 significance level.

The estimation revealed that the explanatory variables, namely human capital ($\ln HC_i$), economy size (ES_i), and business R&D expenditure (BUS_i) are the significant variables with statistically significance at 0.01 and 0.05 level, respectively. These variables showed a positive relationship with the dependent variable. But, total R&D expenditure (RD_i) and government R&D expenditure (GOV_i) are having insignificant relationships with innovation performance. A 1 percent increase in human capital, on average will lead to an increase in innovation performance by 0.9889%, holding constant with other variables. For every USD 1 increase in GDP, on average, it had a positive relationship effect of increasing innovation performance by 1.27E-13% with statistically significance at 0.01 level. A 1 percent increase in business R&D expenditure, on average, it had a positive relationship effect of increasing innovation performance by 0.0268% with statistically significance at 0.05 level, holding constant with other variables.

Diagnostic Testing

Table 5: Summary of Residual Diagnosis

Diagnostic Tests	Results	Hypothesis	Decision
Normality test (Jarque-Bera)	JB Statistics: 0.0956 Prob. Value: 0.9533	H_0 : Residuals are normally distributed. H_A : Residuals are not normally distributed.	p-value > 0.05. Do not reject H_0
Heteroscedasticity test (White)	F (27,39) Statistics: 0.1899 Prob. Value: 0.2167	H_0 : Variance shows homoscedasticity. H_A : Variance shows heteroscedasticity.	p-value > 0.05. Do not reject H_0
Serial Correlation test (LM)	F (1,59) Statistics: 0.5073 Prob. Value: 0.4788	H_0 : No serial correlation in residuals. H_A : There is serial correlation in residuals.	p-value > 0.05. Do not reject H_0
Multicollinearity (Variance Inflation Factor, VIF)	All variables were within the range of 5 for all centered VIFs.		VIF < 5.

Source: Developed for the research

CONCLUSION AND DISCUSSION

Based on the findings, human capital, business R&D expenditure, and economy size had a positive and significant relationship on innovation performance. Other variables were having insignificant relationship with innovation performance, where the total R&D expenditure and government R&D expenditure had positive and insignificant relationship, whereas formal institution had a negative and insignificant relationship with the innovation performance.

According to the findings of this study, human capital had a positive and significant effect on the innovation performance at 0.05 level of significance. Human capital is a crucial component of the innovation performance in the selected nations. This result is supported by Suseno, Standing, Kiani-Mavi, & Jackson (2018), Benhabib, & Spiegel (2005), and Dakhli, & De Clercq (2004). According to Suseno, Standing, Kiani-Mavi, & Jackson (2018), the improvement of human capital fosters national innovation performance. Dakhli & De Clercq (2004) stated that the beneficial impact of human capital on economic growth might be grounded partly on the level to which resources, experience, and educational background are attached in open interactions within a region. However, this result is contradicted by Danquah & Amankwah-Amoah (2017). The researchers stated that this outcome attributed to the lower level of tertiary education attainment in Sub-Saharan Africa. This indicates that differences in the level of human capital may influence innovation performance.

Business R&D expenditure had a positive and significant impact on innovation performance at 0.05 level of significance. The significant amount of R&D funding, particularly from the private sector stimulates national innovation performance. This result is supported by Bilbao-Osorio, & Rodríguez-Pose (2004), Demir (2019), Voutsinas, Tsamadias, Carayannis, & Staikouras (2018), and Pegkas, Staikouras, & Tsamadias (2019). Bilbao-Osorio & Rodríguez-Pose (2004) concluded that the business R&D activities emphasise towards the applied research, whereas public innovative activities focus on basic research. As the innovation measured by the patent applications, government R&D investment has a less direct connection and business R&D funding has more direct connection with the number of patent applications due to the commercialisation of businesses' ideas. Demir (2019) also indicated that public innovative activities perform based on the needs of the government departments, whereas business R&D efforts make according to the market and society needs, which contribute to the spillover of knowledge between the companies.

Economy size had a positive and significant relationship with innovation performance at 0.05 level of significance. Economy size is a control variable for this study. This result supported by Bilbao-Osorio, & Rodríguez-Pose (2004), Galindo, & Méndez (2014), and Petrariu, Bumbac, & Ciobanu (2013). Bilbao-Osorio, & Rodríguez-Pose (2004) claimed that nations with proper facilities empower them to well-transform R&D spending into more innovative products and equip them to learn and adopt foreign technologies. Galindo, & Méndez (2014) stated that economic stimulation would encourage businesspersons to carry out their activities. If the economy size of a nation is bigger, the higher the economic activities, the higher the utilisation of resources, the higher the innovative activities, the better the innovation performance.

There are three implications of the study. First and foremost, nations need to stress in building a skillful and knowledgeable workforce. Governments need to emphasise the importance of skills and knowledge through the encouragement of individuals pursuing science, technology, engineering, and mathematics (STEM) education in the nations. When more and more people receive STEM education, individuals may build their interest in science, technology, and innovation (STI) and produce more innovative ideas and inventions. Besides, governments may also need to consider the cultivation of innovative and entrepreneurial skills in their human capital and STI policies because the way they commercialise their new products is also crucial to translate their new ideas into the products that sell in the market.

Second, the private sector, including large corporations and small and medium enterprises (SMEs) need to have strong commitment and participation in innovative activities. Many past studies have shown that business R&D expenditure is crucial to stimulate more innovative activities and improve innovation performance. Although the intention of doing business for the companies is to earn more profits, businesses also need to emphasise on the importance of innovation. Innovative ideas and products benefit the businesses in long run. Third, the private and public sector should collaborate to foster more innovative activities and boost innovation performance. The government

not only needs to provide substantial public financial support, but also includes the ambitious goal and plans for a nation to make the private sector to pay more attention to the importance of innovative activities. Also, government and businesses may work together based on project-based innovative activities that benefit both parties, people, and the society to enhance the wellbeing and economic development of the nation.

There are two limitations of this study. First, the limitation of this study is data availability. Some data were missing for some countries, which led to the small sample size in this study. Second, there are a number of indicators to reflect innovation performance at the national level. This study used patent applications by the residents to measure nations' innovation performance. There are researchers who argued that patent applications better reflect firm innovation performance as businesses usually commercialise their ideas and inventions. However, some researchers claimed that the patent is a good indicator because it measures the relatively objective measure of new knowledge.

Thus, the future researchers may employ the most relevant proxies as their variables and include more nations as their observation to increase the sample size. Large sample sizes provide more valid and accurate outcomes, which may better reflect the situation of innovation performance. In addition, future researchers may employ other variables such as the number of cited articles and innovation index as their dependent variables to examine the determinations of innovation performance across the nations.

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BAFE026:
**SUPPORT FOR SPORT TOURISM DEVELOPMENT AMONG LOCAL
RESIDENTS: THE MEDIATOR ROLE OF PERCEIVED SPORT
TOURISM IMPACTS**

Miaw-Xian Chang ^a, Yuen-Onn Choong ^b, Lee-Peng Ng ^c

^a Postgraduate student at Faculty of Business and Finance, Universiti Tunku Abdul Rahman,
Malaysia

Email: xianchang28@gmail.com

^b Assistant Professor at Faculty of Business and Finance, Universiti Tunku Abdul Rahman,
Malaysia

Email: choongyo@utar.edu.my

^c Assistant Professor at Faculty of Business and Finance, Universiti Tunku Abdul Rahman,
Malaysia

Email: nglp@utar.edu.my

Abstract

Malaysia is selected as one of the favourable destinations for organizing international sport events such as Commonwealth Games, Formula One Grand Prix and World Football Youth Cup since 1998. The rapid growth of sport tourism industry can be observed through the expanding number of international sport events being organized and profitable financial income. However, the success of sport tourism and support of local residents is inseparable. The development of sport tourism has contributed to local communities in terms of economic, social, environmental, and cultural. This study aims to explore how perceived sport tourism impacts mediate the relationship between place image and knowledge about tourism on residents' support for sport tourism development. A total of 300 local residents participated in this study. The analysis was conducted using partial least square structural equation modeling with a two-stage analytical approach. Surprisingly, the relationship between place image and knowledge about tourism on residents' support for sport tourism development are significantly mediated by perceived sport tourism impacts. These findings can contribute to the existing body of knowledge, tourism policy makers and the Ministry of Tourism and Sport in crafting an effective sport tourism development plan to improve residents' support for sport tourism development.

Keywords: Sport Tourism, Residents' Support, Place Image, Knowledge, Sport Tourism Impacts

INTRODUCTION

The inter-relationship between sport and tourism has become more popular since the mid-19th century (Schwark, 2007). Sport tourism refers to "leisure-based travel that enable people to visit the place that outside of their home communities to join and watch sporting event or visit some sport related-destinations" (Gibson, 2006). According to Ross (2001), sport tourism is categorized into event sport tourism, active sport tourism and nostalgia sport tourism. According to the World Tourism Organization (WTO), its market value is proved and expected to achieve 1.6 billion in 2020. Because of outstanding economic performance, sport tourism is emerged as one of the major growth sectors in tourism development.

Malaysia is a country that has the potential to be a famous sport tourism destination in Asia-Pacific area. It has been positioned in the sport market globally through hosting international sport events including Commonwealth Games and Southeast Asian Games (Marimuthu & Hassan, 2016). In order to promote sport tourism in the country, the Malaysian government has cooperated with several organizations, such as Malaysia Tourism Promotion Board (MTPB), Tourism Malaysia and also Malaysia Convention and Exhibition Bureau (MyCEB). They are aggressively assisting in organizing sport events, promotional events as well as sport related workshops for sport tourism officials and sport clubs.

However, the number of total attendees to sporting events is decreasing gradually since 2014 based on the annual report of Malaysian Convention and Exhibition Bureau. One of main problems stems from local residents' disposition on sport tourism development. Due to their disposition, the number of hosting sport event is declining. For example, one of the famous sport events – Formula One is forced to give up due to decreased in ticket sales and number of television audience (Scott, 2016). The support of local residents plays a significant role in sustaining sport tourism sector. Without the support of local community, a success of tourism sector is unable to attain since it may increase the inequalities in socio-economy (Mohd Salleh et al., 2014). Sport tourism has contributed positive tourism impacts to local community such as creating more job opportunities, improving their life quality as well as cultivating sport culture. While, it also brings negative tourism impacts such as environmental degradation (Hanafiah, Jamaluddin & Zulkifly, 2013) and increased in crime rate (Pappas, 2016). It is believed that local residents tend to support for sport tourism development in the case of benefits exceeding costs. As a result, when the benefits they received is unable to cover the costs they incurred, they will not give support on it.

In order to sustain sport tourism sector, destination image is vital. Another issue is emerged from an absence of place image (Kani, Aziz, Sambasivan & Bojei, 2017). Mohebbi and Ujang (2016) claim that sport infrastructure has been underutilized such as sport arenas and lobbies in Kuala Lumpur. The accessibility of community and recreational services also act as an important factor to influence their participation in sport tourism for local residents (Stylidis, Biran, Sit & Szivas, 2014). Apart from the issues above, level of knowledge about tourism is found as one of the problems. It is because local residents' knowledge will directly influence the way they treat and perceive sport tourism development. For instance, Malaysia Super League, a football event is forced to be postponed because of the negative perception of local residents (Syed Omor Junid, Aminudin & Mustapha, 2013). Hence, this paper is first aim to examine how the place image, knowledge about tourism and perceived sport tourism impacts influence on residents' support for sport tourism development. And secondly, it also explores how perceived sport tourism impacts mediate the relationship between place image and residents' support for sport tourism development as well as knowledge about tourism and residents' support for sport tourism development.

LITERATURE REVIEW

Residents' Support for Sport Tourism Development

Residents' support for tourism development has been widely studied in different tourism sector (Gutierrez-Tano, Garau-Vadell & Diaz-Armas, 2019; Imbaya & Irungu, 2013; Krishnaswamy, Abdullah & Toh, 2018; Masa'Deh et al., 2017; Meimand et al., 2017; Rasoolimanesh, Jaafar & Barghi, 2017; Stylidis, 2016; Wang, Ju, Xu & Wong, 2019). However, there is a limited study that investigates community support under Malaysian-based sport tourism context. To fill up the gap, there is a need to conduct this research to investigate the factor that influence residents' support for sport tourism development. As mentioned by Nicholas, Thapa and Ko (2009), development of local residents' support is vital for serving sport tourism as a sector that strengthens state of economy. Residents' support for sport tourism development is a significant factor for ongoing sport tourism sector.

To define residents' support for tourism development, social exchange theory has been extensively adopted (Ouyang, Gursoy & Sharma, 2017; Lee, Reisinger, Kim & Yoon, 2014; Suntikul et al., 2016; Pappas, 2016; Stylidis et al., 2014). A balance of exchange is used to trigger their support or rejection of development plan. Ouyang et al. (2017) asserted that local community tend to enter an exchange based on the evaluation of potential benefits and costs. The outcomes of evaluation will influence their behavioural response. Further to this, Lee et al. (2014), Pappas (2016), Stylidis et al. (2014) reveal that residents who perceive tourism as a profitable sector, will proactively engage in the exchange process and support of tourism development. Therefore, they must make a decision by weighing the related tourism impacts such as economic, social, environment and cultural (Gursoy, Chi & Dyer, 2010). By investigate the factor that influence their support of tourism development, it is useful to better formulate a sustainable tourism development plan to enhance their support.

Place Image

Place image is defined as "the compilation of view, thought and impression towards a place, destination or city" (Echtner & Ritchie, 2003). Most of the studies has examined the place image

based on travellers' perspective (Buzinde, Santos & Ith, 2006; Yuksel & Akgul, 2007). It is usually known as "destination image" or "city image" in the view of travellers (Ramkissoon & Nunkoo, 2015; Tasci, Gatner & Cavusgil, 2007). As mentioned by Lopes (2011), it refers to the perceptions about a place that form by the tourists. However, local residents are one of the stakeholders in tourism development. Their perception of place image intent to affect the rejection of tourism development (Bandyopadhyay & Morraais, 2005). As mentioned by Henkel et al. (2006), a sustainable tourism is built when the local community have a similar perception as the potential travellers. Therefore, there is a need to examine the place image in the view of residents.

Place image is essential for enhancing residents' support for sport tourism development. A study of Schroeder (1996) found that when local residents perceive a positive place image, they are more likely to give support for tourism development. As supported by Govers, Go and Kumar (2007), when a positive place image is formed, decision on support for tourism is hardly to be changed. Meanwhile, residents are more willing to visit the place and recommend the place to others (Hsu, Wofle & Kang, 2004). It is because they agree with the positive attribute of the place and understand the value of the place. Thus, hypothesis 1 is proposed as below:

H1: Place image is significantly related to residents' support for sport tourism development.

Knowledge about Tourism

In sport tourism context, knowledge about tourism is known as a better understanding of the sport tourism activity based on residents' views. According to Nunkoo and So (2015), it is defined as a comprehensive residents' knowledge of sport tourism development and the responsibility of local authority in particular sector. Knowledge is an important factor that has been extensively examined in residents' support studies (Abdullah, Patterson & Pegg, 2015; Rasoolimanesh et al., 2017; Nunkoo & So, 2015; Meimand et al., 2017; Gutierrez-Tano et al., 2019). As mentioned by Hung, Sirakaya-Turk and Ingram (2011), high level of knowledge gives a positive impact on local residents' support. By having a high level of knowledge, it assists local community to better understand the importance of sport tourism and improve their evaluation of sport tourism impacts. As supported by Abdullah et al. (2015), when local residents receive sufficient information about sporting events, they will be more support of those events. It is because the increased knowledge enables them to be more valued and appreciated the events. Therefore, hypothesis 2 is proposed as follow:

H2: Knowledge about tourism is significantly related to residents' support for sport tourism development.

Perceived Sport Tourism Impacts

It is noted that sport tourism is an activity that contributes both positive and negative impacts to local community in different aspects. As mentioned by Kim and Chalip (2004), different type and scale of sporting events will bring different kinds of impacts. Therefore, the way of local residents perceiving sport tourism impacts is varied due to different conditions. There are four dimension of tourism impacts have been widely indicated including economic, social, environment and cultural (Lorde, Greenidge & Devonish, 2011). Economic impact always acts as the main consideration for local residents (Akis, Peristianis & Warner, 1996). It is because tourism is treated as an economic opportunity to increase their number of jobs and income. Secondly, social impact is perceived as both positive and negative in sport tourism development context. Sport tourism enables to provide local community for meeting new people and forming uniqueness of society (Lorde et al, 2011). Meanwhile, it has the risk faced by locals such as increased crime cate (Bob & Swart, 2009) and overcrowding (Pappas, 2016). Thirdly, environmental impact can also be evaluated as positive and negative impacts. Organizing sporting event might improve the landscape (Prayag, Hosany, Nunkoo & Alders, 2012), but also create environmental degradation and pollution (Lorde et al., 2011). Lastly, cultural impact is a dimension that been neglected since most studies focus only the 3 dimensions mentioned above (Hanifah et al., 2013; Prayag et al., 2013). Through hosting sporting event, local community might receive the benefits such as enhancing their cultural value and involving cultural exchange (Lorde et al., 2011). At the same time, local communities' culture might be commercialized.

As mentioned by the study of Krishnaswamy et al. (2018) and Wang et al. (2019), perceived sport tourism impacts and residents' support for sport tourism development is connected with each

other. It is because when residents have a positive view on tourism impacts, they tend to support for tourism development more vigorous. As supported by Zhou and Ap (2009), residents who receive less benefits from tourism development, they are less likely to engage in tourism development. As a result, evaluating the influence of perceived sport tourism impacts from local residents' perspective is important in improving their support. Hence, hypothesis 3 is proposed as follow:

H3: Perceived sport tourism impacts is significantly related to residents' support for sport tourism development.

In this study, perceived sport tourism impacts are not only acted as an independent variable but also a mediator in the relationship between place image and residents' support for sport tourism development. A positive place image is attempted to trigger more positive perception of tourism impacts (Devine-Wright & Howes, 2010). It is believed that positive residents' place image will influence their perceptions on tourism impacts, consequently improve their support of tourism. As supported by the study of Krishnaswamy et al. (2018) and Styliadis et al. (2014), the mediating relationship between place image and residents' support for tourism development is found. The finding indicates how the perceived tourism impacts is formed by locals' place image and affecting them to accept or reject tourism development plan. However, different location, place and destination will contribute different perception and decision of residents. Therefore, hypothesis 4 is proposed as follow to examine the mediating relationship:

H4: The relationship between place image and residents' support for sport tourism development is mediated by perceived sport tourism impacts.

In addition, studies of Rasoolimanesh et al. (2017) and Meimand et al. (2017) indicated the mediating relationship between knowledge about tourism and residents' support for sport tourism development by perceived sport tourism impacts. It is because knowledgeable residents tend to be more concerned about the tourism impacts and react either positively and negatively toward tourism development. Hence, hypothesis 5 is proposed as follow:

H5: The relationship between knowledge about tourism and residents' support for sport tourism development is mediated by perceived sport tourism impacts.

UNDERPINNING THEORY

In order to further understand the residents' support for sport tourism development, number of theories have been adopted such as social exchange theory (Latkova & Vogt, 2012; Prayag et al., 2013), social representation theory (Andriotis & Vaughan, 2003; Yutyunoyong, 2010), theory of reasoned action (Dyer, Gursoy, Sharma & Carter, 2007) and stakeholder theory (Styliadis et al., 2016). In this study, social exchange theory (SET) and social representation theory (SRT) were adopted to explain the proposed conceptual framework. SET is considered as the most common accepted theory in evaluating residents' support for tourism development. It is because SET able to measure different perceptions from observed and emotional result (Nunkoo & Ramkissoon, 2011). It also tends to explain the process of exchange by recommending that local residents are more initiatively to participate the exchange when benefits gained exceed costs incurred (Ap, 1992).

However, a number of limitations are found when adopting SET. In the perspective of SET, human beings are treated as an isolated person and only respond like computer system. In reality, human beings who act as one of the stakeholders, have their own interest and interactions with others (Styliadis et al., 2016). Therefore, SRT is added to further explain the research model and make up for the limitations of SET. According to Feighery (2002), SRT attempts to provide a clear understanding of local communities' thoughts and perceptions on tourism development. In the perspective of SRT, local communities' perceptions and attitudes are perceived as an integrated and complex process (Pearce & Moscardo, 2002). It is able to influence the way of thinking and discussing tourism development by local communities. When social representation shows a favourable attitude toward tourism development, those involved local residents are more likely to have similar attitude. In return, they will give support for tourism development.

CONCEPTUAL FRAMEWORK

Based on the literature review and discussion of underpinned theory, the proposed conceptual framework is constructed and illustrated as Figure 1. The hypotheses are also presented. As shown in Figure 1, this study will examine how place image, knowledge about tourism and perceived sport tourism impacts will urge the residents to support for sport tourism development. On the other side, the perceived sport tourism impacts will serve as a mediator to examine the direct relationship.

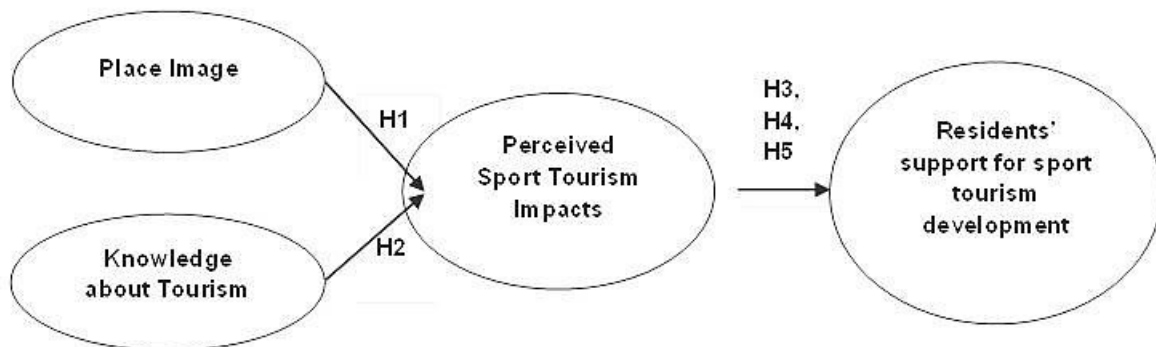


Figure 1: Proposed Conceptual Framework

RESEARCH METHODOLOGY

Sampling Design

The target population of this study is Malaysia's local resident who stay in sport tourism areas. There are few criteria need to be fulfilled as following: (1) aged at least 18 years old and above, (2) he or she is resident in the particular sport tourism areas for at least one year, and (3) they are not employed in any sport-related government service such as sport tourism authorities and sport tourism operators to avoid any bias and conflict of interest. According to Tourism Malaysia, the majority of sport events were hosted in Selangor, Kuala Lumpur and Pahang. Therefore, these three states were selected as sampling location. A quota sampling technique was adopted whereby the samples were drawn equally in these three selected states due to an unknown target population in each state. A total of 400 self-administered questionnaires were distributed to the locals who stay in the area of sport tourism destinations. Out of 323 collected data, 300 sets of data were usable, which yield 75% of response rate.

Respondents' Profile

Based on descriptive statistics extracted from SPSS software version 26, majority are represented by female (51%, n=153) while 49% are male (n=147). For the distribution of marital status, 44% are single, 51% are married, 3% are divorced and only 2% are widowed. In term of age group, 45% of the samples are 21-30 years old, followed by the age group of 31-40 years old (24%), 41-50 years old (16%) and 51 years old and above (15%). Approximately half of the respondents had lived in the area for over 21 years and above (42%), recommending that this sample is highly familiar about the area. The following length of residence tenure is 32% of 1-10 years and 26 % of 11-20 years. Further, in term of education level, more than half of the respondents are degree holders (59%, n=175), followed by certificate/diploma holders (24%, n=73), secondary school holders (7%, n=22), master/PhD holders (6%, n=19) and primary school holders (4%, n=11). About 35% of respondents reported their income level between RM3,001- RM6,000 monthly, followed by RM1,000 and below (24%), RM1,001 –RM3,000 (31%), RM6,001 – RM13,000 (15%), RM13,001 and above (4%) and no fixed income (1%). For occupation characteristics, the majority group are administrative management (22%), marketing & sales (21%) and students (19%). Finally, more than half of respondents (77%) stated that they are no involved in business-related to tourism, whereas 23% stated that they are involved in business-related to tourism.

DATA ANALYSIS

The data analysis for this study was conducted using partial least square approach. One of the reasons for choosing partial least square-structural equation modeling (PLS-SEM) method was the model consists of formative constructs (place image and perceived sport tourism impacts) and reflective constructs (knowledge about tourism and residents' support for sport tourism development) (Willaby, Costa, Burns, Maccann & Roberts, 2015). According to Anderson and Gerbing (1988), two-stage analytic approach was adopted for assessing the measurement model and structural model via SmartPLS version 3. In the first stage of analysis, PLS algorithm technique is applied for examining the outer model technique (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). While, bootstrapping technique and blindfolding technique are used to assess the inner model (Hair et al., 2014). Prior to PLS-SEM analysis, common method variance was performed by correlation matrix procedure. Result of inter-correlation was reported as Table 1. None of the values were fall above 0.9 between construct. Therefore, all the data are free from common method bias error.

Table 1. Correlation Matrix

	CI	CS	EI	ENI	ES	KAT	PA	PI	PSTI	SE	SI	RSTD
CI	1											
CS	0.360	1										
EI	0.377	0.431	1									
ENI	0.466	0.535	0.510	1								
ES	0.351	0.537	0.386	0.466	1							
KAT	0.300	0.298	0.367	0.383	0.277	1						
PA	0.329	0.464	0.403	0.533	0.458	0.339	1					
PI	0.444	0.815	0.549	0.640	0.781	0.388	0.756	1				
PSTI	0.817	0.520	0.702	0.808	0.488	0.430	0.500	0.645	1			
SE	0.331	0.459	0.479	0.441	0.424	0.288	0.440	0.739	0.484	1		
SI	0.496	0.127	0.138	0.311	0.174	0.176	0.133	0.175	0.589	0.104	1	
RSTD	0.371	0.455	0.479	0.507	0.383	0.327	0.425	0.566	0.541	0.488	0.178	1

Note. CI = Cultural Impacts; CS = Community Service; EI = Economic Impacts; ENI = Environmental Impacts; ES = Entertainment Service; KAT = Knowledge about Tourism; PA = Physical Appearance; PI = Place Image; PSTI = Perceived Sport Tourism Impacts; SE = Social Environment; SI = Social Impacts; RSTD = Residents' Support for Sport Tourism Development

Measurement Model Assessment

Prior to PLS algorithm function, one item from measuring PA in aspect of place image, one item for measuring EI in aspect of perceived sport tourism impacts and one item for measuring residents' support for sport tourism development were deleted because of low loadings (<0.708). Based on Table 2, construct reliability and convergent validity result were illustrated. The Cronbach alpha coefficient (CA) for all the measurement constructs were fall between 0.712 and 0.910. They were considered as good reliability since CA value are scored between 0.70 and 0.90 (Hinton, Brownlow, McMurray & Cozens, 2004). In order to improve the validity of result, assessment of convergent validity was conducted through factor loadings, average variance extracted (AVE) and composite reliability (CR) (refer Table 2). The result indicated that around 88% of items loadings have fall above the minimum cut-off value of 0.708. Although the factor loadings of five measuring items fall between 0.500 and 0.700, while they were retained due to fulfilment of AVE requirement (>0.500) (Fornell & Larcker, 1981). Besides, Table 2 shows that the AVE values for all the constructs scored between 0.536 and 0.736, which exceedd the minimum required value of 0.500 (Hair, Risher, Sarstedt & Ringle, 2019). Composite reliability for all the construct also archives the minimum requirement of 0.700 (Hair, Hult, Ringle & Sarstedt, 2017). Hence, the model was well-validated.

Table 2. Construct Reliability and Convergent Validity Result

Constructs	Items	Loadings	AVE	CR	CA
Place Image	Physical Appearance	PA1	0.806	0.637	0.715
		PA2	0.815		
		PA3	0.772		
	Community Service	CS1	0.731	0.536	0.821
		CS2	0.761		
		CS3	0.641		
		CS4	0.786		
	Entertainment Service	ES1	0.742	0.649	0.847
		ES2	0.813		
		ES3	0.859		
	Social Environment	SE1	0.752	0.627	0.834
		SE2	0.819		
		SE3	0.802		
Knowledge about Tourism		KAT1	0.776	0.736	0.933
		KAT2	0.876		
		KAT3	0.892		
		KAT4	0.904		
		KAT5	0.837		
Perceived Sport Tourism Impacts	Economic Impacts	EI1	0.747	0.544	0.856
		EI2	0.741		
		EI3	0.765		
		EI4	0.709		
		EI6	0.726		
	Social Impacts	SI1	0.674	0.532	0.850
		SI2	0.660		
		SI3	0.740		
		SI4	0.782		
		SI5	0.783		
	Environmental Impacts	ENI1	0.726	0.567	0.867
		ENI2	0.766		
		ENI3	0.782		
		ENI4	0.696		
		ENI5	0.790		
	Cultural Impacts	CI1	0.709	0.546	0.878
		CI2	0.751		
		CI3	0.660		
		CI4	0.772		
		CI5	0.801		
		CI6	0.730		
Residents' support for sport tourism development		RSTD2	0.736	0.563	0.837
		RSTD3	0.755		
		RSTD4	0.756		
		RSTD5	0.751		

Note 1. PA = Physical Appearance; CS = Community Service; ES = Entertainment Service; SE = Social Environment; KAT = Knowledge about Tourism; EI = Economic Impacts; SI = Social Impacts; ENI = Environmental Impacts; CI = Cultural Impacts; RSTD = Residents' Support for Sport Tourism Development

Note 2. Items PA4, EI5, RSTD1 are removed from the measurement model.

Further, the discriminant validity test was performed by cross loadings (Hair et al., 2014), Fornell and Larker (1981) method and Heterotrait-monotrait (HTMT) ratio of correlations (Hair et al., 2017). Table 3 shows the cross loadings value of each measuring item. The result has proved the validity of data since the assigned item's factor loading are higher than other items' loadings with at least 0.100.

Table 3. Cross Loading

	PA	CS	ES	SE	KAT	EI	SI	ENI	CI	RSTD
PA1	0.806	0.362	0.356	0.373	0.294	0.372	0.179	0.433	0.363	0.340
PA2	0.815	0.355	0.397	0.338	0.289	0.358	0.071	0.436	0.240	0.391
PA3	0.772	0.394	0.344	0.343	0.227	0.234	0.067	0.407	0.181	0.286
CS1	0.305	0.732	0.332	0.302	0.240	0.258	0.102	0.346	0.292	0.226
CS2	0.433	0.762	0.382	0.367	0.194	0.350	0.165	0.441	0.336	0.364
CS3	0.202	0.640	0.350	0.171	0.145	0.307	-0.010	0.309	0.077	0.284
CS4	0.380	0.786	0.490	0.453	0.277	0.343	0.091	0.447	0.304	0.432
ES1	0.288	0.297	0.742	0.268	0.163	0.227	0.038	0.226	0.172	0.235
ES2	0.436	0.460	0.813	0.348	0.246	0.309	0.192	0.438	0.312	0.337
ES3	0.372	0.513	0.859	0.395	0.250	0.380	0.169	0.431	0.340	0.340
SE1	0.258	0.362	0.355	0.752	0.156	0.349	0.135	0.328	0.254	0.366
SE2	0.358	0.365	0.304	0.819	0.209	0.390	0.035	0.355	0.229	0.362
SE3	0.422	0.364	0.349	0.802	0.310	0.397	0.080	0.362	0.302	0.429
KAT1	0.333	0.240	0.291	0.221	0.794	0.349	0.192	0.283	0.309	0.225
KAT2	0.304	0.226	0.202	0.243	0.875	0.298	0.116	0.327	0.291	0.292
KAT3	0.246	0.226	0.194	0.176	0.893	0.245	0.112	0.297	0.247	0.243
KAT4	0.266	0.288	0.238	0.239	0.902	0.304	0.155	0.358	0.222	0.279
KAT5	0.296	0.288	0.256	0.333	0.824	0.362	0.174	0.366	0.220	0.348
EI1	0.340	0.349	0.268	0.345	0.396	0.747	0.135	0.437	0.324	0.329
EI2	0.246	0.236	0.227	0.314	0.240	0.741	0.070	0.361	0.240	0.334
EI3	0.342	0.424	0.401	0.460	0.299	0.765	0.153	0.398	0.323	0.434
EI4	0.250	0.280	0.242	0.302	0.199	0.709	0.104	0.345	0.271	0.343
EI6	0.299	0.280	0.271	0.332	0.189	0.726	0.030	0.324	0.213	0.320
SI1	0.046	0.078	0.072	0.040	0.173	0.075	0.674	0.198	0.331	0.133
SI2	0.142	0.114	0.250	0.152	0.244	0.094	0.660	0.247	0.329	0.177
SI3	0.020	0.049	0.090	-0.030	-0.010	0.020	0.740	0.138	0.320	0.082
SI4	0.145	0.098	0.120	0.133	0.120	0.096	0.782	0.223	0.448	0.138
SI5	0.107	0.114	0.103	0.059	0.108	0.190	0.783	0.301	0.365	0.117
ENI1	0.437	0.411	0.333	0.325	0.259	0.366	0.231	0.726	0.291	0.427
ENI2	0.365	0.394	0.348	0.289	0.225	0.413	0.307	0.766	0.358	0.327
ENI3	0.484	0.417	0.357	0.370	0.306	0.401	0.159	0.782	0.349	0.396
ENI4	0.348	0.369	0.424	0.310	0.241	0.342	0.174	0.696	0.338	0.353
ENI5	0.380	0.422	0.303	0.365	0.401	0.393	0.286	0.790	0.412	0.410
CI1	0.241	0.264	0.150	0.255	0.212	0.294	0.244	0.403	0.709	0.266
CI2	0.187	0.187	0.210	0.199	0.284	0.256	0.371	0.321	0.751	0.292
CI3	0.294	0.253	0.380	0.286	0.334	0.256	0.333	0.293	0.660	0.294
CI4	0.196	0.210	0.221	0.162	0.146	0.230	0.386	0.283	0.772	0.232
CI5	0.242	0.315	0.262	0.294	0.166	0.248	0.439	0.335	0.801	0.255
CI6	0.292	0.351	0.332	0.267	0.202	0.373	0.411	0.417	0.730	0.301

RSTD2	0.346	0.364	0.251	0.383	0.175	0.389	0.137	0.348	0.294	0.734
RSTD3	0.278	0.327	0.224	0.341	0.205	0.328	0.178	0.418	0.324	0.768
RSTD4	0.354	0.329	0.311	0.331	0.237	0.384	0.088	0.393	0.247	0.759
RSTD5	0.299	0.346	0.354	0.407	0.354	0.338	0.133	0.365	0.252	0.742

Note. PA = Physical Appearance; CS = Community Service; ES = Entertainment Service; SE = Social Environment; KAT = Knowledge about Tourism; EI = Economic Impacts; SI = Social Impacts; ENI = Environmental Impacts; CI = Cultural Impacts; RSTD = Residents' Support for Sport Tourism Development

Table 4 illustrates that the square root of AVE for each construct is higher than other correlated cross loading values. By Fornell and Larcker (1981) approach, all the indicators were measured under right constructs, which resulted that all the constructs were different with each other.

Table 4. Fornell-Larcker Criterion

	CI	CS	EI	ENI	ES	KAT	PA	SE	SI	RSTD
CI	0.739									
CS	0.360	0.732								
EI	0.377	0.431	0.738							
ENI	0.466	0.535	0.510	0.753						
ES	0.351	0.537	0.386	0.466	0.806					
KAT	0.300	0.298	0.367	0.383	0.277	0.859				
PA	0.329	0.464	0.403	0.533	0.458	0.339	0.798			
SE	0.331	0.459	0.479	0.441	0.424	0.288	0.440	0.792		
SI	0.496	0.127	0.138	0.311	0.174	0.176	0.133	0.104	0.73	
RSTD	0.371	0.455	0.479	0.507	0.383	0.327	0.425	0.488	0.178	0.751

Note. CI = Cultural Impacts; CS = Community Service; EI = Economic Impacts; ENI = Environmental Impacts; ES = Entertainment Service; KAT = Knowledge about Tourism; PA = Physical Appearance; PI = Place Image; PSTI = Perceived Sport Tourism Impacts; SE = Social Environment; SI = Social Impacts; RSTD = Residents' Support for Sport Tourism Development

The last approach of assessing discriminant validity, HTMT criterion were reported as Table 5. Table 5 posits that the HTMT ratio values are fall in between 0.160 and 0.720, which are lower than the suggested value of 0.90 (Henseler, Ringle & Sarstedt, 2015). Therefore, the research model are free from issue of discriminant validity.

Table 5. Heterotrait-Monotrait Ratio Criterion

	CI	CS	EI	ENI	ES	KAT	PA	SE	SI	RSTD
CI										
CS	0.444									
EI	0.455	0.565								
ENI	0.563	0.695	0.631							
ES	0.437	0.720	0.493	0.594						
KAT	0.349	0.360	0.418	0.440	0.332					
PA	0.425	0.632	0.531	0.704	0.626	0.417				
SE	0.431	0.625	0.636	0.585	0.584	0.349	0.617			
SI	0.609	0.182	0.176	0.379	0.223	0.219	0.169	0.160		
RSTD	0.473	0.613	0.622	0.657	0.508	0.388	0.583	0.673	0.236	

Note. CI = Cultural Impacts; CS = Community Service; EI = Economic Impacts; ENI = Environmental Impacts; ES = Entertainment Service; KAT = Knowledge about Tourism; PA = Physical Appearance; PI = Place Image; PSTI = Perceived Sport Tourism Impacts; SE = Social Environment; SI = Social Impacts; SSTD = Residents' Support for Sport Tourism Development

Formative-Reflective Construct Assessment

There are two variables have been considered as Type II reflective-formative order, which are place image and perceived sport tourism impacts. As mentioned by Wong (2013), convergent and

discriminant validity were no required to be performed when evaluating formative construct. It is because the relationship between each other is always treated as positive, negative and even no relationship. Further to this, Hair, Ringle and Sarstedt (2011) claim that collinearity of indicator and significance of indicator weights are needed to be examined. By examining the collinearity issue, variance inflation factor (VIF) score of all the first order constructs were reported (refer Table 6). Table 6 depicts that all the VIF values are fall in the range of 1.376 and 1.992, which are lower than minimum value of 5.0 (Hair et al., 2017).

Table 6. Variation Inflation Factor score for Formative Construct

Second-order Construct	First-order Constructs	VIF value
Place Image	Physical Appearance	1.466
	Community Service	1.623
	Entertainment Service	1.569
	Social Environment	1.423
Perceived Sport Tourism Impacts	Economic Impacts	1.591
	Social Impacts	1.376
	Environment Impacts	1.992
	Cultural Impacts	1.693

Note. VIF=Variation Inflation Factor

In addition, Table 8 shows the result of testing weights' significance. By assessing t-statistics value, all the formative constructs are retained as providing significant values. Whereas, the confidence interval and p-value for all the first order constructs (physical appearance, community service, entertainment service, social environment, economic impacts, social impacts, environmental impacts and cultural impacts) also further proved their reliability and validity (refer Table 9). As a result, both formative-reflective constructs are well-established.

Table 7. Testing of Significance of Weight

Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)
PA -> PI	0.309	0.308	0.019	16.053
CS -> PI	0.363	0.362	0.019	18.390
ES -> PI	0.317	0.316	0.02	15.226
SE -> PI	0.302	0.301	0.019	16.255
EI -> PSTI	0.321	0.318	0.026	12.165
SI -> PSTI	0.224	0.225	0.034	6.565
ENI -> PSTI	0.382	0.380	0.022	17.751
CI -> PSTI	0.404	0.401	0.020	20.228

Note. PA = Physical Appearance; CS = Community Service; ES = Entertainment Service; SE = Social Environment; PI = Place Image; EI = Economic Impacts; SI = Social Impacts; ENI = Environmental Impacts; CI = Cultural Impacts; PSTI = Perceived Sport Tourism Impacts

Table 8. Confidence Interval

Second-Order Construct	First Order Constructs	Sample (N=300)		
		P value	95% of Confidence Interval	Significance (p≤0.05)?
Place image	Physical Appearance	0.000	(0.276, 0.339)	Yes
	Community Service	0.000	(0.330, 0.395)	Yes
	Entertainment Service	0.000	(0.283, 0.351)	Yes
	Social Environment	0.000	(0.271, 0.332)	Yes
Perceived Sport Tourism Impacts	Economic Impacts	0.000	(0.275, 0.361)	Yes
	Social Impacts	0.000	(0.169, 0.280)	Yes
	Environmental Impacts	0.000	(0.345, 0.416)	Yes
	Cultural Impacts	0.000	(0.369, 0.434)	Yes

Structural Model Assessment

Prior to structural model analysis, the collinearity test for each construct is examined by VIF values. As illustrated in Table 9, the result indicates that all the constructs are free from collinearity issues since the VIF value are fall below 5.0 which suggested by Hair et al. (2017).

Table 9. Collinearity Result

Constructs	Perceived Sport Tourism Impacts	Residents' support for Sport Tourism Development
Place Image	1.177	1.757
Knowledge about Tourism	1.177	1.259
Perceived Sport Tourism Impacts	N/A	1.832

Note. N/A = Not Applicable

Table 10 depicts the assessment of structural model. The result of significance test for each hypothesis is extracted from bootstrapping technique with 5000 resamples. As shown in Table 10, place image forms a significant positive relationship with residents' support for tourism development ($\beta = 0.359$, $p < 0.000$, $t = 5.031$). Perceived sport tourism impacts is also positively related with residents' support for sport tourism development ($\beta = 0.281$, $p < 0.000$, $t = 4.108$). Whereas, no significant relationship between knowledge about tourism and residents' support for tourism development is found ($\beta = 0.067$, $p = 0.116$, $t = 1.197$). Regarding to indirect relationship, mediation effect of perceived sport tourism impacts is examined. The result proves the mediating effect of perceived sport tourism impacts on the relationship between place image and residents' support for sport tourism is significant and positive ($\beta = 0.158$, $p < 0.000$, $t = 3.492$). Similarly, the mediating effect of perceived sport tourism impacts on the relationship between knowledge about tourism and residents' support for sport tourism is significant and positive ($\beta = 0.059$, $p = 0.001$, $t = 3.176$). Hence, H1, H3, H4 and H5 are supported based the result of study.

Table 10. Structural Model Result

Hypothesis	Path	Beta	t-Statistics	p-value	Results
H1	PI -> RSTD	0.359	5.031	0.000	Supported
H2	KAT -> RSTD	0.067	1.197	0.116	Not Supported
H3	PSTI -> RSTD	0.281	4.108	0.000	Supported
H4	PI -> PSTI -> RSTD	0.158	3.492	0.000	Supported
H5	KAT -> PSTI -> RSTD	0.059	3.176	0.001	Supported

Note: PI = Place Image; KAT = Knowledge about Tourism; PSTI = Perceived Sport Tourism Impacts; RSTD = Residents' Support for Sport Tourism Development

Table 11 shows the result of explanatory power, R^2 . As recommend by Henseler, Ringle and Sinkovics (2009), the outcome of study indicates both constructs (perceived sport tourism impacts and residents' support for sport tourism development) are considered moderate since the R^2 value fall in the range of 0.25 and 0.49. In other word, place image, knowledge about tourism are able to explain 45.4% of the variance in perceived sport tourism impacts. While, 37.7% of the variance in residents' support for sport tourism development is able explained by the rest independent and mediating variable. Lastly, Table 11 also indicates the result of predictive relevance, Q^2 . Regarding to cross-validated redundancy, both constructs are considered moderate as Q^2 value are fall between 0.25 and 0.50 (Hair et al., 2019).

Table 11. Result of Explanatory Power, R^2 and Predictive Relevance, Q^2

Constructs	R Square	Q Square
Perceived Sport Tourism Impacts	0.454	0.443
Residents' Support for Sport Tourism Development	0.377	0.367

CONCLUSION AND DISCUSSION

Discussion and Theoretical Implications

There are several studies of residents' support for tourism development have been conducted in different tourism context such as cultural tourism, community-based tourism and religious tourism (Krishnaswamy et al., 2018; Stylidis et al., 2016; Meimand et al., 2017). This study extends the existing literature by focusing sport tourism context. The findings reveal that place image and perceived sport tourism impacts are positively related to residents' support for sport tourism development. It means that positive place image and perception of sport tourism impacts are able to enhance the residents' support for sport tourism. Further to this, result of study claims a non-significant relationship between knowledge about tourism and residents' support for sport tourism development. However, an indirect relationship between knowledge about tourism and residents' support for sport tourism development is found to be significant.

Further, this study contributes to the body of knowledge by incorporating perceived sport tourism impacts as mediator in the research model. The result of study shows the relationship between independent variables (place image and knowledge about tourism) and residents' support for sport tourism development are positively and partially mediated by perceived sport tourism impacts. The findings reveal that a reciprocal relationship is occurred when residents are experiencing positive sport tourism impacts from a favourable place attribute. And thus, residents are more likely to support for tourism plan. Similarly, knowledgeable local communities tend to more tolerated with those negative tourism impacts and more initiative to participate in tourism development. However, the mediating effect of perceived sport tourism impacts is expected to be more significant. Interestingly that the direct relationship between the place image and residents' support for sport tourism development are stronger than indirect effect that introduces mediator. Therefore, the direct effect of the relationship should be highlighted when improving residents' support.

Practical Implications

Regarding to place image, the implication of this study is tourism policy maker should work together with local authorities for enhancing place attributes and shaping sport tourism destination image. For example, they may enhance place attributes such as sport facilities, public services and social environment. Due to a strong relationship between place image and residents' support, tourism policy maker should gather information from local communities about their perception of place to ensure the appropriateness of the tourism development plan. It is because tourism development plan has a risk to be opposed but only when it is not suitable with the particular image (Schroeder, 1996). By considering the perception of local communities when planning tourism development, it is more likely to gain their support.

Further, tourism policy makers should organize educational campaign and program to increase residents' knowledge about sport tourism. For example, the training courses, seminars or public exhibitions such as mini Tourist Information Centre (TIC) can be organized for improving their awareness and knowledge. As a second stronger direct relationship (perceived sport tourism impacts and residents' support for sport tourism development), tourism policy maker should ensure that positive sport tourism impacts are well disseminated and reach the local communities effectively. Therefore, residents will be more knowledge about the tourism benefits and costs and react with it positively.

Limitations and Recommendations

This study contributes to the body of knowledge by focusing sport tourism context and introducing perceived sport tourism impacts as mediator. However, it would be more interesting by conducting longitudinal or comparative study. It is because a comprehensive finding could be provided such as their attitudes and perception across the time frame. Further, place image and perceived sport tourism impacts have been analysed by total score of their multi-dimension. It is advised to testing the effect of each dimension toward residents' support for sport tourism development. By doing so, it could provide an in-depth understandings of how respective dimension influence on residents' support. Lastly, there is only 37.7% of variation is explained. It is

recommended to incorporate moderator such as gender, tourism dependence, length of residency to further improve the significance of study.

Conclusion

The aim of this study has been achieved by highlighting the influences of residents' support for sport tourism development in Malaysia context. Gaining the residents' support of tourism plan is critical for sustaining a tourism segment. The findings of study provide a comprehensive understanding of how the place image, knowledge about tourism and perceived sport tourism impacts influence residents' support. It also offers an insight on how perceived sport tourism impacts mediate the relationship between independent variables (place image and knowledge about tourism) and residents' support for sport tourism development. As the stronger direct relationship, place image and perceived sport tourism impacts should be focused. Residents' support for sport tourism development can be improved as long as tourism policy maker have a proper tourism development that providing positive place image and sport tourism impacts. In summary, this study could serve as a guide and resource for future researchers, tourism policy makers and even Ministry of Tourism, Arts and Cultural.

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BAFE031:
**THE DRIVERS OF EMPLOYEE ENGAGEMENT IN THE
MANUFACTURING AND SERVICE INDUSTRY IN MALAYSIA**

Foo, Meow-Yee^a, Lee, Kwee-Fah^b, Ho, Wen-Huey^c

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: foomy@utar.edu.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: leekf@utar.edu.my

^cFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: hwhhowenhuey@hotmail.com

Abstract:

This study examines the drivers of employee engagement in the manufacturing and service sector in Malaysia. In the current business environment, top talents' turnover rate has increased due to a lack of staff engagement with their employer organisations. The critical drivers investigated include core self-evaluation, leadership, information and communication, and reward and recognition. Survey questionnaires were distributed to employees of multinational enterprises in Klang Valley, Malaysia. Usable data were collected from 200 respondents. The Statistical Package for Social Science (SPSS) was utilised for data analyses and hypotheses testing. The study results reveal that the four variables investigated have significant relationships with employee engagement in multinational enterprises' service and manufacturing industry. These findings help employers develop more effective human resource strategies and policies in organisations to attract and retain talents.

Keywords: Employee engagement, core self-evaluation, leadership, information and communication, reward and recognition

1.0 INTRODUCTION

The concept of employee engagement is relatively new and different from job satisfaction and organisational commitment (Macey & Schneider, 2008). Engaged employees are responsible workers who motivate their staff or colleagues to achieve their objective and future direction (Anitha J, 2014.). According to Rothbard (2001), employee engagement can be defined as the type of psychological presence where it involves the time spent by an employee on thinking about his role at work.

Employee engagement and employee satisfaction are different because satisfied employees may not be passionate about their jobs nor be very productive. Whereas, engaged employees care about the firm and are emotionally committed to their work and company (Thomas International, 2016). They work to achieve company goals.

Unlike Macey and Schneider (2008) view, the discipline of employee engagement is not a new area viewed by the human resource (HR) consulting firms in the commercial sector. This sector using the knowledge and expertise to offer advice on how to create and leverage engagement. Employee engagement has also attracted academic interest. However, practitioners and academicians have different ideas about the concept.

The purpose of this study is aiming to examine the drivers and factors of employee engagement in multinational enterprises (MNE) involved in manufacturing and service in Malaysia. This study's findings will help employers understand employee engagement's current factors that may lead to improved HR practices and company performance.

2.0 LITERATURE REVIEW

Employees are the foundation of a firm. The success or failure of an organisation depends on its employees (Constantin & Baias, 2014). There is research that is carried out to support the evidence of the positive consequences of employee engagement. Using a large scale of the using 50,000 businesses in 34 countries, selecting 49 industries with the sample size of 192 organisations, involving 1.4 million respondents, backing the effect of employee engagement on organisational performance can be used as the significant effect that becomes the crucial competitive differentiator for an organisation (Popli & Rizvi, 2016).

2.1.1 Employee Engagement

In the research by Kahn (1990) highlighted that engagement at work could be well-defined as the "harnessing of organisational members' selves to their work roles." It has concluded that engaged people will express themselves physically, cognitively, and emotionally during role performances or carry out their duty to benefit an organisation. This statement is supported by Anitha J. (2014), where engaged employees are willing to go beyond their current responsibility, achieving higher performance to provide the best services and accomplish outdo in their work.

According to Frank, Finnegan and Taylor (2004) and Saks (2006), engaged employees will show their indiscriminate effort to their jobs due to their inner presence when doing their job. It means employees were having a positive emotional and intellectual commitment when performing their duty towards the organisation goals and objectives. One of the main criteria of an engaging employee besides looking into their attitude, employees concentrating and immersed, is counted when playing their role in his/her organisation. (May, Gilson & Harter, 2004). This statement is enhanced by May et al. (2004), stated engagement involves the dynamic usage of emotions, conduct, and perceptions on how people employ themselves in their job

Lee and Ok (2015) found that employees' stage of effort will increase by 6% when there is a 10% increase in employee engagement, which leads to a 2% increase in employee performance. The study's findings concluded that 87% of engaged employees have a lower intention to leave their company when there is a 10% improvement in employee engagement; turnover rates will reduce by 9%. Engaged employees have a more profound commitment. Therefore, fewer leaves are applied; there are reduced sick absences, lesser conflict and grievances, and increased firm's productivity and outputs (Engage for Success, 2019).

2.1.2 Core Self-Evaluation

Judge and Bono (2001) defined the core self-evaluation as the necessary evaluation of a person about themselves. It can be seen as the bottom-line assessments of each individual that judge and perceive themselves. This is further supported by Judge, Locke, Durham and Kluger (1998), where positive individuals who evaluate themselves as worthy and capable are those with high core self-evaluation.

This is supported by other researchers who found that employees with optimistic self-centeredness will aim for higher achievement by establishing attainable goals and moving toward the planned objectives. Employees will be seeking meaningfulness from achieving the target (Danish, Ahmad, Ramzan, & Khan, 2014; Karatepe & Demir, 2014). Research by Lee and Ok (2014) pointed out that employees with high core self-evaluation will be encouraged to move on, and they will believe it is worthwhile and meaningful to complete a job. Furthermore, these employees will be highly engaged if they are confident of the organisation's reliable work environment, and there are enough inner resources for them to complete the tasks. Similarly, Judge and Hurst (2007) observed that an individual with high core self-evaluation would be more optimistic about demands. They can stand high stress to handle all kinds of demands effectively. Simultaneously, if the employees realized there are sufficient resources available to support them in their daily duties, the higher the employee engagement will be.

However, in another research by Chang et al. (2012), they have highlighted that the working environment can easily influence an employee, leadership, and overall communication. Therefore, core self-evaluation might not be able to encourage employee engagement due to these factors.

2.1.3 Leadership

Leadership is described as a leader's value, quality, and characteristic to the environment or both (Billsberry, 2009). Leaders' behaviour affects the motivation and satisfaction of employees. It also fosters an environment that is reliable and trustworthy to support employees' work engagement. Thus, the use of different leadership styles can increase employee engagement (Bakker, Albrecht & Leiter, 2011).

Bedarkar and Pandita (2014) noted in an organisation that a motivating culture, power-sharing, and communication across departments, provide supports and encouragement given to their employees, which will lead to high confidence of their staff towards positive engagement. This could be contributed by the inspirational, visionary, and decisive, and team-oriented leaders to promote employee engagement in an organisation. Similarly, other researchers (Saks, 2006; May et al., 2004; Xu & Thomas Cooper, 2010) concur that employees will more engage when their leaders exhibit relationship-related behaviour.

However, research on leadership as drivers of employee engagement is inconsistent. Britt, Thomas and Dawson (2006) found no direct relationship between leadership and employee engagement. This was supported by McColl-Kennedy and Anderson (2002), who proved that leadership style is not the sole factor that leads to employee engagement. In the research by Ritz et al. (2010), a person with good psychological quality will cope with stressful and ambiguous situations. However, individual engagement and obligation towards their organisation are not directly influenced by the leadership style.

2.1.4 Information and Communication

Internal communication is the practice of conveying an organisation's values to all its employees (Berdarkar & Pandita, 2014). It is also an internal process of the organisation (Ryynanen, Pekkarinen & Salminen, 2012). When employees are allowed to provide and share information, a sense of community can be created. In the research by Mishra, Boynton and Mishra (2014), promoting a transparent organisation's culture is crucial for an organisation to enforce employee engagement in the firm.

The study was done by Freitag and Picherit-Duthler (2014) and Lee and Ok (2015) pointed crossed functional sharing of information, and appropriate communication among the staff in an organisation, with the precise job description and scopes for employees in a firm, will lead to higher engagement across teams and departments.

However, the finding by Hayase (2009) argued that limited empirical studies are supporting the above findings, where there is no direct relationship between information and communication with employee engagement.

Constantin and Baias supported this (2015), stated employees themselves must build their knowledge and skills to be recognized by the management instead of only depending on their internal communication. Therefore, information and communication cannot stand by itself as an essential driver of employee engagement. To conclude, to promote engagement, organisations should encourage two-way communications among the team and departments to address and solve the problem together. Employees must be allowed to share their opinion and perspective on the issues related to their daily tasks in their working environment (Markos & Sridevi, 2010). Also, Involving employees in any minor or significant decision that links to their responsibilities and position will create a sense of belongingness by involving and respecting employees' inputs to achieve a consensus that will upsurge employee engagement.

2.1.5 Reward and Recognition

In a study found by Markos and Sridevi (2010), based on some of the several management theories, it proved that when there is the high reward given to the employee coupled with the high recognition or praise from their superior, more effort will be given to accomplish their task for the organisation

A rewards system can be used as one of the main factors to encourage job performance in a workplace that directly impacts employee engagement. This is because the employees are more motivated, eager, and willing to put in their effort to achieve their strategies, goals, and objectives. Armstrong (2009) pointed out that rewards can be concluded in two forms: financial (extrinsic) and non-financial factors or both. Rewards can also be given in partial or total rewards to motivate them to realize the target set for them.

It is common for an individual is expected to be acknowledged for their valuable contributions. According to Hofmans, De Gieter and Pepermans (2013), to get more staff engaged, employees need to be convinced that the management will recognize their contributions.

The two most common rewards, salary, and fringe benefits, are the most popular rewards used in many organisations for employee benefits and welfare. However, this was not supported by the research done by Markos and Sridevi (2010). The author argues that most organisations did not treat salary and benefits as the main drivers to encourage or promote employee engagement behaviour. Non- financial rewards in nature are a more crucial factor for employee engagement. On the other hand, appropriate rewards and recognition are more important because they feel obliged to receive rewards and recognition. In contrast, lack of rewards and recognition will cause employee burnout as the effort cannot measure with the rewards system in their working environment. (Maslach, Schaufeli & Leiter, 2001).

3.0 CONCEPTUAL FRAMEWORK

Several practitioners acknowledge that employee engagement is a new element developed in human resource management for business owners or professionals to withstand the current unsteady and turbulent economic conditions in current conditions.

These areas have gained wide acceptance by many industry players due to the possibility of it being linked to an extensive range of outcomes for individuals and organisations. According to Lee and OK (2015), Karatepe and Demir (2014) in researched employee engagement proved a positive linkage with an organisation practices and policy that benefits the company and the employee that eventually leads to the overall employee engagement company.

Much researches have been done by the business consultants, practitioners, and the research entities, with the promising outcomes of employee engagement in organisations. (Kim, Murrmann, & Lee, 2009; Kim, Shin, & Swanger, 2009; Shuck & Wollard, 2010). Hence, this study intends to explore the relevant drivers for employee engagement, particularly in the Malaysian context's service and manufacturing industries. Based on the above explanation and the literature reviews, the researcher has identified the research objective and questions for the hypothesis testing as below:

3.1 Research Objectives

1. To examine the relationship between core self-evaluation and employee engagement in MNE's manufacturing and service industry in Malaysia.
2. To investigate the relationship between leadership and employee engagement in the manufacturing and service industry in MNE in Malaysia.
3. To determine the relationship between information and communication and employee engagement in the manufacturing and service industry in MNE in Malaysia.
4. To examine the relationship between core reward and recognition and employee engagement in MNE's manufacturing and service industry in Malaysia.

3.2 Research Questions

1. What is the relationship between core self-evaluation and employee engagement?
2. Is there a significant relationship between leadership and employee engagement?

3. What is the relationship between information and communication and employee engagement?
4. Is there a significant relationship between reward and recognition, and employee engagement?

Based on the above, the following conceptual framework is proposed:

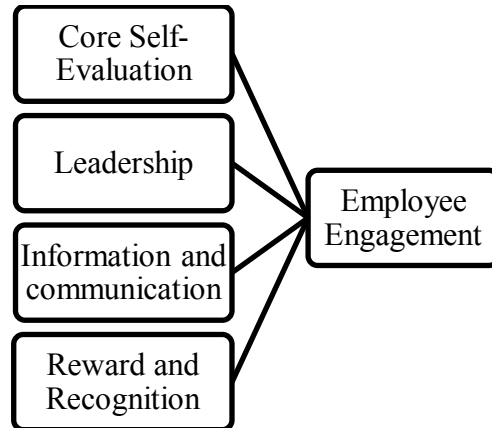


Figure 3.1 Conceptual framework

Next, the hypotheses developed this study are as follows:

3.3.1 Core self-evaluation and employee engagement

In the research by Danish et al. (2014), proved that there is a positive relationship between core self-evaluation and the employee engagement, the author share when an employee observe they have a higher level of the capabilities to perform the tasks. Employees will feel more confident and comfortable working harder to prove themselves to meet their superiors and management demands. Also, this is supported by Rich, Lepine and Crawford (2010). The author believed the employee would invest their time and resources in their role due to high core self-evaluation. Hence, the proposed hypothesis is as below :

H1: Core self-evaluation and employee engagement are positively related.

3.3.2 Leadership and employee engagement

Datche and Mukulu (2015) agreed on the positive relationship between leadership behaviour and employee engagement and supported by the research done by Wahyu (2014) showed that good leadership would encourage team players across functions and departments moving towards the goals and objectives. Thus, the proposed hypothesis is suggested below:

H2: Leadership and employee engagement are positively related.

3.3.3 Information and communication with employee engagement

Lee and Ok (2015) showed that organisations' information and communication are positively related to employee engagement. Another research found that employee communication affects employee engagement (AbuKhalifeh & Som, 2013). Hence, the proposed hypothesis is proposed as below:

H3: Information and communication have a positive relationship with employee engagement

3.3.4 Rewards and Recognition

Ram and Prabhakar (2011) shared a positive relationship between rewards and recognition and employee engagement. Similarly, in the research by Hassan, Hassan and Shoaib (2014) supported the statement, a sound rewards system will encourage the employee to move on in order to work hard to achieve the company's objective as they can see the fair compensation to motivate

them to perform for the benefit of the company. Based on these researches, thus the hypothesis is proposed as below;

H4: Rewards and recognition has a significant positive relationship with employee engagement

4.0 RESEARCH METHODOLOGY

This study utilized a quantitative approach. Specifically, a survey questionnaire is used. A set of structured questions was adopted from past research. Section A of the questionnaire is about the demographic and general profile of the respondent's firm. The questions are fixed-alternative questions where the respondent is asked to select the answer closest to his/her viewpoint. Section B focused on four independent variables (core self-evaluation, leadership, information and communication, and rewards and recognition) and one dependent variable (employee engagement). The survey questions used a five-point Likert-scale that ranges from 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree. The instruments were modified from past studies, which were based on multiple-item measurement scales.

The study respondents comprise of employees of MNE involved in manufacturing and service in Klang Valley, Malaysia. Survey questionnaires were distributed to 223 employees. However, only 200 usable responses were received.

DATA ANALYSES AND FINDINGS

The data collected was analysed using SPSS version 21. Descriptive analyses and inferential analyses were conducted. Pearson correlations and multiple linear regressions were done to test the relationships between the independent variables and the inferential analyses' dependent variable.

4.1 Descriptive Analyses

Out of 200 respondents, 47% worked in the service sector while the rest are employed in manufacturing. Most (17.5%) work in the food and beverage industry for business type, while the least (3.5% each) are from accounting firms and IT. Most companies (36%) have below 100 employees. Next, 21.5% have 101-250 employees, 20.5% with 251-300 employees, and 14% with over 1,000 employees. The least are from companies with 501 to 1000 employees. For organisations' operational period, 28.5 % have operated for 11-20 years. Next, 28% have operated below ten years. Another 25.5% of companies have been in operations 21-30 years, and 18% 30 years plus. For the departments, most respondents (23%) are under sales and marketing while the lowest is the IT department (2.5%) and other departments (3.5%). The majority (46.5%) of the respondents are executives or senior executives, followed by managers or senior managers (20.5%), and directors or general managers (10%).

For gender, mostly female respondents (56%). As for the age group, the majority are aged 18- 23. Those over 47 years is the least (5.5%). Most respondents (70.5%) have undergraduate degrees. Just 1% holds a Ph.D. Looking at work experience, most (33%) already worked 1-5 years. Just 6.5% have 11-15 years of service. The most significant number of respondents (36.5%) make RM2001-RM4,000 income per month. The smallest number make RM8001-RM10,000 every month.

4.2 Central Tendencies Measurement of Constructs

From table 4.1, the leadership mean value is 3.953, the highest out of all variables. Next are information and communication (3.944), rewards and recognition (3.920), and core self-evaluation (3.917). The findings indicate that most respondents agree that leadership is vital to influence the employee's engagement. They rate core self-evaluation as of least importance.

Table 4.1: Descriptive Statistics on Variables

Variables	N	Mean	Std. Deviation
Core Self-Evaluation (CSE)	200	3.917	0.64884
Leadership (L)	200	3.953	0.72790
Information and Communication (IC)	200	3.944	0.68106
Rewards and Recognition (RR)	200	3.920	0.74510

4.3 Reliability Analysis

Cronbach's alpha measures reliability. From table 4.2, the value of Cronbach's alpha for information and communication is 0.787, which falls under the acceptable range of 0.7 and 0.8. Core self-evaluation (0.877), leadership (0.880), and rewards and recognition (0.859) have Cronbach's alpha values ranging from 0.8 to 0.9, which is considered as good internal consistency reliability. Employee engagement (0.929) is considered as excellent because it is above 0.9.

Table 4.2: Reliability Analysis

Construct	Cronbach's Alpha	Number of Items
Core Self-Evaluation	0.877	6
Leadership	0.880	5
Information and Communication	0.787	4
Rewards and Recognition	0.859	5
Employee Engagement	0.929	5

4.4 Inferential Analyses

4.4.1 Pearson Correlation Analysis

Pearson correlation is used to examine the strength and direction of relationships of variables in this study. As shown in Table 4.3, the significant values of all the independent variables (CSE, L, IC, and RR) are under 0.01 (two-tailed), indicating that the correlations among the variables are significant with the dependent variable (EE). Moreover, the correlation coefficients' positive values show the positive relationship between all independent variables (CSE, L, IC, and RR) and EE. RR has the strongest relationship with EE with a coefficient of 0.756, followed by CSE (0.724), and IC (0.711). Among all independent variables, L has the weakest relationship with EE with a correlation coefficient value of 0.624.

Table 4.3: Pearson Correlation

		CSE	L	IC	RR	EE
CSE	Pearson Correlation	1	.544**	.670**	.631**	.724**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	200	200	200	200	200
L	Pearson Correlation	.544**	1	.580**	.640**	.624**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	200	200	200	200	200
IC	Pearson Correlation	.670**	.580**	1	.747**	.711**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	200	200	200	200	200
RR	Pearson Correlation	.631**	.640**	.747**	1	.756**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	200	200	200	200	200
EE	Pearson Correlation	.724**	.624**	.711**	.756**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	200	200	200	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

4.5 Multiple Linear Regression Analysis

The summary results are shown in Table 4.4. The R^2 adjusted is 0.687, which indicates that 68.7% of the variance in employee engagement can be explained by core self-evaluation, leadership, information and communication, and rewards and recognition.

Table 4.4: Summary of Multiple Linear Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833 ^a	.694	.687	.4544

a. Predictors: (Constant), Rewards and Recognition, Core Self-Evaluation, Leadership, Information and Communication

From table 4.5, the significance value is less than 0.05. Thus, the overall regression results indicate that employee engagement can be explained quite well by the four independent variables.

Table 4.5: ANOVA Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	91.171	4	22.793	110.372	.000 ^b
Residual	40.269	195	.207		
Total	131.440	199			

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), Rewards and Recognition, Core Self-Evaluation, Leadership, Information and Communication

Table 4.6 illustrates that CSE, L, IC, and RR are significantly related to EE since the significance value is 0.000, 0.014, 0.021, and 0.000, respectively, for each of the independent variables. All these figures have p-values below 0.05.

The beta of CSE is 0.412, indicating that by increasing one CSE unit, EE will go up by 0.412 units when all other variables are the same. Other variables being the same, increasing one unit of L will make EE go up by 0.148 units. Increasing IC by 1 unit will raise EE by 0.181 units while other variables stay the same. Lastly, increasing one RR unit will make EE go up by 0.383 units when other variables are held constant.

Table 4.6: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.512	.219		-2.332	.021
Core Self-Evaluation	.412	.070	.329	5.843	.000
Leadership	.148	.060	.133	2.479	.014
Information and Communication	.181	.078	.152	2.331	.021
Rewards and Recognition	.383	.072	.351	5.345	.000

a. Dependent Variable: Employee Engagement

The following multiple regression equation can then be formed as:

$$Y = \alpha + \beta^1 X^1 + \beta^2 X^2 + \beta^3 X^3 + \beta^4 X^4$$

where:

Y = Employee Engagement (EE)

α = as constant, value of Y when X become zero

X^1 = Core Self-Evaluation (CSE)

X^2 = Leadership (L)

X^3 = Information and Communication (IC)

X^4 = Rewards and Recognition (RR)

Hence,

Employee Engagement = (-0.512) + 0.412 (CSE) + 0.148 (L) + 0.181 (IC) + 0.383 (RR)

4.6 Discussion of Main Findings

The results of the hypotheses tests are shown in table 4.7. It can be seen that core self-evaluation is significantly related to employee engagement. The significance value of core self-evaluation is 0.000, i.e. less than the p-value of 0.05. Hence, H1 is supported.

The other result of the multiple regression analysis is that there is a significant relationship between leadership and employee engagement. The significance value of leadership with employee engagement of 0.014 is lesser than 0.05. Hence, H2 is supported.

The relationship between information and communication with employee engagement shows a significance value of $p=0.021$, which is less 0.05. Thus, H3 is supported, indicating that information and communication are significantly related to employee engagement.

Lastly, the results show a significant relationship between rewards and recognition with employee engagement as $p= 0.000$, which is smaller than 0.05. Thus, H4 is supported.

Table 4.7 Main Findings of Hypotheses Testing

Hypothesis	Significance	Conclusion
H1: Core self-evaluation and employee engagement are positively related.	$\beta = 0.412$ $p = 0.000 < 0.05$	Accepted.
H2: Leadership and employee engagement are positively related.	$\beta = 0.148$ $p = 0.014 < 0.05$	Accepted.
H3: Information and communication have positive relationship with employee engagement	$\beta = 0.181$ $p = 0.021 < 0.05$	Accepted.
H4: Rewards and recognition has significant positive relationship with employee engagement	$\beta = 0.383$ $p = 0.000 < 0.05$	Accepted.

5.0 DISCUSSION

Core self-evaluation significantly influences the engagement of employees. Positive core self-evaluation will encourage employees to look at the good and motivating part of their jobs (Judge et al., 1998, Ferris et al., 2011). As noted by Judge and Hurst (2007), people who see themselves as having high levels of general self-efficacy to meet the job demands have also increased available psychology to devote themselves to carrying out their job roles. The current study's finding is in line with this observation. Additionally, people who have higher core self-evaluation levels are more likely to find their work meaningful and have more work confidence. Rich and colleagues (2010) also support that these favourable factors motivate engagement among employees.

Organisations with committed leadership are more likely to get the employee engagement they desire using less cost (Solomon & Sridevi, 2010). Rama Devi (2009) observed that if an employee believes that his organisation focuses on good leadership, he tends to be committed,

leading to engagement. Different behaviours by leaders correlate with different degrees of engagement. Behaviours that enable their subordinates to relate with the goals of the firm will enhance employee engagement. In other words, leadership affects the engagement of employees (Xu & Thomas Cooper, 2010).

Studies by Karanges and colleagues (2012) and Beatson and Lings (2015), show that managers and supervisors can get the optimal level of engagement from employees by communicating with them so that employees feel like they are a part of the organisation. Superiors who involve their subordinates to discuss the staff's role and goals can improve the individual's engagement. Clarke (2009) and Welch (2011) noted that effective communication strategies could get proper information flow in a firm, build more robust employee engagement, and understand how their roles fit with its goal.

Employees' feeling of belongingness is fundamental. The emotional link and the human aspect of being accepted and valued in the organisation will affect employee engagement (Rodrigues da Costa & Maria Correia Loureiro, 2019). Studies support the power of recognition and its importance in retaining talents by improving employee engagement (Rodrigues da Costa & Maria Correia Loureiro, 2019). Furthermore, Veerabramham and Kolla (2014) stressed the importance of compensation, benefits, and formal recognition in developing employee engagement. On top of meaningful work, a sense of return on investment can come from external rewards and recognition. Thus, employees will become more engaged if given greater rewards and recognition for performing their roles (Maslach et al., 2001). The findings of these past research are consistent with the results of the current study, i.e., rewards and recognition, will influence the employee's engagement.

Overall, the findings highlight the importance of self-core evaluation, leadership, information and communication, and rewards and recognition in enhancing employees' engagement in the service and manufacturing sector of MNEs in Klang Valley, Malaysia.

6.0 CONCLUSION

This study's findings are useful for employers to develop more effective human resource systems in their organisations. Companies can develop HR systems that focus on the proper drivers for their firms to improve employee engagement leading to higher productivity and better organisational performance. The study also guides employers on how to attract and retain their top talents to gain competitive advantage via cost savings while improving an organisation's effectiveness. Moreover, employees can enjoy the benefits of an enhanced work environment and build positive relationships with their organisations.

In contemporary times, many companies are forced to bring down costs and prices by reducing their number of employees, simplify their organisational structure, and redesign their business processes (Cartwright & Holmes, 2006). Many practitioners agree that employee engagement is a new human resource practice that helps businesses cope with the industry's challenging conditions (Lee & Ok, 2015). During times of economic recession, employee engagement could be the most crucial factor for a business to succeed in a challenging environment. According to research involving 25,000 employees and survey data from human resource directors and CEOs, organisations invested in engagement earned higher revenue than others in the market ("Malaysia's upward course in employee engagement," 2014).

Much of the research on employee engagement has been conducted overseas, like Canada. Nevertheless, Aon (2018) mentioned that employee engagement is slowly getting better in Malaysia. It had increased to 63% by 2018. However, Malaysia's ranking remains the lowest compared to other countries in the Asia Pacific. Zainul (2018) also observed that when employees' engagement goes up by 5%, company revenue will increase by 3%. Therefore, engaging employees is an essential area of management, particularly in Malaysia.

In conclusion, employee engagement and its antecedents are undoubtedly crucial for both organisations and individuals. Firms with a more robust culture that supports employee engagement drivers are more likely to get better performance from their employees. Thus, understanding the relevance and significant influence of different variables on engagement is crucial for both the academia and managers.

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BAFE032:
**WOMEN ENERGIZED: PRE- AND POST- QUOTA OF WOMEN
DIRECTORSHIP IN THE MALAYSIAN ENERGY INDUSTRY**

Jannatul Ferdous^a, Nurul Afidah Mohamad Yusof^b, Zuriawati Zakaria^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: jannattushti2828@utar.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: afidahj@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: zuriawatiz@utar.edu.my

Abstract

Diversity has become the subject of key interest in the corporate governance area. Among various diversity-related issues, gender diversity has been the main attention in corporate governance discussions, particularly in the context of the corporate boardroom. The implementation of women quota on corporate boards is one of the initiatives to ensure gender diversity and women empowerment in the corporate world. In view of this, the Malaysian government has imposed a 30% women quota on the corporate sector to enhance women participation in order to keep pace with other countries. This is further supported by the requirement in the latest Malaysian Code on Corporate Governance 2017 (MCCG2017) which binds the listed firms under the “Large Companies” category to comprise at least 30% women directors. This paper outlines the trend of women directorship in the energy sector during the pre- and post-period of quota implementation in Malaysia. The energy sector is known as one of the male-centric industry not only in Malaysia, but also globally. The “glass ceiling” and “broken rung” phenomenon still prevail in the energy sector economy, throwing cold water on the women’s corporate ladder. In addition, this paper aims to reflect whether the Malaysian energy companies have accomplished the target of 30% women directors to comply with the quota. Subsequently, the characteristics of the women directors in terms of their independence and qualification (financial literacy and industry-related experience) are also examined in this paper. These traits are expected to result in better monitoring and supervision by board members.

Keywords: Board gender diversity, Women directorship, Quota, Glass-ceiling, Broken- rung

INTRODUCTION

In the era of equity, competition and inclusion, diversity earns so much concerns and critiques. Demographic and cognitive attributes of diversity can blend together to ensure proper strategic alliances among the corporation. Among the diversity-related issues, gender diversity is always regarded as jewel in the crown. Gender diversity attains vast attention due to the corporate legislation, reforms, and financial crisis and scandals in the last few decades. When it comes to ensure proper gender balance in all phases of the corporate sector, board gender diversity is one of the context that is being discussed in both the policy studies and academic literature.

Everyone is entitled to an equal opportunity and chance to demonstrate their contribution and talent in their respective sector. In order to achieve good corporate governance and better performance, firms need a more balanced male and female board of directors who own the right aptitudes such as knowledge, skills, experience, and professionalism. A balanced board may help the corporation to contribute to board strategic decision making, access risky ventures, innovation and high growth. A corporate board is deemed to be well balanced if its board members are from different backgrounds regardless of gender, age, experience, ethnicity, etc.

When women remain being under-represented on the board merely due to gender issues, it raises some ethical concerns. The “glass-ceiling” phenomenon has often barred the way of climbing the corporate ladder for women. Moreover, the “broken rung” phenomenon also often happens, whereby women facing difficulty of getting the promotion at each level. As stated by Jess et al. (2019),

this particular phenomenon has caused many women to get stuck at the manager level and unable to further climb up the career ladder. According to S&P Global Indices, if the growth of women participation continues at current rate, a 50-50 gender-balanced board will only be achieved in 2058 (New Straits Times, September 2019).

Quota for women membership on corporate boards has been gaining attention in the last few decades. The quota implementation is encouraged to minimize the effect of a male-dominated society and to promote gender diversity at the workplace. Being the pioneer of establishing quota policy, Norway has successfully achieved this with 40% women quota. Iceland, Spain, France, Germany, Italy have followed suit and achieved the quota target successfully.

Malaysia is not the exception in ensuring women empowerment, especially when it comes to the gender-balanced board. In 2004 Malaysian government declared that there must be 30% women participation at the top level of the corporation. Many corporate firms struggled to comply with this quota in the early stage. Next, the government further called for 30% representation of women on board, which is to be achieved in 2020. This is further supported by the requirement in the latest Malaysian Code on Corporate Governance 2017 (MCCG 2017) which binds the listed firms under the "Large Companies" category to comprise at least 30% women directors. Under MCCG 2017, Practice 4.6 states that "Large Companies" must have 30% of women directors on board, and half of the directors must be independent. In a nutshell, MCCG 2017 aims to improve board structure by enhancing the board independence and gender diversity. According to Global Board Diversity Tracker 2018, the percentage of board positions held by Malaysian women is 24.1% whereas it is only 9.4% in the case of Asia. Malaysia is moving relatively fast to ensure gender-balanced board, but it is still far from achieving the 30% target as declared by the Malaysian government.

Problem Statement and Research Objective

The energy sector plays a crucial role in mapping new future growth in Malaysia. The Malaysian energy sector is the combination of natural gas, fuel, petroleum, coal, biodiesel, and electricity. The contribution of Malaysia's energy sector to its gross domestic product (GDP) is approximately 20%. The oil and gas industry makes up nearly 76% of the entire energy sector. The energy sector is selected in this paper for its known male-dominated environment. Only a fifth of employees are female employees, and this raises a concern. Female participation in the energy sector workforce is low; the lowest in any significant industry (New Straits Times, September 2019).

When quota comes into force, there are two problems that need to be addressed, i.e. tokenism and visibility. Tokenism problem occurs when female directors assume themselves as token. They don't feel comfortable sharing their opinion related to any decision in the corporation. Meanwhile, the visibility problem suggests that women directors are always being observed by their male counterparts. This continuous observation limits and shrinks the credibility and decision making of women directors. On another note, in order to comply with the government 30% quota, it is concerned that firms might appoint women directors just as a box-ticking process rather than taking serious consideration on their respective qualification.

In view of the above discussion, the objective of this paper is to examine the trend of women directorship in the Malaysian energy industry from 2013 to 2019, which covers the pre- and post-quota period. The trend is examined from the perspective of the percentage of women directors, 30% quota achievement, independence, and qualification in terms of financial literacy and industry-related experience.

Research Significance

First, this study will contribute to bridge the gap of past literature regarding the quota implementation, especially in the energy sector of Malaysia. This study will mirror that to what extent the quota target is achieved after the implementing of MCCG 2017. Whether the large energy companies are complying with government 30% quota policy or not is also justified in this study.

Second, women are facing glass-ceiling and broken-rung problems, especially in the energy sector's women director's position. This study will shed light on the fact that to achieve 30% women quota, the companies should have women employees in the entry and mid-level. Furthermore, the

government can set up a new policy that the energy sector should have a required rate of women percentage at the very entry-level. This will justify that if there is a pool of talented women at every stage of the corporation, it will be easy for women to become the board of director.

Third, this study will justify with SDG-17 goals that should be achieved within 2030. The “Gender Equality” is the 5th goal of SDG-17. This goal signifies the equal participation of women on board in the energy sector of Malaysia.

Finally, when there is the presence of women not only on the top-level but also on every phase of the companies, this will lead a positive vibe to the customers. Apart from this, Malaysia’s oil is exporting to other countries. This will create a good image and reputation when the foreign buyers will see the presence of women directors. Moreover, as women are proving themselves in all the sectors, the energy sector will take in into consideration to create a way for graduate females to enter this industry.

LITERATURE REVIEW

Underlying Theories

Various theories have been used in corporate governance research. Particularly in examining the role of the corporate board of directors, the prominent theories are agency theory, resource dependence theory, resource-based view theory, stakeholder theory, and stewardship theory. In the context women directorship, this paper takes the approach from two theories, namely the agency theory (AT), and the resource-based view theory (RBV). These theories are used to give the support and justification of women director’s presence on corporate boards.

Agency theory was introduced by Ross (1973), and was later given a detailed overview by Jensen and Meckling (1976). The agency theory plays a role in resolving the issues between agents and principals of the company. This theory is often used to promote board gender diversity along with improving agency problems. It suggests that good corporate governance can be achieved through greater gender diversity on the board by enhancing board independence and monitoring system. To support this phenomenon, this theory asserts that women are considered as outsiders of the corporate board (because they are not members of the “old boys’ network”). Therefore, they can play better monitoring and supervision role than their male counterparts (Kirsch 2018).

Resource-Based View theory (RBV) was introduced by Wernerfelt (1984) and was later refined by Barney (1991). The theory suggests that a firm may turn its internal resources and capacities into strategic decision making in order to get competitive advantages over the other market players. As firms possess unique attributes in their internal resources and capacities, this heterogeneity will lead firms to attain sustainable competitive advantages to foster the firm’s growth (McWilliams & Siegel, 2010). Based on the RBV theory, firm employees are considered as intangible assets which can help firms to gain competitive advantages (Farndale & Atli, 2016). Homogeneous boards are most likely to lack in creativity, risk-mitigating, and market insights. Meanwhile, heterogeneous boards could enhance firm reputation and growth by providing creativity, and market insights (M Ali, Kulik & Metz, 2009). Moreover, women directors are considered as more enthusiastic and dynamic than their male counterparts (Charbel Salloum et al., 2016).

Board Gender Diversity – Women Directorship

Past research had shed light on the significance of having women directors on corporate boards. Women directors engage themselves sincerely in the supervisory committee. For this, they can carry out all responsibilities related to supervision and monitoring (Adams & Ferreira 2009). Luckerath-Rovers (2013) asserted that female directors can perform as an intermediate to create a connection between the external entities and firm’ stakeholders to uphold the prestige of the firms. They also justified that those firms have more females on boards are performing better rather than fewer females on board in Netherlands. Female are more assertive, compassionate and determined to follow the rules and regulations more than men (Luckerath-Rovers, 2013). According to Zam et al., (2017), the mixture of gender can provide a different viewpoint and different way of thinking.

On another note, Vinnicombe (2011) suggested that women face difficulties to be the directors as they lack proper family connections, lack determination and confidence, lack personality traits and most importantly proper educational qualification and industry experience. Amran et al. (2014) highlight that although women are underrepresented in corporate boards, their existence, worth, and values should not be ignored. Women directors are more supportive in the workplace rather than male counterparts that leads to managers to be more open and share valuable information with them (Arzubiaga et al., 2018). Moreover, female directors having different mindsets which lead to different viewpoints and bring about quality brainstormed ideas and perception.

Agency theory purports the presence of independent directors on board to establish proper monitoring session and strategic decision making. According to Chen (2013), independent directors help to alleviate conflicts regarding risky ventures, innovation. Moreover, Wong et al. (2017) stressed that the independent director's act as role to lessen the abuse of power and being overconfidence of CEO's and managers. Balsmeier et al., (2017) justified that independent directors take proper and strategic decisions for the utmost use of company resources along with upholding the company's prestige in the market. Although there has been good progress in terms of the number of women directors on corporate boards, the senior positions such as independent non-executive directors and sub-committee members are still not easily accessible to these women directors (Nekhili & Gatfaoui, 2012).

Having a business education background is an advantage to directors because they are exposed to various business and management-related subjects that enable them to have better understanding on business operations (Mahadeo, Soobaroyen, & Hanuman, 2012). Furthermore, business education background also allows directors to understand and interpret financial data, and subsequently take strategic decisions for the company (Maslina and Raja, 2019). Meanwhile, industry-related experience gives better understanding to the corporate-related issues such as the firm's strength, weakness, opportunities in the industry. The presence of more skillful, knowledgeable, and experienced women directors contributes positively to the firm. By possessing these qualities and traits, women directors would be able to identify problems, risky ventures and channel their expertise to maximize the shareholders' wealth. Past research has also found a positive association between women directors' business educational qualification and firm growth (Poon, Heong & Lee, 2013). Besides, there is positive linkage found with industry experienced directors and firm growth, due to the ability of the directors to provide insightful information and to make more strategic decisions (Firehiwot Kebede, 2016).

RESEARCH METHODOLOGY

Sampling Design

The target population of this study is the listed energy companies of Malaysia. As energy listed companies are chosen for this study, there are 31 energy companies are trading in Bursa Malaysia. The period will be taken into consideration is from 2013 to 2019; the pre and post-quota period for this study; in total, 7 years' time span. The pre quota period is taken from 2013 to 2017, and the post-quota period is 2018 to 2019. The pre-quota period is chosen to take MCGG (Malaysian Code of Corporate Governance) 2012 under consideration while the post-quota is chosen considering MCGG 2017. The final observation is chosen $31 \times 7 = 217$ samples that will be used to determine the trend of women directorship in the energy industry. The population of this study will be collected from the corporations that are listed in Bursa Malaysia and the annual report and website of the respective energy companies from 2013 to 2017.

Research Procedure

This paper examines the trend of women directorship in the Malaysian energy industry from the following perspectives:

- a) Percentage of women directors
- b) Achievement of 30% quota requirement
- c) Independence
- d) Qualification in terms of financial literacy and industry-related experience

The operationalization of the perspectives is described in Table 1.

Table 1: The Examined Characteristics of Women Directors

Characteristics	Operationalization
Percentage of women directors	Number of women directors on a board / Number of directors on a board
Achievement of 30% quota requirement	Number of companies which have achieved the 30% quota requirement by MCCG2017
Independence	Number of independent women directors / Number of independent directors
Qualification – Financial literacy	Number of women directors having business education background / Number of women directors
Qualification – Industry-related experience	Number of women directors having industry-related experience / Number of women directors

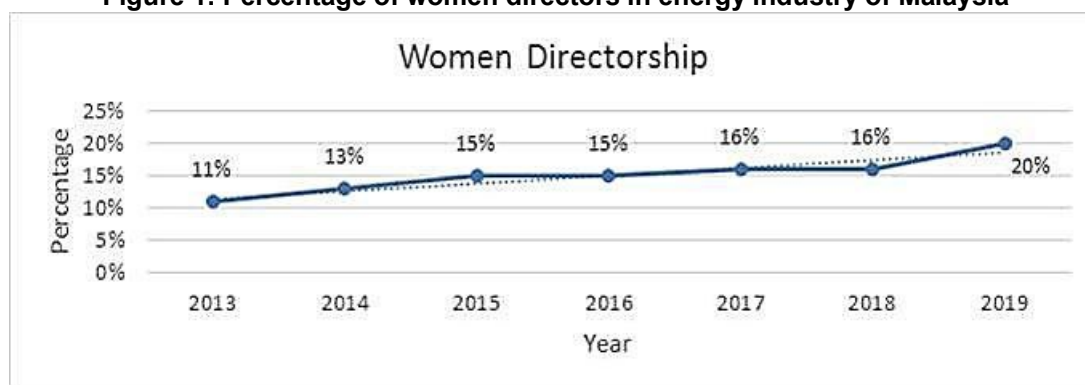
DATA ANALYSIS

Trend of Women Directorship in the Malaysian Energy Industry

The following sections present the findings of this paper with regards to the trend of women directorship in the Malaysian energy industry during the pre- and post-quota period. Figure 1 shows the percentage of women directors from 2013 to 2019. It indicates that there is an upward trend during the examined period.

It is noted that the percentage of women directors has steadily increased from 2013 to 2019. The upward trend started even during the pre-quota policy, that is moving from 11% to 16% from 2013 to 2017. This is conjectured to be the implication of MCCG 2012, which highlighted the need for gender diversity on corporate boards, albeit no quota being stipulated. Subsequently, the Malaysian Code on Corporate Governance 2017 (MCCG 2017) indicated that there must be 30% women's presence on the board of directors for "Large Companies". To comply with this obligation, companies started to hire women directors to fill up the quota. As observed, although the percentage of women directors in 2018 was the same as in 2017, i.e. 16%, the case has changed in 2019. In 2019, there was a dramatic change which has seen the percentage of women directors to increase to 20%.

Figure 1: Percentage of women directors in energy industry of Malaysia



Meeting Quota Requirement

Based on Figure 1, it is seen that energy industry has not complied with MCCG 2017 with regards to the 30% quota. Although there is an increasing percentage of women directors on board, it is still far away from achieving the target of 30% quota requirement. Nevertheless, in the case of single entity, some companies have achieved the imposed 30% quota, as presented in Table 2.

Table 2: List of companies which have achieved the 30% quota post-MCCG2017

Year	Company Name	% of women directors
2018	Dialog Berhad	33%
	KNM Group	40%
	Malaysia Marine & Heavy Holdings	33%
	Petron Refining Malaysia	37%
	Velesto Energy Berhad (UMW oil and gas)	30%
2019	Bumi Amarda Berhad	33%
	Dayang Enterprise Holdings Berhad	33%
	Dialog Berhad	33%
	KNM Group	40%
	Icon Offshore Berhad	33%
	Sapura Energy Berhad	30%
	Scomi Energy Services Berhad	30%
	Petron Refining Malaysia	37%
	Velesto Energy Berhad (UMW oil and gas)	40%

Board Independence

Independent directors are appointed to strengthen the firm's monitoring and supervision system. It is clearly stated in MCCG 2017 that each board should have at least half independent directors. In the case of large companies, there must be a majority presence of independent directors.

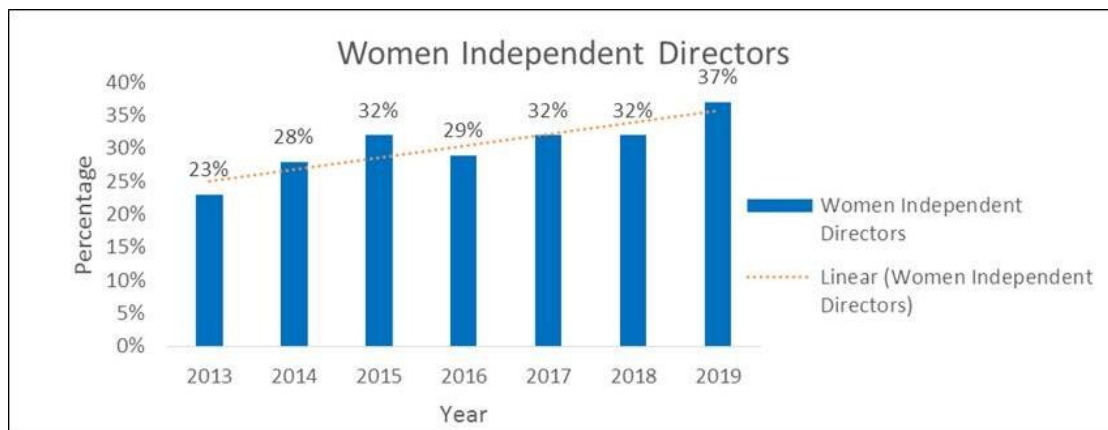
From Figure 2, it is depicted that there is an increase in the appointment of independent directors on board, i.e. from 49% to 52% for the period from 2013 to 2019. As presented, the graph indicates that all the energy companies possess majority of independent directors from 2015 to 2019, providing better monitoring and supervision towards company and its shareholders.

Figure 2: Percentage of independent directors in the energy industry of Malaysia



With regards to the presence of women independent directors on the board, there is nothing explicitly stated in the MCCG 2012 or 2017. However, it may indicate board independence through women, as well as the accessibility of women directors to senior board positions. The findings from this paper presents a visionary scenario. There is a clear indication of an upsurge in the percentage of independent women directors in the energy industry from 2013 to 2019. As presented in Figure 3, there is a rapid increase from 23% to 32% during the pre-quota period from 2013 to 2017. This trend continues during the post-quota period, whereby the percentage increases from 32% to 37%; amounting to 5% increment in 2 years.

Figure 3: Percentage of women independent directors in energy industry of Malaysia

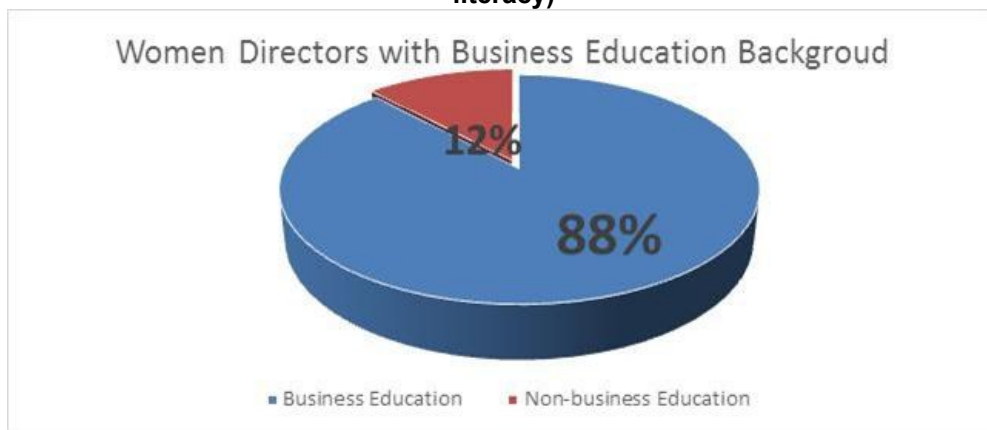


Based on Figure 2 and Figure 3, both independent and women independent directors are on an upsurge trend. In comparison to board independence, whereby there is a slight increment of independent directors in energy industry, the percentage of independent women directors has increased at a higher rate. This indicates that the senior positions, such as independent non-executive directors are becoming more accessible to the women directors.

Women Directors' Qualification

Having business education background increases one's financial literacy. Women directors with different types of qualifications related to business education and experiences help to distinguish themselves among other members. These unique attributes beget not only strict monitoring of financial statements, but also strategic decision making of companies.

Figure 4: Percentage of women directors with business education background (financial literacy)



From Figure 4, it is clearly indicated that almost 88% women directors have business education background such as finance, accounting, economics, management, marketing, etc., contributing to good financial literacy. From the graph, it is identified that energy companies are more likely to appoint women on their board level who have solid business knowledge so they can easily contribute their knowledge to firm's growth.

Industry experience is considered as one of the most prime factors to appoint the board of directors. If the appointed women directors have an outstanding industry-related experience, they can dodge the tokenism problem. Women having industry experience keep themselves distinct from others; deserving the priority to be on the board. From Figure 5, it is shown that there is only 24% of women directors who have industry-related experience, whereas the rest 76% women directors do not have the industry-related experience.

Figure 5: Percentage of women directors with industry-related experience



Based on Figure 4 and Figure 5, it is found that the Malaysian energy industry is still shortage of industry-related experienced women directors. However, the industry has an outstanding number of women directors with financial literacy (by having business education background).

DISCUSSION AND CONCLUSION

The Malaysian energy industry is still male-dominated, and women in this industry are still under-represented; not only at board level but also at entry and mid-level of company. The glass-ceiling and broken-rung phenomenon still prevail, and this hinders women's ladder of success at every level by not getting promoted easily. Women participation is still not praiseworthy even after the implication of quota policy (MCCG 2017). The findings indicate that only 20% women are serving the energy industry board, whereas the targeted quota is 30%. It implies that there is still a long way to achieve the desired target level within this industry. On another note, it is noteworthy that almost all the women directors are designated as independent directors in this energy industry. Women independent directors are more assertive and mitigate conflicts among managers and CEO's. Indeed, independent directors are more cautious about firm's new projects by critically scrutinizing the high risky ventures. Women with business-related knowledge can contribute to the firm by identifying the potential problems along with having a clear concept of financial statements of firms. Those having industry knowledge expertise in the respective fields can track and monitor the upcoming risk associated with it. For this, boards can take a proper strategic decision within the proper time frame in a cost-effective way. Furthermore, women directors are designed to bring more strategic inputs and lead to productive discourse. As the quota target set by the government is still not achieved till now, the quota should be reviewed and redesigned to implement easily. Government should be more flexible about this quota policy or the tenure of the achievement of target as the tenure of achieving of quota target is till 2020. Quota policy cannot be achieved without the proper intervention of government and support of companies. From the data analysis, there is still long way to go to achieve the desired 30% within this year 2020. It can be speculated that government should relax the quota percentage or extend the year to be achieved the women director's percentage.

This paper examines the trend of women directorship in the Malaysian energy industry from 2013 to 2019, considering the pre- and post-quota policy. It is found that despite the increasing percentage of women directors at the board level, it is still far from the 30% quota requirement. Out of the 31 companies, only a handful that has achieved the target. However, it is interesting to find that most of the women directors are appointed as independent non-executive directors. This indicates that senior positions are directors becoming more accessible to the women directors. More women directors possess business-related knowledge rather than industry experience in the energy listed companies of Malaysia. Remarkably, energy companies prioritize those women who own business-related knowledge rather industry experience. Energy listed companies should focus on achieving not only the quantity of women directors but also qualified women directors in terms of business knowledge and industry experience. Women director's qualification (business knowledge and industry experience) can differentiate themselves among the male counterparts and make their voices to be heard. Qualified women directors should be given priority to sit on the board level so company can achieve target level along with fostering the growth.

The implementation of quota system is not intended to create conflict between male and female, but to encourage female counterparts to take part in the corporate world. Quota gives an assurance that female workers are no longer denied access to hold that desired position due to their gender. The energy industry should create such a working environment with female-friendly culture, so those female employees are persuaded to stay rather than to leave due to "old boy's network" taboo. Proper monitoring, sponsorship development and especially formal training program should be launched to retain female employees to gain the advantage of the proper blend of the board of directors in future.

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BAFE033:
**MILLENNIALS' PERCEPTION TOWARDS THE ADOPTION OF
WECHAT PAYS IN MALAYSIA**

Foo, Meow-Yee^a, Chong, Jackmond^b, Pang, Harn-Jian^c, Lai, Siew-Fong^d

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: foomy@utar.edu.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: jackmon07@hotmail.com

^cFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: jackyphj1997@gmail.com

^dFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: laisf@utar.edu.my

Abstract:

This study focuses on the factors influencing WeChat's adoption in the millennium in the Malaysian context. Mobile payment is defined as a subset of the electronic payment system where any monetary value transaction is carried out using mobile devices in a wireless environment. Nowadays, business organizations are paying more attention to mobile payments to improve transactions. A total of 230 samples were collected by using the convenience sampling methods and the survey questionnaires with closed-end questions and five-point Likert Scale. Statistical Package for Social Science (SPSS) is used in data analysis and hypotheses testing. The critical factors affecting the WeChat's adoption are Trust, Perceived Ease-of-Use, Perceived Usefulness, and Social Influence. The results show that Trust has a significant relationship with WeChat adoption. In contrast, Perceived Ease-of-Use, Perceived Usefulness, and Social Influence have no relations in the Wechat's adoption among the millennium in the Malaysian context. This research helps understand consumers' concerns and needs using the WeChat payment service, which could be useful and beneficial for the commercial sectors such as finance and bank. This research can also be used as the platform for those organisations plan to adopt Wechat payment to set the policy and procedure for implementing Wechat in Malaysia, where this will be a new trend adoption for a future transaction in Malaysia's business environment the near future.

Keywords: Wechat's adoption, Trust, perceived ease of use, perceived usefulness and social influence

1. INTRODUCTION

Smartphones have been viewed as the indistinguishable parts of people's lives and the convenient tools for digital payments (Yadav, 2017). With the rapid growing penetration of portable cell phones, it is anticipated that mobile payments (m-payments) would eventually transform the cash society to a cashless society. The advancement in technology has enabled mobile users to make payments and money transactions quickly and conveniently by installing m-payment applications on the phone (Doan, 2014). Besides, smartphones can be used as leather wallets to store bills, receipts, coupons, Etc., and hence, they are also known as "Digital Wallets" or "Mobile Wallets."

The introduction of m-payment in the digital era has empowered consumers to transact payments conveniently and more securely compared to the conventional cash-based method (Low, 2017). It is believed that m-payments will gradually replace the conventional payment mode if the systems form-payment is continuously developed (Tan, Ooi, Chong, & Hew, 2014). The m-payments enhance the consumers' satisfaction since they save their queuing time at the checkout counter and benefit the merchants because they encourage satisfied consumers to visit the merchants more frequently.

M-payment has been developed rapidly and steadily in China for the past few years, and it is well accomplished even during the recent financial crisis (2012-2014). In August 2013, WeChat enabled the m-payment service (Feng, 2017). Since then, WeChat users have increased massively. In Malaysia, it has exceeded 2 million active users at the end of the year 2017. In July 2018, the WeChat Pay was introduced and used by some convenience stores, restaurants, and international Airports (Green, 2018).

2. LITERATURE REVIEW

2.1 Mobile Payment Adoption

The researcher used various acceptance and adoption theories to ascertain the behavioral factors that may prompt an individual to adopt the technologies (Matemba & Li, 2018). Among all these theories, the Technology acceptance model (TAM) is recognized as one of the broadly used models to predict the user's perception of accepting technologies (Kalinic & Marinkovic, 2016). However, TAM has a limitation in explaining the adoption of m-payment, such as it does not provide a social impact in the reception of innovations (Shin, 2009).

Adoption is referred to as the outcomes of the total variables that culminate in consumers' acceptance to execute specific movements or behaviour (Low, 2017). In this study, adoption relates to the level of WeChat Pay used by the millennials in performing payment transactions. The innovative mobile payment technology enables an individual to use their smartphones to conduct electronic transactions (Singh, Srivastava, & Sinha, 2017). Thus, implementing this technology empowers the financial and non-financial organizations to improve their business and easily access financial services quickly.

2.2 Trust

Trust is referred to as an individual's psychological state in accepting the internet risks basing on his/her optimistic anticipations from the service providers' intentions and behaviour (Matemba & Li, 2018). Trust can be a possible strategy used by an individual to manage uncertainty and uncontrollable future events (Rouibah, Lowry, & Hwang, 2016). It also enables consumers to unveil their personal information willingly to the online environment, such as mobile transactions (Immonen & Sintonen, 2015).

According to Tamimi and Sebastianelli (2015), providing feedback, implementing assurance privacy seals, and setting up security policies can enhance the consumer's perceptions towards online trustworthiness. The study of Ooi and Tan (2016) also confirmed that Trust has an important impact on m-payment adoption and asserted that the consumers would be more likely to use the m-payment application if it is free from identity theft or mobile fraud.

2.3 Perceived Ease-of-Use (PEOU)

It is evidenced that the consumers' perception of whether the m-commerce technology is effortless to use can influence their adoption or rejection of the technology (Krotov, Junglas, & Steel, 2015). According to Hsiao and Chen, (2015), PEOU can be measured as the degree of consumer confidence in using a new system free of any effort in using the technology. PEOU is essential for most consumers, especially in m-commerce adoption, as the new technology may involve many complicated steps in implementation. (Rakhi & Mala, 2014).

Previous research indicates that the higher the millennial's perception of the ease in utilizing the technology, the greater the consumers' positive attitudes towards adopting the m-commerce technology (Chen, Li, Chen, & Xu, 2013). In the research by Amin, Baba, and Muhammad (2007) proved that PEOU had influenced the users in Malaysia significantly in their technology adoption decisions. Millennials are more likely to adopt them-payment/WeChat Pay if they perceive that this technology is easy to learn and use.

2.4 Perceived Usefulness (PU)

PU is viewed as the degree of individual's self-assurance in using an appropriate system that can enhance efficiency (Lee, Fiore, & Kim, 2006; Davis, Bagozzi, & Washaw, 1989; Henderson & Divett, 2003; Doll, Hendrickson, & Deng, 1998; McKechnie, Winkhofer, & Ennew, 2006; Eriksson,

Kerem, & Nilsson 2008). It is argued that M-payment is acceptable when the system provides more benefits than cash or credit card transactions (Aik-Chuan, Garry, Keng-Boon, Teck-Son, & King-Tak, 2015).

Furthermore, PU can motivate and encourage adopters to use the gadgets to enhance the consumers' overall performance (Davis et al., 1989). Hence, it is a very high chance for an individual to use WeChat Pay to improve productivity and efficiency.

2.5 Social Influence (SI)

SI is referred to as the individual's level is affected by other people's opinions when using a technology (Amoroso & Magnier-Watanabe, 2012). The source of SI may be from the relatives, friends, or superiors of the users, and if it is positive, it may instigate the users' adoption of m-payment services. A previous study conducted by Chong (2013) confirmed that SI from family, media, and associates could affect the adoption of an individual's m-payment decision.

According to Koenig-Lewis et al. (2015), individuals are likely to be influenced by their companions' behaviours or people who are important to them in using mobile phones in a public or social context. For example, if an individual is happy with the m-payment services, he or she may be more willing to propose the services to other people. The study by Mun et al. (2017) indicates that SI affects the consumers' intention to adopt m-payment technology because they are generally referred to using m-payments services from their families' companions. It is also agreed by Khalifa and Shen (2008) that SI has a massive impact on the intention of the customers in utilizing m-payment technology.

2.6 Conceptual Framework

This study aims to determine the elements that can affect the adoption of WeChat pay among Malaysia's millennials. The objectives are set as follows:

Objectives

- 1: To determine whether Trust affects the millennials' perception towards the adoption of WeChat Pay in Malaysia.
- 2: To determine whether PEOU affects the millennials' perception towards the adoption of WeChat Pay in Malaysia.
- 3: To determine whether PU affects the millennials' perception towards the adoption of WeChat Pay in Malaysia.
- 4: To determine whether SI affects the millennials' perception towards the adoption of WeChat Pay in Malaysia.

Research Questions

Based on the research objectives established in the previous section, the following are the research questions:

- 1: Does Trust affect the millennials' perception towards the adoption of WeChat Pay in Malaysia?
- 2: Does PEOU affect the millennials' perception towards the adoption of WeChat Pay in Malaysia?
- 3: Does PU affect the millennials' perception towards the adoption of WeChat Pay in Malaysia?
- 4: Does SI affect the millennials' perception towards the adoption of WeChat Pay in Malaysia?

Proposed Conceptual Framework

A theoretical model is constructed based on a review of past empirical studies. In this study, the adoption of WeChat Pay is the dependent variable (DV). The variables that are expected to influence the adoption of WeChat Pay are Trust, PEOU, PU, and SI (i.e., the independent variables). A conceptual framework is constructed as follows:

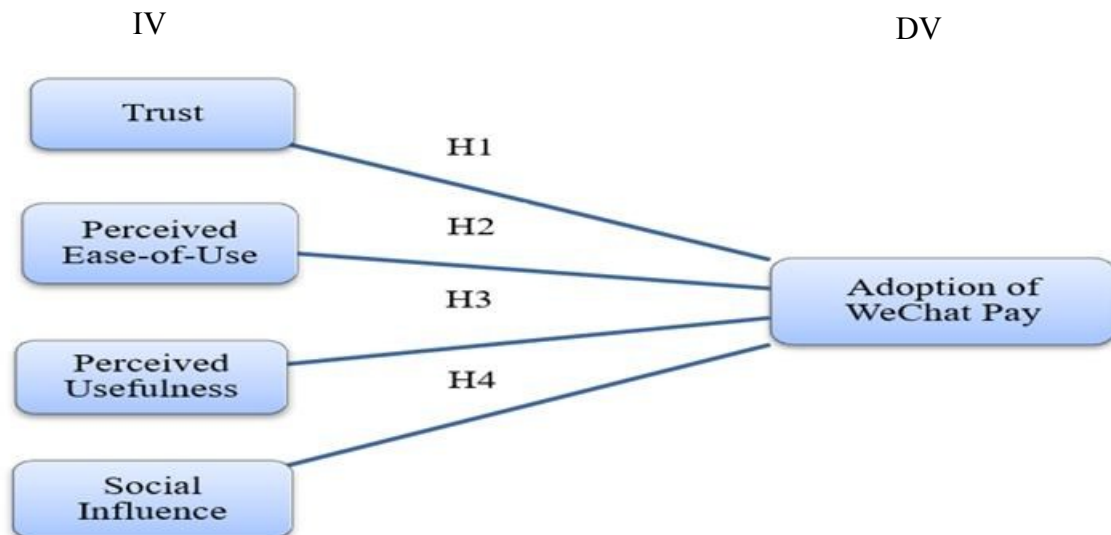


Figure 2.1 Conceptual Framework

Hypothesis Development

Rouibah et al. (2016) has classified risks into either Transaction-specific uncertainty or Device-established uncertainty. They further explained that the transaction-specific uncertainty is caused by the unbalanced transmission of data between the customers and the service provider, which can be attributed to the service provider's behaviour. For example, the provision of the wrong identifies and the disclosure of confidential information. Simultaneously, the device-established uncertainty relates to the direct impact on an individual, which is usually related to financial risk. For example, a credit card's theft and the loss of secure personal information by using it. Both risks require Trust to mitigate them. Hence, it is proposed that:

H1: Trust has a significant relationship with the adoption of WeChat Pay.

A previous study conducted by Chen, Li, Chen and Xu (2013) indicated that the higher the level of millennials' perception towards the ease of using m-commerce, the greater the tendency for them to have a positive attitude m-commence. It is acknowledged that PEOU has significantly influenced Malaysian users on M-payment adoption decisions (Amin, Baba, & Muhammad, 2007). Customers usually consider PEOU as a personal understanding that needs learning and website operation (Gao, Koufaris & Ducoffe, 2004). The studies of Thong, Hong and Tam (2006) and Chiu, Chang and Cheng (2009) have demonstrated that PEOU influences the consumers' intention to buyback decisions. It is also supported by Guriting and Ndubisi, (2006) that PEOU can strongly determine the individuals' behaviour intention to adopt m-payment. Therefore, it is proposed that:

H2: PEOU has a significant relationship with the adoption of WeChat Pay

According to Eastin, Brinson, Doorey and Wilcox (2016), M-payment transactions are faster than any cards' payments. Users are motivated to accept m-payment technology if it can enhance their productivity (Chung, 2014). Thus, in this study, it is proposed that:

H3: PU has a significant relationship with the adoption of WeChat Pay.

Many empirical research types have been conducted on the relationship between SI and the individuals' behavioural intention of adopting technologies. TW Et al. (2008) concluded that SI is strongly related to the consumers' intention in adopting m-payment. Therefore, it is proposed in this study:

H4: SI has a significant relationship with the adoption of WeChat Pay.

3. RESEARCH METHODOLOGY

3.1 Sampling Design

3.1.1 Target Population

A target population is the elements or the boundaries the researcher design in collecting the data for inferential analysis (Lavrakas, 2008). Since this study aims to examine the millennials' perception towards WeChat Pay adoption, the targeted population is the millennials in Malaysia. Millennials are people born from the years 1981 to 1996 (See Yan, 2018) or between the ages of 22 and 38.

Millennials are considered the biggest spenders because they have the mindset of "you only live once" (See Yan, 2018). According to Farag, Schwanen, Cijst and Faber (2007), millennials have a better understanding of the internet and technology, more prompt to online shopping, and not easily giving in to any challenges facing e-payments as compared to other generations. Besides, millennials are the heavy users of a mobile device in this advanced technology era (Burns & Bush, 2006). They use these technology gadgets heavily in their daily activities.

3.1.2 Sampling Elements

This study uses a convenience sampling technique to obtain data from the respondents. This method is used because of its simplicity and its relative ease of obtaining respondents. A total of 250 questionnaires have been distributed to the millennials in the Klang Valley, and of which, 230 data were collected. According to Dan, Xu and Liu (2012), this group of respondents is selected because they are regular internet users and know e-commerce and internet operation.

3.2 Research Instrument

This study uses the self-administered questionnaires, which are distributed online to collect data from the millennials. This method is used as it saves costs and time in data collection. The questionnaires use simple English to ensure all respondents can understand the questions.

The questionnaire is formulated into three sections—section A comprised of questions relating to the respondents' demographic characteristics. Section B consists of general information relating to respondents' perceptions of adopting WeChat Pay in the future. Section C comprises questions relating to the information relating to the adoption of WeChat Pay and the dimensions of the independent variables, namely Trust, PEOU, PU, and SI.

All the dimensions are rated using a five-point Likert-scale to explore how strongly a respondent agrees or disagrees with the questionnaire's statements. The 5-point scale ranges from 1 (strongly disagree) to 5 (strongly agree) displays as in Table 3.1.

Table 3.1: Likert-type scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

3.3 Construct Measurement

3.3.1 Scale Measurement

It is evidenced that not all scales or number systems can be used to capture the values of multiple variables, and the scales used to depend on the nature of the phenomena (Zikmund, 2003). In this study, the nominal scale and the interval scale are considered the appropriate measurements to capture the information of a concept's variations from one observation to the next.

3.4 Data Analysis

3.4.1 Descriptive Analysis

Descriptive analysis is the conversion of raw data to describe the characteristics of the data to provide a better understanding (Trochim, 2008; Zikmund, 2003). According to Zikmund (2003), frequency distribution can be used on a nominal or ordinal scale to display the total occurrence of a variable's value. In this study, the frequency distribution is used to describe the demographic data collected.

3.4.2 Reliability Test

The reliability test is often used in research to ensure the measurement is consistent across time and is free of any bias (Zikmund, 2003). Three methods can be used to test for reliability, namely, the Test-retest method, parallel-form method and the internal test of consistency. In this study, the internal consistency test is selected as the most appropriate method for determining the data's consistency before other data analysis. This test uses the coefficient alpha (α), ranging from 0 to 1, to measure the internal consistency. It is suggested that a measurement with a score of 0.6 and above is considered as reliable, and measurement with a score below 0.6 is viewed as unreliable for statistical analysis. Table 3.2 displays the detailed indications of α values.

Table 3.2: Indications of Cronbach's Alpha Value

Cronbach Coefficient alpha (α)	Indication
α value < 0.6	Poor reliability
α value between 0.61 to 0.7	Fair reliability
α value between 0.71 to 0.8	Good reliability
α value between 0.81 to 0.95	Excellent reliability

Source: Zikmund W. G. (2003). Business Research Methods (7th ed). South-Western: Thomson.

3.4.3 Inferential Analysis

This study uses the inferential analysis to determine the target population. The analysis findings are used to infer how weak or how strong the IVs as compared to the DV (Gabrenya, 2003). The study also applies Pearson Correlation (PC) and Multiple Linear Regression (MLR) to examine the correlation between the IVs and DV.

3.4.4 Pearson's Correlation Analysis

Pearson's correlation analysis is used to evaluate the strength of the linear relationship between the variables (Zikmund, 2003). It is evidenced by the study of Malhotra and Peterson (2006) that to establish the correlation of the variables, the PC coefficient (represented by symbol r) is to be used. Hair, Wolfinbarger, Bush and Ortinau (2008) assert that the coefficient ranges from negative 1 to positive 1. A negative value indicates that one variable increases the other variable decreases, whereas a positive value implies that one variable's value increases, values of other variables will increase. This study uses Pearson's correlation analysis to assess the relationship between millennials' perception and adoption of WeChat Pay in Malaysia.

Pearson's correlation is represented as:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where X represents the IVs, and Y represents the DV.

The strength of the relationship is detailed in Table 3.3 below.

Table 3.3: Rules of Thumb of Pearson's Correlation

Coefficient Range	Strength of Association
± 0.91 to ± 1.00	Very Strong
± 0.71 to ± 0.90	High
± 0.41 to ± 0.70	Moderate
± 0.21 to ± 0.40	Small but definite relationship
± 0.00 to ± 0.20	Slight, almost negligible

Source: Hair et al. (2008)

3.4.5 Multiple Linear Regressions (MLRs)

MLRs is used by the researcher to assess the relationship in which the effect of IVs (X) has on the DV (Y) when investigated simultaneously (Suki, and Suki, 2011).

MLR can be represented as:

$$Y_i = b_0 + b_1X_{1i} + b_2X_{2i} + \dots + b_kX_{ki} + \epsilon_i$$

where:

Y_i = i th observation of the dependent variable Y, $i = 1, 2, \dots, n$

X_j = independent variables, $j = 1, 2, \dots, k$

X_{ji} = i th observation of the j th independent variable

b_0 = intercept term

b_j = slope coefficient for each of the independent variables

ϵ_i = error term for the i th observation

n = number of observations

k = number of independent variables

In this study, MLR is applied to evaluate the relationships in which the effects of Trust, POEU, PU, and SI on WeChat Pay adoptions.

4. DATA ANALYSIS

4.1 Demographic Profile

The results indicate that from a total of 230 respondents, 64% (N=148) are females, and 36% are male (N = 82). Of the total respondents, 64% (N= 146) are between 18 to 23 years old; 31% (N = 72) are between 24 to 29 years old and 5% (N=12) are between 34 to 38 years old.

The statistics show that majority of the respondents are Chinese, which formed 87% of the total respondents. It was followed by Indian (9%) and Malay (4%). Of the total respondents, only 18% are married, while 82% are still single. Of the total respondents, 59% are students; 28% are employees; 8% are business owners, and 5% are homemakers. In terms of education level, 67% of the respondents are degree holders; 12% are master holders, and 20% are the diploma holders. Only 1% of the respondent is SPM holder. For the monthly income lever, 52% of the respondents earn below RM1,000; 13% of the respondents with monthly income between RM1,000 to RM1,999; 15% of the respondents have a monthly income between RM2,000 to RM2,999. A total of 9% and 12% of the respondents with monthly income between RM3,00 to RM3,000 and above RM4,000 respectively.

4.2 General Information

The analysis findings indicate that most of the respondents (i.e., 96%) have conducted m-payment transactions, and only 4% of the respondents never used m-payment for their transactions. In terms of frequency of usage, 49% of the respondents have used m-payment at least once per month; 21% of the respondents used m-payment at least once per week. A total of 22% of the respondents used m-payment at least once per year; 4% of the respondents use m-payment every day, and balance 4% of the respondents never used m-payment. The statistics also display that 37% of the respondents are willing to spend between RM50 to RM100 in a single transaction when using m-payment. However, 22% of the respondents will spend more than RM300 in a single transaction when using m-payment. A total of 20% of the respondents will spend between RM15 to RM20, and 20% of the respondents will spend between RM200 to RM300 in a single transaction when using m-payment. The balance 1% of the respondents are not willing to spend any money in m-payment transactions. 43% of the total respondents adopt m-payment because it is convenient; 35% of the respondents adopt m-payment because of the promotion's value. 14% of the respondents adopt m-payment because of the influence of their family, peer, friends, and colleagues. A total of 8% of the respondents adopt m-payment because of its popularity.

4.3 Central tendencies of variables

Table 4.1: Measu

Variables	Mean	Median	Mode	N
Trust	3.8896	4.0000	4.00	230
Perceived Ease-of-Use	4.0843	4.0000	4.00	230
Perceived Usefulness	4.0304	4.0000	4.00	230
Social Influence	3.7939	4.0000	4.00	230
Adoption of WeChat Pay	3.7435	4.0000	4.00	230

rement of Central tendencies of variables

Table 4.1 displays the IVs' central tendencies (i.e., Trust, PEOU, PU, and SI) and the DV (i.e. the Adoption of WeChat Pay). The means scores of PEOU and PU (4.0843 and 4.0304, respectively) are higher than the means scores of Trust and SI (3.8896 and 3.7939, respectively). At the same time, the mean score of Adoption of WeChat Pay is 3.7435.

4.4 Reliability Analysis

Table 4.2 and Table 4.3 indicates the internal consistency of the IVs and DV. Table 4.13 reflects that SI has the most significant alpha value of 0.902 among the IVs, which means that SI has the highest consistency than the other IVs. PEOU, PU followed it, and Trust (with an alpha value of

0.889, 0.876, and 0.802 respectively). The DV, Adoption of WeChat Pay, shows the highest alpha value of 0.934 among all the variables, and it indicates that this variable has the most vital consistency.

Overall, the alpha values all the variables are above the acceptable level of 0.7, and hence, it can be concluded that both the IVs and DV variables are valid and reliable.

Table 4.2: Reliability Analysis for Independent Variables (IVs)

No	Independent Variables	Cronbach's Alpha Coefficient	No. of Items
1	Trust	0.802	5
2	Perceived Ease of Use	0.889	5
3	Perceived Usefulness	0.876	5
4	Social Influence	0.902	5

Table 4.3: Reliability Analysis for Dependent Variable (DV)

No	Independent Variables	Cronbach's Alpha Coefficient	No. of Items
1	Adoption of WeChat Pay	0.934	5

4.5 Pearson's Correlation Analysis

Table 4.4: Correlation of variables

Variables	Trust	Perceived Ease-of-Use	Perceived Usefulness	Social Influence	Adoption of WeChat Pay (DV)
Trust	1				
Perceived Ease-of-Use	0.501(**)	1			
Perceived Usefulness	0.623(**)	0.766(**)	1		
Social Influence	0.506(**)	0.542(**)	0.675(**)	1	
Adoption of WeChat Pay	0.512(**)	0.496(**)	0.549(**)	0.534(**)	1

** . Correlation is significant at the 0.01 level (2-tailed)

Table 4.4 reflects that all the four factors of Trust, PEOU, PU, and SI, have a positive relationship with the adoption of WeChat Pay.

H_{A1}: Trust has a significant relationship with the adoption of WeChat Pay

Reject H₀ If p-value < α = 0.05

A Pearson's r data reveals a moderate positive relationship between Trust and adoption of WeChat pay with $r = 0.512$. Table 4.15 also shows that Trust has a significant impact on the adoption of WeChat pay with $p < .001$. Therefore, the null hypothesis is rejected since the p-value for Trust is less than 0.05.

H_{A2}: PEOU has a significant relationship with the adoption of WeChat Pay.

Reject H_0 If $p\text{-value} < \alpha = 0.05$

It is indicated in Table 4.15 that there is a moderately significant positive relationship between PEOU and adoption of WeChat pay with $r = 0.496$ and $p < .001$. Thus, the null hypothesis is rejected since the $p\text{-value}$ for PEOU is less than 0.05.

H_{A3}: PU has a significant relationship with the adoption of WeChat Pay.

Reject H_0 If $p\text{-value} < \alpha = 0.05$

Table 4.15 shows that the correlation coefficient between PU and adoption of WeChat pay is 0.549, with the coefficient is significant at the 0.01 level. Hence, it implies a significant relationship between PU and the adoption of WeChat Pay, and the null hypothesis is rejected.

H_{A4}: SI has a significant relationship with the adoption of WeChat Pay.

Reject H_0 If $p\text{-value} < \alpha = 0.05$

Similarly, SI shows a moderate positive significant relationship with the adoption of WeChat pay with an R-value of 0.534 and the coefficient significant at 0.01 level (Table 4.15). Therefore, the null hypothesis is rejected as the $p\text{-value}$ is lower than $\alpha = 0.05$.

4.6 Multiple Linear Regression (MLR)

Table 4.5: Multiple Regression Analysis Model Summary

Model	R	R Square (R^2)	Adjusted R Square	Std. Error of the Estimate
1	.628 ^a	.395	.384	.59168

Table 4.5 summaries the results of the MLR for this study. The correlation of $r = 0.628$ shows a substantial positive linear correlation between IVs and DVs. The R^2 of 0.395 represents 39.5% of the variance in the adoption of WeChat Pay is explained by the factors of Trust, PEOU, PU and SI. This implies that 60.5% of the variance in the adoption of WeChat Pay might be due to other factors.

Table 4.6: Table of ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51.336	4	12.834	36.660	0.000 ^b
Residual	78.769	225	0.350		
Total	130.105	229			

Table 4.6 displays the F value for the statistical significance of the model. According to Low (2017), the applied model is significant if the $p\text{-value}$ is less than 0.05. Hence, it can be concluded that this regression model is statistically significant for the analysis as the results shown in Table 4.7 reflect the F value is 36.66 with a $p\text{-value} < 0.05$.

Table 4.7: Output of Multiple Regression Analysis Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.379	0.291		1.303	0.194
	Trust	0.262	0.075	0.235	3.501	0.001
	Perceived Ease-of-Use	0.188	0.100	0.152	1.875	0.062
	Perceived Usefulness	0.134	0.114	0.114	1.174	0.242
	Social Influence	0.274	0.076	0.255	3.587	0.000

From the results of the analysis, the MLR can be presented in the following equation:

$$Y = 0.379 + 0.262 (T) + 0.188 (PEOU) + 0.134 (PU) + 0.274 (SI)$$

Where

Y = Adoption of the WeChat Pay

T = Trust

PEOU = Perceived Ease-of-Use

PU = Perceived Usefulness

SI = Social Influence

The estimated value of 0.379 ($\beta_0 = 0.379$) denotes that when PEOU, PU, Trust, and SI are set to be zero, the value towards the WeChat Pay adoption is expected to be 0.379.

4.7 Hypotheses Testing

$$\begin{aligned} H_0: \beta_i &= 0 \\ H_1: \beta_i &\neq 0 \\ \text{Where } i &= 1, 2, 3, 4, 5 \end{aligned}$$

H_{A1}: Trust has a significant relationship with the adoption of WeChat Pay.

Reject H_0 if p-value < $\alpha = 0.05$

Table 4.8 displays the coefficient value of 0.262 for Trust, which means that for every point increase in Trust, it is anticipated that the value towards adoption is increased by 0.262 times, with other variables remained constant. The results indicate a significant relationship between Trust and adoption of WeChat Pay since the p-value of 0.001 is lower than $\alpha = 0.05$. Thus, the null hypothesis is rejected.

H_{A2}: PEOU has a significant relationship with the adoption of WeChat Pay.

Reject H_0 if p-value < $\alpha = 0.05$

The coefficient value of 0.188 for PEOU implies that for every point increase in PEOU, the adoption to WeChat Pay value will increase by 0.188 times, with all other variables remained constant (Table 4.18). With the p-value of 0.062, which is greater than the α value of 0.05, the null hypothesis is accepted, which means no correlation between PEOU and WeChat pay adoption.

H_{A3}: PU has a significant relationship with the adoption of WeChat Pay.

Reject H_0 if p-value < $\alpha = 0.05$

Table 4.18 reflects a coefficient value of 0.134 for PU, which denotes that the estimated value for adoption to WeChat Pay would increase by 0.134 times with every one-point increase in PU. All other variables remain unchanged. The analysis shows that a p-value of 0.242 implies that PU has no relationship with the adoption of WeChat pay as it is greater than the α value of 0.05. Hence, the null hypothesis is accepted.

H_{A4}: SI has a significant relationship with the adoption of WeChat Pay.

Reject H_0 if p-value < $\alpha = 0.05$

The findings show a coefficient value of 0.274 for SI indicates that there would be a 0.274 times increase in the estimated value towards WeChat Pay adoption if all other variables are constant for every point increase in SI. The p-value of 0.000, which is lower than the α value of 0.05, suggests rejecting the null hypothesis.

4.8 Summary of Findings

Table 4.8: Summary of the Hypotheses Testing

Hypotheses	Unstandardized Coefficient Beta	t-value	Significant Level	Result
H1: Trust has significant relationship with the adoption of WeChat Pay.	0.262	3.501	0.001	Supported
H1: Perceived Ease-of-Use has a significant relationship with the adoption of WeChat Pay.	0.188	1.875	0.062	Not Supported
H1: Perceived Usefulness has a significant relationship with the adoption of WeChat Pay.	0.134	1.174	0.242	Not Supported
H1: Social Influence has a significant relationship with the adoption of WeChat Pay.	0.274	3.587	0.000	Supported

This study supported the hypothesis that Trust and SI have a significant relationship with the adoption of WeChat Pay. In contrast, PEOU and PU do not have a significant relationship with the adoption of WeChat Pay.

5. DISCUSSION

This study focus on millennials is examining their perception towards WeChat Pay adoption. In Malaysia, the millennials are considered more sensible compared to other generations in using WeChat Pay. They are also shifting their physical store habits to online shopping (Ling, Daud, Piew, Keoy, & Hassan, 2011).

The finding of this study indicates a significant positive relationship between Trust and WeChat Pay adoption, which means that the higher the Trust of an individual in WeChat Pay, the higher is the rate of adopting the WeChat Pay. These results are in line with the findings from the studies by Zhou (2011); Ooi and Tan, (2016) and Matemba and Li (2018). Hence, it is asserted that Trust is positively affecting the adoption of WeChat Pay. There is a higher chance for the millennials in Malaysia to adopt WeChat Pay if they have higher Trust in WeChat Pay.

This study also reflects that social influencing has a significant positive relationship with WeChat Pay adoption. These findings are consistent with the results of previous studies carried out by Toh. et al. (2008); Oye et al. (2014); Martis et al. (2014) and Tiago O. et al. (2016). These findings imply that the higher the millennials' social influence, the greater their chances of adopting WeChat Pay.

However, the results of the analysis do not show a significant relationship between PEOU and WeChat adoption. This insignificant finding is supported by Mukherjee (2015) that it could be due to the respondents unfamiliar with the technologies. Besides, studies by Seetharaman, Kumar, Palaniappan and Weber (2017) and Yadav (2017) also confirmed that PEOU has no statistically significant relationship with WeChat Pay adoption. Thus, this study concludes that the adoption of WeChat Pay is not affected by PEOU despite the ease of learning and using WeChat Pay.

The findings of this study also assert that PU has no significant correlation with the adoption of WeChat pay. This result is supported by Islam, Khan, Ramayah and Hossain (2011) that the young generation does not consider WeChat Pay as useful as the airline's applications, entertainment, and transportation. Studies by Lwoga and Lwoga, (2017) and Liébana, Sánchez, and Muñoz (2014) also indicate that PU is not statistically significant for m-payment adoption. Hence, this study concludes that PU does not affect the adoption of WeChat pay.

Future researchers may consider other target populations such as baby boomers, generation Z, and generation X for their data collection. They may consider expanding their sample size to enhance the accuracy of the hypotheses testing. Besides, the future researcher may consider using longitudinal studies to examine the development of the changes in the factors that affect the adoption of WeChat pay.

6. CONCLUSION

With the rapid emergence of advanced technology, it is anticipated that electronic transactions will soon replace the conventional way of conduction business transactions. In WalktheChat, 2015, Malaysia has the highest population of 22 million WeChat users outside the country of origin, China. 80% of the WeChat users in Malaysia are from the age group between 18 to 35 years old (Dai & Zhang, 2015). However, the usage of WeChat Pay remains low in the country, and it could be because this digital payment is still new for the users. According to Goh (2017), millennials may have the financial ability and are more willing to adopt the m-payment system than other generations. Thus, this study aims at examining the millennial's perception of adopting the WeChat pay.

A previous study indicated the growth of using e-payment in Malaysia (Ramalingam, 2012). However, Luam and Lin (2005) argued that Malaysian are still not engaged much on e-payment due to their lack of knowledge and have no confidence in using the system. The majority of Malaysian are still using cash and cheques for their transactions because they are not convinced about the reliability of the e-payment system (Hataiseree, 2008). Hence, the purpose of this study is to determine the readiness and Trust of the millennium in Malaysia to adopt WeChat Pay as a payment mechanism.

Lack of awareness is also a factor preventing customers from using m-payment (Central Bank of Malaysia, 2009). The complication of the structure and design of the m-payment system that cannot fulfill the users' expectations and requirements (Abrazhevich, 2001) may also prevent the individuals from using the system. Consequently, the number of people using the m-payment service will decrease if WeChat Pay system is complicated.

There are limitations in adapting WeChat Pay in Malaysia. Last year, WeChat Pay services had only engaged Hong Leong Bank as the merchant acquirer (Pang, 2018). This implies that businesses and local merchants need to get in touch with Hong Leong Bank if they intend to use WeChat as a payment option for their customers. This may result in not all the businesses, or local merchants can get in touch with Hong Leong Bank on time for the support of WeChat Pay for their customers. Therefore, this study aims to examine the effect of Malaysian's millennials' perception of adopting the e-payment system. It requires time to influence people to get attached to the newly implemented system in Malaysia.

The majority of the previous studies predict that WeChat Pay users in Malaysia will increase significantly shortly. This study helps to understand the users' concerns and requirements when using WeChat payment service to benefit the financial institutions.

The findings of this study have significant implications for the organizations and policymakers in understanding the factors that can improve millennials' level in adopting the WeChat Pay. Besides, the findings enable the organisations and policymakers to build a strong relationship with the

consumers and enhance the Trust among the consumers and strengthen the security of the systems. Furthermore, the findings have vital implications for the organization and policymakers in providing useful features to the system to interfacing with the consumers and bringing conveniences in converting the conventional means of transaction to the modern cashless m-payments.

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BAFE034:
**WORD-OF-MOUTH GENERATION IN MEDICAL TOURISM: THE
EFFECT OF MEDICAL SERVICE QUALITY, PERCEIVED VALUE,
AND SATISFACTION**

Ching, Ying-Tian^a, Seow, Ai-Na^b, Lam, Siew-Yong^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lauraching@1utar.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: seowan@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lamsy@utar.edu.my

Abstract

Medical tourism is considering to be a significant revenue generation for the country. With the rising competitive level in medical service industry, using an effective promotional tool to attract more potential medical tourists is vital. Healthcare service providers must constantly improve its services if they desire to win consumer satisfaction and expand the market share. Medical tourists who are satisfied tend to generate their motivation to make recommendations through word-of-mouth. This paper aims to examine the effects of medical service quality and perceived value on satisfaction, and subsequently, influence on word-of-mouth generation for medical tourism in Malaysia. A self-administered questionnaire will be used to test the hypothesised relationships of the study. The collected data will be analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results of this study could provide a better understanding on the perception of medical tourists, particularly, their word-of-mouth behaviour. Besides, the medical tourists' perception on the medical services offered by the hospitals in Malaysia would be useful in providing the valuable feedback for marketing strategies. Moreover, the findings can provide a reference for the future researchers or scholars on how to stimulate medical tourists' word-of-mouth generation further.

Keywords: Word-of-Mouth Generation, Medical Service Quality, Perceived Value, Satisfaction, Medical Tourism

INTRODUCTION

Medical tourism industry has grown dramatically since the late 1990s due to globalisation (Isa, Lim, & Chin, 2019). Medical tourism refers to people who travel abroad for the main purpose of seeking medical care (Seow, Choong, Moorthy, & Choong, 2020). The value of world medical tourism market worth USD 16,761 million in 2018 and is anticipated to achieve USD 27,247.6 million by 2024 (Medical Tourism Singapore 2020, 2020). Although there are various medical tourism destinations around the world, Asia-Pacific region appears to be a major player in this industry (Dang, Nguyen, Wang, Day, & Dang, 2020). Developing countries such as India, Thailand, Singapore, and Malaysia have become the main participants in earning the available medical income (Dang et al., 2020). As one of the popular medical tourism destinations in Asia, Malaysia has welcomed 1.2 million medical tourists and generated RM 1.5 billion in 2018 (Malaysia Healthcare Travel Council, 2019). The success of Malaysia's medical tourism industry can be attributed to the state-of-the-art healthcare facilities, well-trained healthcare professionals, economical medical costs, political and economic stability, favourable exchange rates and outstanding quality (Cham, Cheng, Low, & Cheok, 2020a). Besides, there are various medical services provided which include cosmetic surgery, pain management, cancer treatment, fertility treatment, cardiology surgery, dental treatment, orthopaedics, and rehabilitative medicine (Cham, Lim, Sia, Cheah, & Ting, 2020b). To date, the medical tourists in Malaysia are mainly from Indonesia, middle-eastern countries and China (Yunus, 2019).

In spite of the increasing revenue trend, medical tourism service providers in Malaysia still receive numerous challenges in facing intense competition in attracting more potential medical

tourists (Cham et al., 2020b; Yusof, Rosnan, & Shamsuddin, 2020). In particular, its two neighbouring countries, Singapore and Thailand, are also the main key players and rivals for medical tourism industry (Cham et al., 2020b). Thailand competes with Malaysia in cost options whereas Singapore competes with Malaysia in high-end medical services (Aljumah, Islam, & Noor, 2017; Prajitmutita, Perényi, & Prentice, 2016). Medical tourists usually consider the quality and costs of medical services when choosing a medical tourism destination (Hwang, Lee, & Kang, 2018). Superior service quality and values are essential factors in improving consumer satisfaction and loyalty (Prajitmutita et al., 2016). It also helps to improve the competitive advantage of medical service providers (Prajitmutita et al., 2016). In healthcare industry, hospitals are providing the same types of medical services but the quality of service may vary (Chaniotaki & Lymperopoulos, 2009; Kitapci, Akdogan, & Dortyol, 2014). In order to distinguish the uniqueness of its services, the testimonials provided by the medical tourists are crucial. Herein, word-of-mouth is one of the powerful promotion tools for the satisfied medical tourists to share on their experiences with some of the potential customers. In order to ensure that the medical tourists engage in word-of-mouth generation, it is important to ensure that they are satisfying with the quality of medical services from the healthcare institutions. There is no doubt that medical tourists would demand for complete and accurate information before availing any sort of service from a particular medical service provider (Fatima, Malik, & Shabbir, 2018). This is because as the medical tourists are spending lucrative money for medical treatment, they are more inquisitive and expecting supplementary services in providing the quality of services that exceeds their expectations. In the event of any dissatisfaction occurs, they will tend to move towards to another competitor (Fatima et al., 2018).

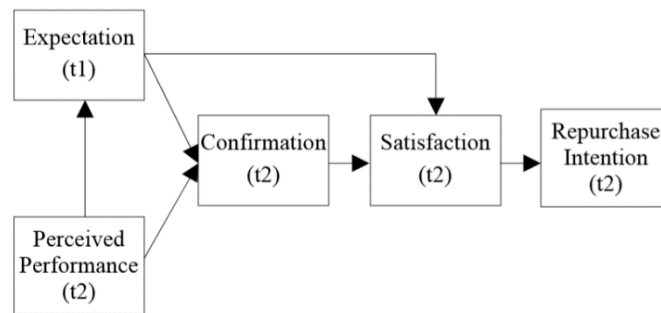
Although there are studies emphasised on the impact of word-of-mouth (Yeoh, Othman, & Ahmad, 2013) and electronic word-of-mouth (Abubakar & Ilkan, 2016) on medical tourism, nevertheless, the importance of word-of-mouth generated by the medical tourists is not well-addressed. Due to the lack of study on medical tourists' word-of-mouth on healthcare behaviour as well as its impact on medical service providers, word-of-mouth literature appears to be vital for both researchers and practitioners (Hether, Murphy, & Valente, 2014; Martin, 2017). Hence, the current study targets to fill this gap by examining word-of-mouth generation in medical tourism. This study proposed a research model with the aims to (1) examine the effect of medical service quality and perceived value on satisfaction and the subsequent influence on word-of-mouth generation and (2) examine the mediating effect of satisfaction in the relationship between medical service quality, perceived value and word-of-mouth generation in medical tourism.

LITERATURE REVIEW

Theoretical Background

Oliver (1980) had proposed Expectation confirmation theory (ECT) to explain consumer satisfaction and post-purchase behaviour. It is believed that consumers' post-purchase behaviour; whether to recommend, complaint or repurchase is influenced by their overall satisfaction. ECT provides a conceptual model with a theoretical base to describe consumer post-purchase behaviour such as revisit (Tsai, Chang, & Tsai, 2016) and word-of-mouth intention (Nam, Baker, Ahmad, & Goo, 2020) as a result of expectations, perceived performance, confirmation and post-purchase satisfaction. ECT has been applied and adapted in various empirical tourism and hospitality researches to illustrate the precursors and outcomes of satisfaction. Specifically, ECT has been verified with dynamic groups for example hotel visitors (Rajaguru & Hassanli, 2018) and restaurant customers (Yu, Luo, & Zhu, 2018). Besides, ECT has also been used as the fundamental framework in several medical tourism studies. For instance, Chou, Kiser, and Rodriguez (2012) and Rahman, Zailani, and Musa (2018) successfully applied this theory in their studies and found that medical tourists' expectations and perceptions on medical services can meaningfully explain their satisfaction and the intentions to continue on the usage of medical services. Hence, in this study, the researchers argue that based on the ECT perspective, post-satisfaction of medical tourists can be explained further from the differences among their expectations and perceived performance, and such satisfaction will affect medical tourists' word-of-mouth generation. Figure 1 shows the model of ECT.

Figure 1: Expectancy Confirmation Theory.



Past study has stated that word-of-mouth is one of the determinants that affects medical tourists' choice of destination for medical tourism (Al-Farajat, Jung, Gu, & Seo, 2019). By considering the significance of word-of-mouth marketing in medical tourism industry, the word-of-mouth generation by medical tourists who visited Malaysia for medical service is crucial. For instance, medical tourists will have a tendency to generate word-of-mouth when they are satisfied with the medical service in Malaysia. Accordingly, these medical tourists become testimonial in promoting medical tourism in Malaysia. Meanwhile, the word-of-mouth generated by the satisfied medical tourists can serve as an assurance to confirm the genuine information. The sources used for delivering the messages are formulated and can be considered as an effective communication. Furthermore, a review of literature revealed that both service quality and perceived value were precursors of satisfaction, which in turn significantly affect tourists' behavioural intention and their willingness to make recommendation (Abdalla, Ribas, & da Costa Vieira, 2014; Chen & Chen, 2010; Khuong, Phuong, & Chau, 2016). Indeed, apart from the necessity to survive the severe competition among numerous medical service providers, it is vital that all these service providers must continuously improve their services if they desire to gain medical tourist satisfaction and expand the market shares. As such, these antecedents will be included to further investigate the total effect on word-of-mouth generation in medical tourism context.

Hypotheses Development

Relationship between medical service quality and perceived value

The competition among hospitals in the field of medical tourism is becoming intense and this has heightened the need for better service quality. Medical service quality in this study is defined as "medical tourists' judgment or impression about a medical service provider's overall excellence and superiority in terms of quality of object, process, infrastructure, interaction and atmosphere" (Javed & Ilyas, 2018). Zineldin (2006) believed that the quality of services and treatment are critical in medical care because compromise on any of the essential service quality dimensions may result in negative consequences. Besides, Zineldin (2006) further pointed out that all patients have the right to receive good-quality care, and medical service providers are obliged to provide good-quality care and improve the quality of their services. Qualified service perception could lead to the value and enhance the satisfaction (Keshavarz & Jamshidi, 2018). From the perspective of quality, value refers to the discrepancy between the price paid for a product and the quality of the product (Kuo, Wu, & Deng, 2009). A higher level of perceived service performance leads to a high level of perceived value (Momotaz, 2019). In healthcare, when patients form a perception of value, the consequences of service performance will be considered. There have been numerous studies confirming the relationship between service quality and perceived value. Choi, Law, and Heo (2018) regarded that service quality is the precursor of perceived value. Dubey and Sahu (2019) and Suryadana (2017) have proved that service quality has a direct influence on perceived value in the healthcare sector. Similarly, in the context of medical tourism, past studies have proved that service quality positively affects perceived value (Chou & Kohsuan, 2019). Based on the discussion above, the researchers expect that when the medical service providers provide quality services, medical tourists will form a higher perceived value. Thus, the following hypothesis is proposed:

H₁: There is a positive relationship between medical service quality and perceived value.

Relationship between medical service quality and satisfaction

It is evidenced that excellent service quality can increase patients' satisfaction level and loyalty (Calisir, Bayraktaroglu, Gumussoy, & Kaya, 2014). The perception of patients on medical service quality is the main factor that determines the success of a healthcare organisation (Prajitmutita et al., 2016). The higher the perceptions of patients on medical service quality, the higher the satisfaction level, thus benefit their respective service providers (Prajitmutita et al., 2016). Patient satisfaction depends on the extent to which the patient receives the services that match with his expectation. When the service performance fulfils or exceeds the expectation of the patients, the patients are satisfied (Meesala & Paul, 2018). On the other hand, when the service performance fails to fulfil their expectation, they are dissatisfied (Meesala & Paul, 2018). Hence, it is believed that medical tourists consider medical service quality to be one of the most significant factors that motivates their satisfaction (Cham, Lim, Aik, & Tay, 2016; Manaf, Hussin, Kassim, Alavi, & Dahari, 2015). Past studies in the healthcare setting have revealed that healthcare service quality positively influence patient satisfaction (Shabbir & Malik, 2016). Further, in dental tourism context, a study conducted by Jaapar, Musa, Moghavvemi, and Saub (2017) proved that there is a positive relationship between dental service quality and dental tourist satisfaction. Thus, according to the discussion above, it is claimed that medical tourists will be satisfied when the quality of the services provided exceeds or meets their expectation. Hence, the following hypothesis is proposed:

H₂: There is a positive relationship between medical service quality and satisfaction.

Relationship between perceived value and satisfaction

Perceived value is conceptualised as the customer's assessment of the utility of perceived benefits and perceived costs (Choi, Cho, Lee, Lee, & Kim, 2004; Zeithaml, 1988). In current study, perceived value is defined as "medical tourist's overall evaluation towards the medical service provider based on their perceived benefits and sacrifices in terms of service quality, emotional experience, monetary price, behavioural price as well as the reputation of the medical service provider" (Zeithaml, 1988). The value of a product or service represents a major competitive advantage for the company in generating revenue and consumer satisfaction (Choi et al., 2004; Suryadana, 2017). It is argued that if the value of excluding the patient's sacrifice is greater than the total sacrifice obtained, it will produce high patient satisfaction; and vice versa (Suryadana, 2017). However, if the total value received is equal to the total sacrifice; the patient will have lower satisfaction (Suryadana, 2017). This shows that patients are satisfied when their perceived value exceeds their expectations and perceived value is considered to be a significant predictor of patient satisfaction (Moliner, 2009; Prajitmutita et al., 2016). Besides, relevant literatures also proved that perceived value positively influences patient satisfaction (Özer, Başgöze, & Karahan, 2017; Wu, Li, & Li, 2016). By applying this concept into medical tourism industry, the researchers argue that medical tourists are satisfied when their perceived value exceeds their expectations. Hence, the following hypothesis is postulated:

H₃: There is a positive relationship between perceived value and satisfaction.

Relationship between satisfaction and word-of-mouth generation

The study of word-of-mouth communication is important in service-related researches (Jung & Seock, 2017). Consumers tend to depend on word-of-mouth information to reduce perceived risk before purchasing services (Jung & Seock, 2017). Both positive and negative word-of-mouth communication will significantly affect the behavioural intentions of consumers as well as the sales and profits of the service provider (Jung & Seock, 2017). In this study, word-of-mouth generation is refers to the sharing of information from medical tourists about their medical service experiences to others (De Angelis, Bonezzi, Peluso, Rucker & Costabile, 2012). Satisfying the needs and demands of medical tourists is the key point to motivate them to engage in word-of-mouth generation. According to Wang, Tran, and Tran (2017), in the context of tourism, tourist satisfaction has a positive effect on word-of-mouth. Additionally, studies in medical tourism setting have also revealed that satisfied patients will make recommendation and have revisit intention (Cham, Lim, Aik, & Tay, 2016). Therefore, in current study, the researchers argue that if the medical tourist is satisfied with the medical service quality, they will tend to engage in word-of-mouth generation. They will recommend Malaysia as the medical tourism destination to their family members and friends as well as share their experiences to others through social media. Hence, it is hypothesised that:

H₄: There is a positive relationship between satisfaction and word-of-mouth generation

The mediating role of satisfaction

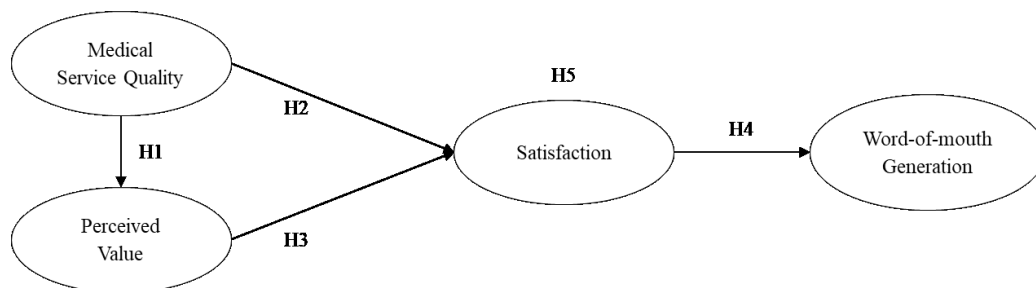
Satisfaction is usually considered as an emotional response of consumers (Hsu, 2018). Kotler (2000) stated that satisfaction is refers to an individual's sense of pleasure or disappointment which is obtained by comparing perceived performance of a production related to his expectations. In current study, satisfaction is defined as "an emotional response of medical tourist to the evaluation of the perceived discrepancy between expected medical service and experience of the service" (Hsu, 2018). It is believed that high-quality services will lead to consumer satisfaction, and thereby positive behavioural intentions, such as generate word-of-mouth, revisit, and willing to pay a premium price (Panchapakesan, Sai, & Rajendran, 2015). A study by Konuk (2019) revealed that consumer satisfaction acts as a partial mediator between perceived food quality, perceived value, and behavioural intentions such as revisit intentions and word-of-mouth intentions. Similarly, in healthcare, patient satisfaction acts as a mediator between service quality and behavioural intentions (Shabbir, Malik, & Malik, 2016). Literatures have empirically supported the mediating role of satisfaction in healthcare studies (Cham, Lim, & Aik, 2014; Meesala & Paul, 2018; Cham, Cheng, Low, & Cheok, 2020). For instances, a study conducted by Han and Hyun (2015) indicated that trust and satisfaction mediates the relationship between perceived quality and revisit intention to Korea for medical care. Additionally, findings by Özer et al. (2017) also indicated that perceived satisfaction mediates the relationship between patient value and loyalty. Overall, these past empirical studies support the notion that satisfaction serves as a mediator among service quality, perceived value and behavioural intention. Thus, it can be claimed that medical tourists who are satisfied with medical service quality and perceived value will involve in word-of-mouth generation. Hence, the following hypothesis is postulated:

H₅: Satisfaction mediates the relationship between medical service quality, perceived value, and word-of-mouth generation.

Proposed Conceptual Framework

Based on the discussion above, it is proposed that when the medical tourists are satisfied with the quality and perceived value of medical services, they will tend to perform word-of-mouth generation. Figure 2 illustrates the proposed conceptual framework of current study.

Figure 2: Proposed conceptual framework.



RESEARCH METHODOLOGY

A descriptive research with the use of the quantitative method will be used to test and confirm the proposed research model. Survey method will be used to collect primary data. The target population of this study is medical tourists who are currently visiting Malaysia or who have visited Malaysia before. This group of people is targeted because they have experience medical services in Malaysia and are able to provide accurate information on their experiences and their intention for word-of-mouth behaviour. The survey will be conducted at Kuala Lumpur, Selangor, Penang, and Melaka. These locations were selected because they are the top destinations for medical tourists (Malaysia Expects 2M Medical Tourists By 2020, 2018). A set of self-administered questionnaires was developed and contained three sections: Section A on filter questions, section B consists of various

construct measurement items, and section C on demographic profile. The items were adopted from prior studies with minor modification to suit medical tourism context (Aliman & Mohamad, 2013; Bambauer-Sachse & Mangold, 2011; Petrick, 2002; Zineldin, 2006). Besides, the items were measured using five-point Likert scale, ranging from 1 representing strongly disagree or very poor to 5 representing strongly agree or excellent. The internal consistency of the variables will be assessed using Cronbach's Alpha to obtain a reliability test. A total of 500 sets of questionnaires will be distributed to the targeted respondents. Quota sampling technique will be employed to collect data from the targeted respondents. The respondent will be selected based on two criteria. First, they are coming from another country. Second, they are travelling to Malaysia for the main purpose of medical treatment. The questionnaire will be distributed to the respondents at cafeteria, lobby and waiting areas of the hospitals. The collected data will be analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) for the measurement and structural model.

EXPECTED OUTCOMES

It is expected that the findings of this study would provide a better understanding on medical tourists' perception and behaviour. The perception of medical tourists on the medical services offered by the service providers in Malaysia would be helpful for the industry practitioners to improve its services and to conduct marketing activities to attract more medical tourists. Besides, the policy makers and government agency such as Malaysia Healthcare Travel Council (MHTC) could use the findings to promote better medical service and develop useful ways in motivating medical tourists' recommendation through word-of-mouth. As engaging in medical services or treatments involve considerable risks, there is a need to deliver quality facilities. Such approach may reduce medical tourists' concerns about their safety, which could lead them in destination loyalty for the same medical service provider in the long run. In terms of theoretical contribution, current study would provide a theoretical perspective to enhance the understanding on how medical service quality, perceived value, and satisfaction provide an impact on word-of-generation. Furthermore, the proposed conceptual framework can provide a reference and guidance to the future research and marketing agents in medical tourism. This study can serve as an orientation on how to stimulate medical tourists' word-of-mouth generation.

In conclusion, through the understanding on the interaction effect of medical service quality, perceived value, and satisfaction on word-of-mouth generation, the study may create a greater chance for the medical service providers and government decision-makers to position the country as a well-known medical tourism destination. In return, it could attract more medical tourists who are seeking first world medical care at reasonable prices. As for the medical service providers, it is very important for them to comprehend and articulate how they can tailor the service delivery to meet the needs of medical tourists.

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BAFE035:
**SCHOOL COUNSELLORS AS PART OF HIGHER EDUCATION
MARKETING: HOW EFFECTIVE ARE THEY AS GATEKEEPERS?**

Maulana, Amalia E.^a, Pradipta, Indry A.^b, Raditya, Redemptus R.^c

^a**Creative Marketing Program, Management Department, BINUS Business School Master
Program, Bina Nusantara University, Jakarta, Indonesia
Email: amalia.maulana@binus.ac.id**

^b**International Marketing Program, Management Department, BINUS Business School
Undergraduate Program Bina Nusantara University Jakarta, Indonesia
Email: ipradipta@binus.edu**

^c**BINUS Undergraduate Program, BINUS University, Jakarta, Indonesia
Email: redemptusrangga@gmail.com**

Abstract

The many choices of universities have forced students' decision-making to become more complex and multifaceted. The role of counselling teachers in influencing the students' university selection is still not fully realized, and the related literature in this field is still limited. The focus of this research is to produce more insights regarding the most basic role of counsellor teachers, namely, as the gatekeepers of information exchanges among universities, students, and parents. More specifically, we seek to understand the characteristics of an effective gatekeeper in the context of university selection. In developing countries with more abundant students and a wider imbalance in the ratio between counselling teachers and students, insights into the role of these gatekeepers are very valuable. Seven issues prove the school counsellor's ineffectiveness as a gatekeeper, which has opened the eyes of universities, schools, and school counsellors themselves. Those issues are (a) mismatches between the needed information and the provided information, (b) communicators' misconceived role as a source of information, (c) the lack of a network, (d) suboptimal utilization of high school alumni as credible sources, (e) irrelevant interest biases and improper information filters, (f) unresourceful gatekeepers, and (g) the lack of communication skills. Empowering counselling teachers is one way of branding the university name. By providing complete and tailored information, there will be no more cases of students who feel they have made mistakes in choosing majors and universities due to a lack of direction by their counselling teachers.

Keywords: School counsellor, higher education marketing, gatekeeping theory

INTRODUCTION

Higher education (HE) in developing countries has been transforming in recent years. The number of universities that now exist is far greater than the number that once existed. Competition among these universities in gaining students is growing tougher, which provokes the need for marketing efforts by HE institutes. In Indonesia, there were 3.293 colleges in 2018 with 6.951.124 students registered (Ministry of Research, Technology, and Higher Education, 2018). The total number of high school graduates in 2018 who are ready to go to college or work is 1.525.418 (Ministry of Education and Culture, 2019). With these many possibilities, students' decision-making with regards to the university's branding has become more complex and multifaceted.

Dao & Thorpe (2015) explain that the student's decision-making is influenced by the level of information provided by the university both directly and indirectly. The various points of contact connecting the universities to the students are parents, other students studying in that university, the students' peers, the university's marketers who students meet in exhibitions, and the counsellor teacher in school. From those points of contact, the roles of counsellor teachers are still relatively under-researched, especially in Indonesia. Thus, this research intends to widen insights regarding the role that a counsellor teacher plays in students' decision making.

The duty of a counsellor teacher should include being responsible for helping the students prepare to attend a university in a structured manner. In developed countries with sufficient allocations for education spending by the government, School Administrator increase the number of counsellor teachers to better handle the needs of the students, including their needs in selecting a university. The problems that counselling teachers face include having too many students to handle and not receiving enough training to be a good advisor. Sometimes, counselling teachers' time is fully spent on handling the students' day to day problems, hence, there is no time left to handle their university preparation (Gibson & Mitchell, 2008; McDonough, 2000; Miller, 1998). This situation is in line with the Vela-Gude et al. (2009) study in South Texas (in the US), which finds that counselling teachers are never considered present in providing guidance and counselling, especially to Hispanic students, and their suggestions are not compatible with the students. In Indonesia, many university students complain that the major they selected is not compatible with their potential, which has resulted in disappointment (Maulana & Dwiwantika, 2018).

The studies on the roles of counselling teachers vary; these studies range from the ones that consider their role significant to the ones that considered their role minimal. The most significant function that counsellor teachers possess is to be an advisor and strong influencer in guiding the students and their parents from the process of gathering information to the process of selecting a university. The least significant role of counselling teachers is as the gatekeeper in the student's decision-making process, as explained by Hart & Jacobi (1992), Hayes (1989), and House & Martin (1998). Even though the role of a gatekeeper is more dominant in the early stage of selecting a university, as explained by Hayes (1989) and Lai et al. (2014), these personnel may negatively impact the next stages of the students' decision making if the information and pieces of advice they provide are incorrect. Thus, it is important for the marketing of HE institutes to understand how to make counselling teachers effective gatekeepers for students to make more factual decisions.

In the theory of gatekeeping, three parties interact with each other, and these parties are the communicator, the audience, and the gatekeeper. The communicator is the group in possession of the information and intending to spread it to the audience. In this case, HE marketing is the communicator party, and the audience is the students and their parents, who represent the university's customer target. The gatekeeper is the counsellor teacher in school. As the gatekeepers, counsellor teachers are expected to execute their role effectively so the information can be disseminated well.

The question that this research asks is how effective counselling teachers are, which is related to the concept of a gatekeeper. The research is conducted by examining several factors: (1) the process, i.e., the gatekeeper's accessibility to the source of information or the communicator and the clarity of the information dissemination; (2) whether the contents change during the information dissemination process with content additions or subtractions (filtering); (3) how competent the gatekeeper is in the matter of information selection and communication; (4) the understanding of the expected targets by the communicators and the students' needs (the students are the audience).

The focus of this research is to generate insights regarding the most basic role of the counsellor teacher, who serves as the gatekeeper of the information exchange among universities, students, and their parents. More specifically, we seek to understand the characteristics of an effective gatekeeper in the context of the university selection. In developing countries with more abundant students and a wider imbalance in the ratio of counselling teachers to students, insights about the role of effective gatekeepers are very valuable.

With a deep understanding of the role of a counselling teacher as an effective gatekeeper, the university can rearrange their strategy for counsellor teachers in school and their branding approach. The university should ensure that the counsellor teacher becomes an effective gatekeeper so that the university is well represented. In a high school, this study describes how to support the counsellor teachers well for the sake of the students. By providing more complete and structured information about universities, there should be no more students selecting wrong majors or universities due to a lack of good guidance from their counselling teachers.

LITERATURE REVIEW

The Different Role of the Counsellor Teacher

A review of the literature on consumer research reveals that counsellor teachers are the inseparable actors in the university's brand decision-making process. The role of counselling teachers in influencing the students' university selection is still not fully realized, and the related literature in this field is still limited. In addition to the limited number of studies, there are also different findings between researchers. Thus, there is a need to better study counsellors contextually within their environment. Table 1 summarizes the school counsellor's role and the studies that have been conducted abroad. The studies are divided into two categories: the ones that find the counsellor's role to be central, and the ones that reach the opposite conclusion.

Matthay (1989) shows that counsellors strongly influence the students' university selections. This fact is in line with Bers (2005), Muhammad (2008), and Willis & Kennedy (2004) and is further supported by the recent study Agrey & Lampadan (2014), which is research from Thailand. There are recent conceptual papers from two research teams in the United States: Bryan et al. (2015) and Hines et al. (2019); these two papers review the importance of counselling teachers for students and parents. A study by Bers (2005) elaborates the student's review retold by their parents, revealing that counselling teachers are more influential than friends, siblings, and other family members.

Contradicting those studies that show counselling teachers' central role, Yamamoto (2006) study in Turkey finds that counselling teachers' roles are less prominent in selecting universities. Lai et al. (2014) highlights that counselling teachers' roles are not as dominant. These authors stated that counselling teachers are more correctly termed as the gatekeepers and said that their influence only extends to the beginning of the decision-making process. Furthermore, Hayes (1989) reports that counselling teachers are involved indirectly but are not included in the decision-making process of selecting specific universities. Instead, counselling teachers act as information providers rather than significant influencers of students' decisions.

Although the role of a gatekeeper is more dominant in the early stages of selecting a university, if the information and advice provided are incorrect, these misstatements will further influence decision making. Maulana & Dwiwantika (2018) find minimal feedback from universities in Indonesia towards the counselling teachers. This shortcoming is one reason some of the students in the later years of college are disappointed with their major and university, which do not suit their potential. Universities must ensure that counselling teachers can be effective gatekeepers who represent the university well even under the least ideal circumstances.

Describing how the phenomenon revolves around the interactions of HE marketing, counselling teachers, and students requires a theoretical framework. Among the various existing communication theories, the one that helps to explain the decisions of a university and major would be gatekeeping theory. In gatekeeping theory, there are three groups that co-interact. The first group would be the communicator, who possesses information and intends to deliver the information to the audience. In this case, the communicators are the HE marketing. The second group is the audience, which is the students. Finally, we have the gatekeeper, which is the counselling teacher. As gatekeepers, counselling teachers are expected to fulfil their role effectively; thus, they should deliver information well and as expected.

Gatekeeping theory refers to controlling information as it passes through a gate (Shoemaker & Vos, 2009). The theory of gatekeeping was first introduced by Lewin (1947). This theory is used to explain the role of journalism as a liaison between the source and the audience. Shoemaker & Vos (2009) adapts the theory's implementation to be more relevant in the modern world, especially where there are accessibility issues and information penetration from various sources, including social media and other recent platforms. Contextually in the new world, the social network capacity comprises more than selecting information; it also includes sharing, copying and pasting, and sometimes even content manipulation.

This study relates to gatekeeping theory because a counselling teacher receives information from various channels; therefore, we have a touchpoint and contact point. The counselling teacher will act as a liaison between the communicator (university marketing) and the audience (the students and

parents). In this case, the audience also has access to resources; however, they would like to understand the universities further. A counselling teacher should be capable of selecting information, which can lead to a fortunate or unfortunate situation. The received information can be distributed directly or modified when the counselling teacher has experiences that differ from the given information. Here, feedback towards the counselling teacher's overall understanding of the material regarding various majors offered in a university and the strengths of that university becomes very important.

RESEARCH METHODOLOGY

This qualitative research utilized interviews as a means to gather the necessary data. The qualitative research method is intended to generate understanding, develop theory, and describe complex reality so that a deeper comprehension can be achieved (Babbie, 2007; Creswell, 2014). The qualitative approach can describe the respondent's feelings, opinions, and experiences better, and it can also translate the meaning of their actions (Denzin, 1989). Moreover, the qualitative approach analyses the interviewer's and source's behaviour and cross-cultural influence during the interview (Lazaraton & Taylor, 2007). Interpretations of sources' answers and behavioural observations can be analysed to reach conclusions.

During the data-gathering period, the researchers and participants interacted directly. This subjective and detailed qualitative research design (with an interactive approach) has a flexible structure because it can be built and reconstructed on a higher level (Naderifar et al., 2017). The snowballing sampling method is utilized to acquire respondents. Snowballing sampling is a method in which a respondent will refer the researcher to other respondents and thereby create a chain of referrals. This process helps researchers to gain easier access to respondents with a specific characteristic, which is often difficult. In this research, the main characteristic of the respondents is being a school counsellor.

The criteria for each respondent in this research are that he or she (1) has more than five years of experience as an active counsellor in a high school and (2) has a psychology or a school counselling education background (or both). A direct interview was conducted with eleven school counsellors in various private high schools from Jakarta, Tangerang, and Bekasi. The characteristics of each respondent are given in Table 1.

Table 1: Respondents' Characteristics

	Initial	F/M	Description	Location
1	OS	Female	Has a bachelor's degree in school counselling and seven years of experience as a school counsellor in a private high school.	South Jakarta
2	GR	Female	Has six years of experience as a school counsellor in a private high school with a psychology bachelor's degree	Central Jakarta
3	SI	Female	Master's degree in counselling with 21 years of experience as a school counsellor in a public school	South Jakarta
4	AL	Female	Bachelor of Psychology with 24 years of experience as a school counsellor in a private high school	South Tangerang
5	AN	Female	31 years of experience as a school counsellor in a public school with a bachelor's degree in psychology	Tangerang
6	SU	Female	Master's degree in psychology and 12 years of experience as a school counsellor in a private high school	Bogor
7	AD	Male	Five years of experience as a school counsellor in a public school with a psychology bachelor's degree	North Jakarta
8	ET	Female	Master's degree in psychology and 15 years of experience as a school counsellor in a private high school	West Jakarta

	Initial	F/M	Description	Location
9	FR	Female	15 years of experience as a school counsellor in a private high school with a master's degree in psychology	West Jakarta
10	RO	Male	Bachelor of psychology with five years of experience as a school counsellor in a private high school	Bekasi
11	DI	Female	Bachelor's degree in school counselling with 16 years of experience as a school counsellor in a private high school	Bekasi

The interviews were structured based on important aspects of gatekeeping theory. Higher Education marketers were interviewed as communicators, students were considered as audiences, and school counsellors were considered as connectors between the university, the HE marketers, and the students.

The interview results were analysed by first reducing all of the data to select the essential information and focusing on important aspects based on the theories we employed beforehand (Miles et al., 2014). Reduced information will provide a clearer picture and will aid in additional data collection if necessary. Next, the data were presented as a collection of information structured to allow researchers to generate conclusions from the descriptive result.

RESULTS

Seven issues prove the school counsellor's ineffectiveness as a gatekeeper, which opened the eyes of universities, schools, and school counsellors. Those issues are as follows: (a) Mismatches between the Needed Information and the Provided Information, (b) Communicators' misconceived role as a source of information, (c) the Lack of a network, (d) Suboptimal utilization of High School Alumni as credible sources, (e) Irrelevant Interest Biases and Improper Information Filters, (f) Unresourceful gatekeepers, and (g) the Lack of Communication Skills.

(1) Mismatches between the Needed Information and the Provided Information

This study uncovered something interesting: in several respects, the gatekeeper role is not functioning properly. According to White (1950), a communicator must understand the audience's needs. As an information supplier, the HE marketer has not provided school counsellors with the information needed by the students. Currently, communicators are stuck with outdated assumptions. Furthermore, many students have needs that are often overlooked.

The students often asked important questions of their school counsellors, but these questions were left unanswered, as elaborated in Table 2. The gatekeeper has some of the answers provided by the HE marketer, but the intensity and completeness are still subpar.

Table 2: Differences and Similarities among the Information Sought, Provided and Forwarded

	Information sought (by students)	Information provided (by HE marketing)	Information forwarded (by the counselling teacher)
Roles	(audience)	(communicator)	(gatekeeper)
University excellence (awards)	Very often	Quite clear	Quite clear
Campus facilities	Very often	Quite clear	Quite clear
Registration and administration date	Often	Quite clear	Quite clear
The relationship between students' self-potential and the appropriate department	Very often	Unclear	Quite clear

Referral career options with the chosen major and type of work	Very often	Unclear	Unclear
Scholarships, fees and payment methods	Very often	Unclear	Unclear
Social life while in university, especially student clubs	Often	Unclear	Unclear
Learning experiences of seniors from the same high school	Often	Unclear	Unclear

According to Table 2, there are several important pieces of information that students need, but the gatekeeper does not have them or only has them partially. This information includes (1) how to connect one's potential with the appropriate majors offered by the university, (2) career options for each major and the university's link with each occupation, (3) detailed information about scholarships, tuition fees, special conditions, and payment methods, (4) information about the university's social life, especially student clubs, and (5) the high school's alumni experiences in the university.

Still, adequate information regarding Higher Education has been well explained by the HE marketing team, which enables school counsellors to relay that information to students and their respective parents. The information may contain (1) the university ranking, each undergraduate programme's accolades, and other achievements like accreditation; (2) the campus facilities, including its location, WiFi access, dormitory, library, class situation, sports facilities, canteen, and web portal.

(2) Communicators' Misconceived Role as a Source of Information

As a gatekeeper, the primary source of information should come from the communicator, with others taking the role of complementary sources. Currently, gatekeepers have to seek information from multiple sources, such as colleagues from other schools and their school's alumni who are currently studying in the university. This forces gatekeepers to conduct "active research", which requires them to continuously remain in touch with alumni and colleagues. The information's quality may also differ from person to person.

The university should carefully address this matter since a majority of the credible information comes from Higher Education marketing. Hence, a diminished role for HE marketing would hamper school counsellors' ability to function as a channel of information between parents and the university. Per our interviews, school counsellors' primary medium for university-related information is HE marketing's catalogue. However, this catalogue often contains outdated information that cannot accurately portray the actual condition of the university.

In the interviews, a school counsellor advises the university to put a special menu on their website for recent, real-time updated information. For example, the major's official title lacks the clarity of information due to multiple uninformed modifications. Hopefully, this type of problem could be prevented by more accessible information on the website.

Based on their experience, school counsellors acknowledge the importance of HE marketing as a communicator for giving comprehensive information through the university website. Thus, counsellors advise HE marketing to create a "for counsellors" menu on the website. This menu will help the counsellors gather fundamental information for their references as well as for their students.

"The way I access primary information, like the university's accolades and competitive achievements, is through the internet. For more details, I go to the university's official website for the visual portrayal of the campus." (Ms. OS)

"Ensuring continuous availability of updated content at the website is crucial since [a lack of updated information happens occasionally. Also, the website often displays excessive windows in its interface. It takes me out of focus and confuses me about the direction of the university." (Mr. RO)

(3) Lack of a Network

The gatekeeper's accesses to information centres are limited on most occasions. This problem creates a network with limited growth when faced with inquiries and unsolved problems. Through an improved network, not only do school counsellors possess better information access, but the network gains increased potential for long-term growth. Some universities are currently initiating training and workshop programmes for school counsellors to refine their relationships through the network.

The adjacent relationship between the school and the university has not been generally recognized by school counsellors. This oversight is the root cause of the severely limited number of trusting, close-knitted relationships between school counsellors and university representatives, which forces HE marketing to emerge as a primary communicator for counsellors. The exhibition, which may be held either by schools or in public, is still the most frequent meeting point for counsellors and HE marketing. Campus visits, especially visits to top universities, have not been properly utilized as a communication method.

Gatekeepers' information quality has developed relatively below par due to the lack of a constant relationship with multiple external parties. Through a qualified network, gatekeepers could gather relevant, up-to-date information while preventing obsolescence. Joining the WhatsApp group from various communities and having a mutual relationship with other school counsellors would help counsellors be relevant and resourceful.

(4) Suboptimal Utilization of High School Alumni as Credible Sources

Ideally, a gatekeeper is tasked to connect the communicators to their audience. In executing this function, gatekeepers should complement the information that they possess by contacting their respective communicators or adding relevant details from alternative sources. Based on our interviews, among those sources are high school graduates from the counsellors' schools. The most frequent topics of discussion between counsellors and high school alumni are internships, social experiences at the university, and job hunting after graduating from the university.

Conversations with the school's alumni that are studying in a university has become a common activity for school counsellors, as these alumni may give counsellors credible contact points. However, initiatives to link school counsellors with these alumni are still minimal at this point. This fact is unfortunate, as these links could enhance the university's branding by promoting the alumni's achievements.

"At the start of the school year, we usually invite our alumni at a public university (PTN) to share their college life experiences." (Ms. ET)

"Sometimes, I have to contact the alumni that study at some short-listed universities. This usually takes time, while the information does not always come as expected." (Ms. SU)

Higher Education marketing teams could make use of the opportunity to promote their institution through each high school's alumni. Furthermore, high-achieving students from the university should be invited to visit their high school alma maters to re-establish connections with the institution. These students will bring first-hand, concrete experiences of their university life, which may render them effective ambassadors. By this means, high school students can gain "real user experience", which is an exclusive benefit that HE marketing and common advertisements cannot provide. School counsellors' actual struggle to establish a connection with alumni only amplifies this programme's benefit.

(5) Irrelevant Interest Biases and Improper Information Filters

The ability of gatekeepers relies not only on the information's comprehensiveness and the accessibility of the information centre but also on the ability to purify and filter invaluable and irrelevant information for the audience. A potential problem is the tendency to prioritize certain information based on the school's subjective interest. For example, per our interviews, some students

suspect their school for not guiding them to their preferred major. These students suspect that their school steers their preference to a top university to improve the school's own ranking.

On some occasions, school counsellors persuade their students to go to public universities (PTN) without considering the students' personal preferences. This habit would create a gap of information, as the substance has been adjusted to fulfil the institution's needs rather than the students' needs.

School counsellors, for instance, could feel comfortable while having interactions with HE marketing or be impressed by the alumni's achievements. These factors would shape the counsellors' personal preference and affect the accountability of information, which would render the role of gatekeeper ineffective for both the students and the university. Students will be redirected to unpreferred majors, which burdens the university. Moreover, unhappy students influence the university's branding in a bad way.

"My student reported back to me. He said that after a few months of experiencing university life, he realized that he should have a different major, as his current major is a misfit. If I recall correctly, this condition was affected by misleading information, some of which came from me, he said." (A few respondents discussed the same issues.)

(6) Unresourceful Gatekeepers

From our study, we found that most school counsellors are not as resourceful as a gatekeeper should be. Their data are still based on past problems, and they do not take present and future problems and needs into account. Hence, most students that do consult with them receive no useful information. Those students do not obtain the information that they had hoped for, much less what they had needed. In the worst case, their head is filled with unhelpful advice that follows the institution's needs.

"The questions are generally predictable. It is the same every year. Consequently, I prepare the information that I deem appropriate for the students and get it ready when it is time for consultation. These days, I find that the questions from the students have changed somewhat, but I am not ready for it." (Mr. RD)

(7) Lack of Communication Skills

Because gatekeepers act as the intermediaries or liaisons, they must have good communication skills either with the communicator or with the audience. Some school counsellors have already achieved the proper communication ability, but only with the students and not with Higher Education marketing as the communicator. In other cases, some school counsellors can seek and filter information from multiple sources, which may be either directly or indirectly from the communicator. However, when counsellors are told to present their findings to the students or the parents, they fail to perform this task well. Miscommunications could happen between counselling teachers and Higher Education marketing, or between the teachers and the students who seek help. When a miscommunication happens, the information defeats the initial purpose of the school counsellor as a gatekeeper.

CONCLUSION AND DISCUSSION

Although counselling teachers' roles in Indonesia are at the same level as sophisticated advisors in developed countries, HE marketing can expect counselling teachers to be effective gatekeepers. As effective gatekeepers, counselling teachers would help the HE marketing teams (as communicators) disseminate information well and filter correctly, then be ready with the various types of information required by students, who are their audience.

Studies have found that counselling teachers have not been effective gatekeepers, and all parties should respond to these insights, namely, universities, schools, and counselling teachers themselves. Various blocking factors that render counselling teachers ineffective need to be reduced by synchronizing the information provided with the actually needed information. In this case, counsellors should learn what information the student needs when selecting a university. The

communication and information filtering need to be rectified and improved to ensure counselling teachers' competency as gatekeepers.

The practice of counselling teachers directing students to a particular university or major without considering students' interests should be stopped. Counselling teachers must be able to filter information for their students. Counselling teachers also should be resourceful in delivering information, which is a sign of good communication.

Furthermore, access by gatekeepers to information centres is usually restricted due to a lack of counselling teachers' presence in schools and university cooperation. Hence, counselling teachers are only aware of HE marketing in a general sense and do not directly contact universities when they require assistance. Counselling teachers also need a network to gain relevant and up-to-date information. It is important to build a more comprehensive network not only amongst gatekeepers and communicators, but also amongst other stakeholders that are capable of giving useful information.

High school alumni that study in particular universities can be the general and credible contact points for counselling teachers. These students are also useful to HE marketing, as they can provide information on the high school alumni to the counselling teachers. Usually, counselling teachers admit that they have to find their alumni contacts themselves to ask for their particular university studies experiences.

This research manages to provide a new understanding regarding the effectiveness of counselling teachers that enhances the knowledge of gatekeeping theory applications in higher education and itself represents an academic contribution. This study also provides many insights that can help HE marketing be more observant in managing their marketing communications. Rendering the university website more contextual by providing a menu for counsellors is a breakthrough that can be immediately applied and utilized. In addition to improving the website, this research implies that HE marketing teams should rearrange their approach strategy to school counselling teachers. Empowering counselling teachers is one way of branding the university name. By providing complete and tailored information, there will be no more cases of students who feel they have wrongly selected their majors and universities due to a lack of direction by their counselling teachers.

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BAFE036:
**FACTORS INFLUENCING USER ACCEPTANCE TOWARDS TOUCH
N GO E WALLET SYSTEM IN MALAYSIA**

Nik Nuraisyah Binti Nik Azmi^a, Zainon Binti Md Yunus^b, Nur Hazrini Binti Mohd Zahari^c,
Muhammad Ashraf Bin Anuar^d

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: nuraisyah@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: zainon@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: hazrini@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ashrafa@utar.edu.my

Abstract

In recent years, there is a visible growth of cashless transactions due to the development of financial technology. As a result of being growth of fintech products such as e-wallet, consumers are shifting from cash-based to cashless. Touch N Go (TNG) e-wallet has been selected to participate in the ePenjana programmes which is part of the Short-Term National Economic Recovery Plan (PENJANA) to enhance consumer spending and accelerate the growth of digital adoption in Malaysia specially to encourage contactless payments as COVID-19 pandemic escalates. Therefore, this study aims to find out what factors influence the user acceptance on TNG e-wallet system in Malaysia as a contactless payment method. Despite its rapid development, little scholarly literature review has discussed about this topic. The proposed research model was developed by applying extended of Theory of Acceptance Model (TAM) with culture and security into the model, in order to determine the significance factors that influence user acceptance on TNG e-wallet. Hence, this study will be developed and tested using quantitative data and validate using self-administered questionnaire.

Keywords: E-Wallet, User Acceptance and Extended TAM

INTRODUCTION

In the past few years, internet has made a life easier for people. Currently, payments are being done using a smart device. One of the best inventions of the 21st century is the electronic wallets (e-Wallet) which is an integral part of electronic payment system. According to Digital Wallet (2019), e-wallet can be defined as a form of digital wallet that allows an individual to connect their debit or credit cards to digital wallet in order to make any transactions. Besides, e-wallet is a component of payment system. E-wallet is a type of e-money (Aji et al., 2020) where the money is stored in a server, not in a chip card.

As consumer are moving towards a cashless society, the popularity and ubiquity of e-wallet payments platforms has flourishing since e-wallet is perhaps the most trending payment system that has captures the hearts and mind especially in Malaysia. According to Mastercard Impact Study (2020), Malaysia leads other countries in South-East in the usage of e-wallet at 40%, ahead of Philippines (36%), Thailand (27%) and Singapore (26%). In fact, the rapid development of information technology facilitates by providing its distinct characteristics of payment system. Due to the increasing number of e-wallet systems, consumers are shifting from cash-based to cashless, yet converting a non-cash economy is difficulty, and existing cash-based trading practices are still firmly compacted.

On the other hand, Malaysian government support on e-wallets innovation during COVID-19 pandemic outbreak which also will influence the acceptance of using e-wallets since WHO advices to "flatten the curve" (Kaur, 2020). One of the initiatives from government to promote the cashless payment by offering RM50 e-wallet credit under the ePenjana plan to all Malaysians which TNG e-

wallet has been selected to participate in the ePenjana programme which is part of the Short-Term National Economic Recovery Plan (PENJANA) to enhance consumer spending and accelerate the growth of digital adoption in Malaysia especially to encourage contactless payments as COVID-19 pandemic escalates (The Star, 2020). Furthermore, the growth of e-wallet in Malaysia is mainly due to the several facts and one of them are effortless cash transactions followed by security, cost saving and culture.

In Malaysia, Touch N Go (TNG) e-wallet are popular. According Oh (2018), TNG e-wallet play a dominant role in transforming nation towards cashless future. Yet, e-wallet adoption in Malaysia is still in its infancy (PWC, 2018) even though government has made a huge investment for introducing new technologies to the society. However, these efforts may not reap desired results if the intended users do not adopt the innovations.

Therefore, the main objective of this study is to investigate factors that influence user acceptance towards TNG e-Wallet as a cashless payment method in Malaysia. This study is based on Theory of Acceptance Model (TAM) which has been widely used in the technology adoption studies. Hence, to meet the special objectives of this study, there are four variables such as, Perceived Usefulness (PU), Perceived Ease of Use (PEU), Security (S) and Culture (CU) are chosen to see the effects on user acceptance towards TNG.

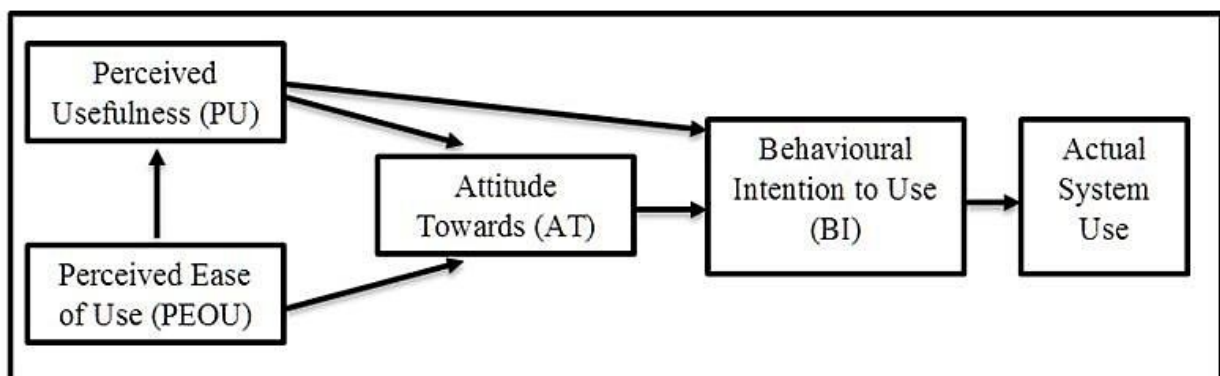
LITERATURE REVIEW

Technology Acceptance Model (TAM)

As the users' attitude towards the acceptance of a new information system could influence its success (Succi & Walter, 1999; Davis et al, 1989), academics have developed various behavioral decision theories and intentional models to analyse and understand users' behaviour towards the adoption of innovative technology. The most prominent theories and models have been adopted such as theory of reasoned action (TRA), the theory of innovation diffusion (IDT), the technology acceptance model (TAM), the theory of planned behaviour (TPB) and the unified theory of acceptance and use of technology (Khalilzadeh, Ozturk, Bilgihan, 2017; Shen, Liu & Yi, 2017; Patil, Dwivedi & Rana, 2017) to understand the behaviour of users towards adoption of various things. However, when it comes to adoption of information system, theoretical model such as TAM have been applied in various studies to understand the behaviour of the users to accept and adopt the new technology as this model has been considered as the most robust, parsimonious and persuasive in the technology acceptance behaviour (Davis, Bagozzi & Warshaw, 1989).

The application of the TAM is proposed to be applied in various studies to capture the factors which has significant impact on the users' behaviour to accept the use of information technology (Hakkak, Vahdati & Biranvand, 2013). TAM which include two particular beliefs which are perceived usefulness (PU) and perceived ease of use (PEOU) are used to be determinants towards the attitude of the users in implementing new technology. Drawing from TRA, PU and PEOU are to be used as determinants to predict the attitude (AT) of the users towards implementation of new technology (Figure 1).

Figure 1: Theory of Acceptance Model (TAM)



These two determinants (PU and PEOU) jointly determined by the AT furthermore will create a favorable behavioral intention (BI) towards using the information technology that consequently affects the actual self-implementation of the system (Figure 1). PU concerns on the extend of users believe that using a particular system would enhance his or her job performance. For the context of this paper, PU can be explained to be used as a determinant of users believes that he or she would benefit from using the TNG e-wallet. While on the other hand PEOU is defined as the extend of the people's believe that using a particular system would be free of effort (Davis, 1989; Davis et al., 1989). PEOU is to be used in this research as to determine whether the users believe by using the TNB e-wallet would be free of effort.

TAM provided an informative representation of the mechanism by which the model can explain user acceptance and should be helpful to forecast and evaluate user acceptance of new information technology. There are various of previous research which have been conducted using TAM for similar purposes for example Grandon and Pearson (2004); examined the determinant factors of strategic value and adoption of e-commerce by referring to the perceived strategic value of IT framework and TAM. From the survey that they have conducted with managers and owners of some SMEs, they have identified four factors that influenced e-commerce adoption which are organizational readiness, external pressure, PEOU and PU.

Meanwhile, there are some studies on the user's application of internet banking acceptance for example the study conducted by Suh and Han (2002) which found out that customer's perceptions of the usefulness and ease of use affect their attitude towards behavior significantly. Besides, their research finding also shows that behavioral intention to use the internet banking was highly related to attitude, perceived usefulness and trust. On the other hand, Lee (2009) examined the factors influencing the adoption of internet banking by integrating TAM and TPB with perceived risk and perceived benefit has found that the intention to use internet banking was positively affected mainly by the perceived benefit, attitude and perceived usefulness.

Besides that, Chen et al (2002) has conducted a study to understand the customers' perspective on the acceptance of virtual store using the application of TAM and innovation diffusion theory. They have found out that compatibility, PU and PEOU were the primary determinants of customers' attitude towards using the virtual stores.

Culture

The definition of culture can be varied and not easily defined. The father of cultural studies, Kluckhohn has defined culture as "the set of habitual and traditional ways of thinking, feeling and reacting that are characteristic of the ways in particular society meets its problems at a particular point of times" (as cited in Schwartz & Davis, 1981). On the other hand, culture also can be defined as; according to Geert Hofstede (1993) who is the first to attempt to define culture "the collective programming of the mind which distinguishes one group or category of people from another". Culture present everywhere and even though it is not something that normally be taken seriously, it may affect the decision-making and information processing. Besides that, culture can be the major influence on the way people view and experience the world (Vygotsky, 1987)

There are ample of previous research done which relates culture with attitude of towards acceptance of certain things. For example, in the research done by Ornek (2015) has mentioned that, cultural influence has significant effect on the students' attitude towards science and science-related careers. Cultural context has several components that determine and shape the young generation's attitudes towards science and their achievements in science. This research also has mentioned that, people from different culture have different attitude towards science and science-related careers. Chang (2006) in his research has stated that individual differences can affect the preferences for brand and advertisement and individuals generally favor the brands which match their personality. Therefore, this research intends to propose the culture to extend the TAM as one of the determinants to affect the attitude towards behavior to adopt the TNG e-wallet.

Security Perception

Security issue has been one of the famous issues which have been cited in various online purchasing studies (Chang & Chen, 2008). Security perception is defined as the degree to which a person believes that the online vendor, website or mobile payment procedure is secure (Shin, 2008).

On the other hand, Roca, Garcia and de la Vega (2009) have defined online security as “a threat that creates a circumstance, condition or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosures, modification of data, denial or service, and/or fraud, waste and abuse”. Security has been mostly an issue of online users to transfer the important information such as credit card details information online (Salisbury, 2001) and is viewed as important concern among online consumers (Roman and Cuestas, 2008).

Chang and Chen (2008) has mentioned that the internet is not a secure environment for online shopping. Therefore, it is very important to emphasize the security on the online website to protect the customers data as the online website are the main target of attackers. On the study to investigate the intention towards behavior of the consumers to use online shopping, various researches have highlighted security as a main issue that effect the online purchase intention (Belanger et al., 2002; Park & Kim, 2003 and Delafrooz et al., 2011). Besides, in another study done by Tsai and Yeh (2010), it is concluded that consumers' perception of security of online vendors is known as a major concern of decision making by consumers.

On the other hand, on the context of adoption of technology as in the mobile payment method, many consumers still regard the mobile payment as less secure even though there are various studies have claimed that mobile payment is more secure than the traditional payment method (Johnson et. al, 2012). Therefore, there will be some refusal to use the mobile payment method by the consumers because of the concern on the security (Cheong, Cheol & Hwang, 2002). Besides, Pousttchi (2003) in his research argues that an infringement of subjective security will prevent consumers from using a particular procedure and the risk of financial loss acts as impediment to the adoption of mobile payment (Liebana-Cabanillas et al, 2014). Caldwell (2012) has mentioned that although the mobile security market is rapidly evolving, there still does not exist set of standard that e-wallet or mobile payment developers can use to make their application more secure. Therefore, it is interesting to include security perception as one of the determinants on the adoption of TNG e-wallet for this research as customers still have doubts about the security of virtual transaction as mentioned in a research done by Liebana-Cabanillas (2014).

CONCEPTUAL FRAMEWORK

Figure 2: Proposed Conceptual Framework

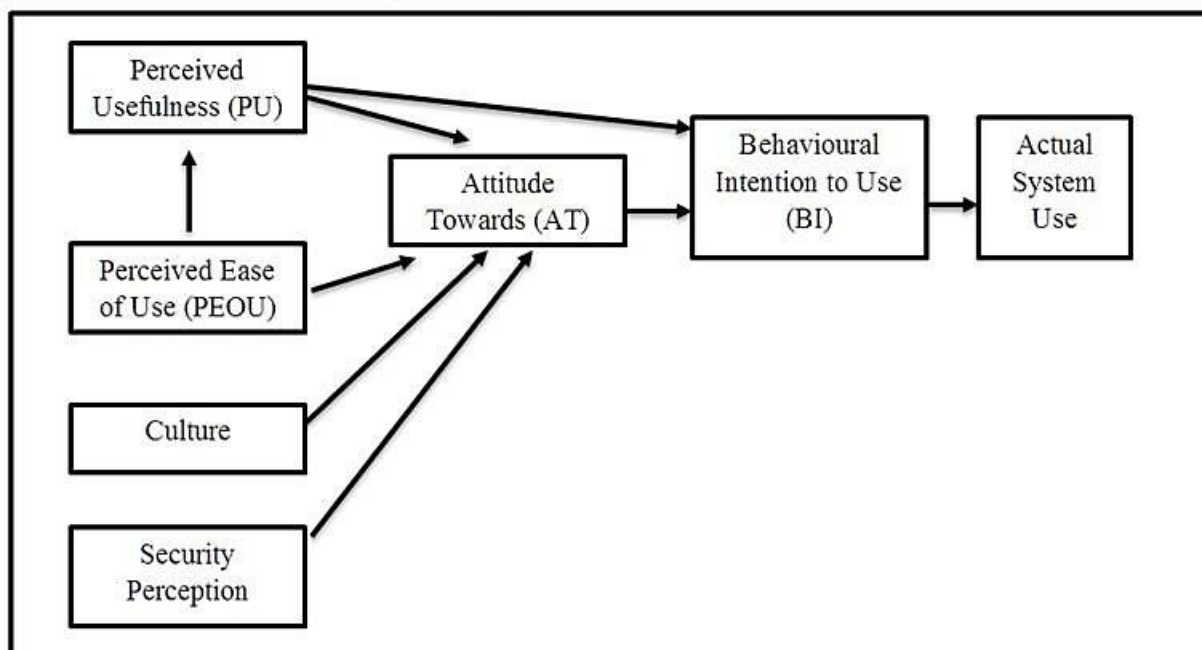


Figure 2 represents the possible factors that influence user acceptance towards TNG e-Wallet system in Malaysia. Therefore, the more benefit of the technology can be offered to the public, the highly likely that the public will accept the cashless payment through TNG e-Wallet system in Malaysia.

RESEARCH METHODOLOGY

This study will be developed and tested using a quantitative approach and it was conducted using self-administered questionnaires. The survey questionnaire will be collected by applying two methods, first is an online survey using Google form and second is face-to-face invitation on the targeted respondents. The respondents are individuals who are smartphone users and those who use TNG e-wallet system and consider using TNG e-wallet in the future. The purpose of this study is to validate the influential factors for the results on TNG e-wallet acceptance used. To make the questionnaire context relevant, the questionnaire was adopted and adapted based on TAM with culture and security perception were added into the model to enhance the significance factor influencing user acceptance on cashless payment through TNG e-wallet system. All constructs and items were adapted from the extent literature review and were customized to suit the purpose of this study.

CONCLUSION

The development of financial technology into digital payment has led to cashless transactions where mobile phones have become the easiest mode of payment. E-wallet is an application that shifts users to make a payment from cash-based to cashless. TAM was developed in the current study by extending the TAM model with culture and security into the model. Through this model, researchers can have a more accurate explanation of the factors influencing user behaviour not only in terms of acceptance of the technology, but other factors considered influential on users such as culture and security perception in Malaysia.

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BAFE038:
THE ADOPTION OF “LIFESTYLE OF HEALTH AND SUSTAINABILITY (LOHAS)” CONCEPT AMONG MALAYSIANS

Jing Ning, Lee^a, Yee Wui, Lim^b, Chooi Chea, Chiam^c

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: jning35@gmail.com

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: ywlim@utar.edu.my

^cCluster of Business and Management, Open University, Malaysia,
Email: chooi_chea@oum.edu.my

Abstract

“Being healthy” is one of the lifestyle trend for generally upscale and well-educated people as health is one of the main concerns for many, hence the introduction of Lifestyles of Health and Sustainability (LOHAS) is a chosen lifestyle by certain demographic with a particular market segment related to sustainable living and “green” ecological initiatives. At the same time, healthy lifestyle is almost addictive in every aspect in life for healthy lifestyle enthusiast. In other words, healthy lifestyle has been on a rising alert among people around the worlds, including Malaysia. People are willing to pay more for premium products and services. Besides, people are more educated on the importance of environmental issue and concerns about their living environment. They tend to seek for a way of living that is healthy and sustainable. This study aims to examine consumers’ knowledge, perceptions and intentions towards Lifestyle of Health and Sustainability (LOHAS) adopting The Theory of Planned Behaviour (TPB) model. A total of 160 respondents aged 18 and above were collected randomly in Malaysia, specifically Klang Valley because they would be able to make a rational decision at a certain maturity. Hypermarket such as Aeon, Aeon Big; healthcare chain store Watson; and the organic or natural retail shop in the shopping mall were selected as locations to collect data because most healthy foods and sustainable eco-friendly products are widely available in these shopping points. The results of this study would be able to shed light to entrepreneurs to design business plans and be creative in introducing and marketing its product to the market especially for this cut-throat competitive market today.

Keywords: Healthy Lifestyle, LOHAS, Sustainability

INTRODUCTION

The rising alert on “living healthy” is of the interest today. Due to the advancement in technology and improved lifestyle around the world, the trend of adopting the concept “Lifestyle of Health and Sustainability, (LOHAS)” has been introduced. The trend of sustainability development raises a new segment of consumer who actively seeks for healthy and sustainable products. The term LOHAS (Lifestyle of Health and Sustainability) was adapted to define the market for healthy and sustainable products (Emerich, 2000). According to Urh (2015), there are five categories which defined LOHAS; consumers who look for healthy living, alternative healthcare, personal development, ecological lifestyle and sustainable economy. LOHAS consumers comprise 16% of the population in United States and 29% of the population in Japan ((French & Rogers, 2006; Urh, 2015). In 2005, LOHAS was one of the most popular words in Japan as this word can be seen in products, restaurants and even magazines in the Japanese market (Ekberg, 2006). Businesses around the globe also showed their interest in understanding and integrating LOHAS concept into their business (Cheng, Chang, Tsai, Chen & Tseng, 2019; Font & Cochrane, 2005).

The concept of LOHAS can be seen growing steadily in Malaysia for the past years as the number of people who are concerned about the environment and wanted to live healthy and sustainability (Rezai, Teng, Mohamed & Shamsudin, 2012). This segment of people seeks products that are healthy and environmentally sustainable. Demand for sustainable products and services had continued to increase among Malaysians as their willingness to pay for these goods is higher

(Shaharudin et al., 2010). Due to the fast pace of living in today's world, health is of concern for most people and they tend to seek for healthy and sustainable products, for a better work-life balance lifestyle (Pugh, 2015).

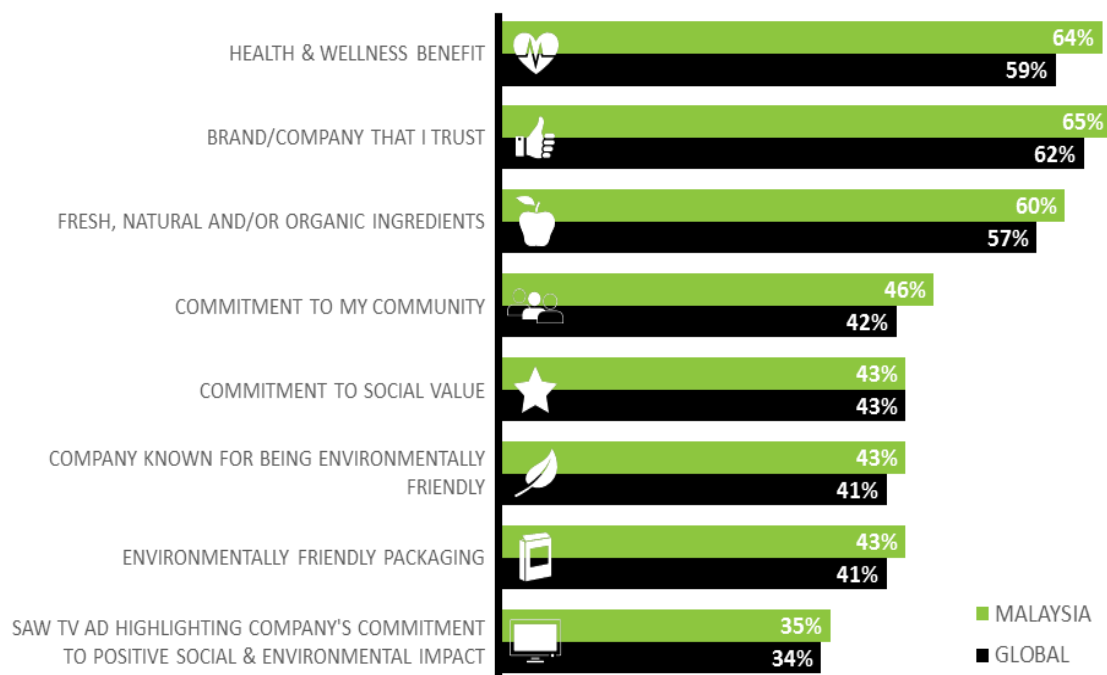
Problem Statement

There has been a steady increase of demand for LOHAS products in the market due to higher stress and fast-paced working and living environment in the world. Therefore, there are many companies have shown their commitment to sustainable development. They integrate the LOHAS concept into their products or services. These companies started to develop products that are natural or organic which less harmful to the environment and some put in effort in the eco-friendly or disposable packaging and green marketing strategy. Figure 1 illustrates the Malaysian vs. Global Consumers' Top Sustainability Purchase Drivers related to LOHAS concept. It shows that an approximately 64% of Malaysians tend to purchase in "health and wellness" products compared to 59% globally. On the other hand, approximately 60% of Malaysians tend to choose products that are fresh, natural and organic. Despite there are more suppliers of healthy and sustainable products, it has very limited information about Malaysian consumer awareness towards sustainable development (Wee, Ariffin, Ng & Shabudin, 2017).

Furthermore, there is a challenge for the LOHAS market as it has not been widespread as a label. Consumers may not identify themselves or are unaware as LOHAS group when they are adopting this lifestyle. Derryberry (2019) stated that LOHAS consumers cannot be easily described by their socio-demographics like age, ethnicity and income level. It is more appropriate to describe them in terms of psychographics such as their basis in making lifestyle decisions. As a result, it is vital to examine factors that drive consumer intention towards LOHAS concept.

Figure 1: Malaysian vs. Global Consumers' Top Sustainability Purchase Drivers
Source: Nielsen Global Corporate Sustainability Survey (2015)

MALAYSIAN VS. GLOBAL CONSUMERS' TOP SUSTAINABILITY PURCHASING DRIVERS



Research Objective

The general objective of this study is to investigate consumer's knowledge, perception and intention towards Lifestyle of Health and Sustainability (LOHAS) in Klang Valley.

- To examine the relationship between consumer's knowledge and their intention towards Lifestyle of Health and Sustainability (LOHAS).
- To examine the relationship between consumer's attitude and their intention towards Lifestyle of Health and Sustainability (LOHAS).
- To examine the relationship between subjective norms and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).
- To examine the relationship between perceived behavioural control and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).

Research Hypothesis

There are four hypotheses formulated to demonstrate the relationship between the independent variables and dependant variable of this study.

H₀: There is no significant relationship between consumer knowledge and their intention towards Lifestyle of Health and Sustainability (LOHAS).

H₁: There is significant relationship between consumer knowledge and their intention towards Lifestyle of Health and Sustainability (LOHAS).

H₀: There is no significant relationship between consumer attitude and their intention towards Lifestyle of Health and Sustainability (LOHAS).

H₂: There is significant relationship between consumer attitude and their intention towards Lifestyle of Health and Sustainability (LOHAS).

H₀: There is no significant relationship between subjective norm and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).

H₃: There is significant relationship between subjective norm and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).

H₀: There is no significant relationship between perceived behavioural control and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).

H₄: There is significant relationship between perceived behavioural control and consumer's intention towards Lifestyle of Health and Sustainability

LITERATURE REVIEW

The term "LOHAS" first appeared in a book was defined as a group of consumers who takes into consideration of their health and environmental responsibility in consumption decisions (Ray & Anderson, 2001). Initially, this group was identified as "cultural creatives" who are aware of global issues such as climate change, greenhouse effects or poverty. LOHAS groups are committed to self-improvement and shared similar values, lifestyle and goals. This segment of consumers have a relatively high self-conscious to the world as they are concern about the society and the earth as a whole as well.

LOHAS consumers are keen users of healthy products and companies with "green-related" products (Laroche, Bergeron & Barbaro-Forleo, 2001). They are willing to put extra effort to quest for eco-labels on the package, products that are certified to be favouring the environment (Vitale et al., 2020; Michaud, Llerena & Joly, 2013). LOHAS consumers regularly purchase green products and usually are one of the earliest groups to use and promote the latest products (French & Showers, 2008). Therefore, their opinions are to e rather influential to influence and push the healthy and sustainable products into the mainstream market.

This paper will adopt the Perceived Behavioural Control (PBC) model in order to study the adoption of "LOHAS" concept among Malaysians. Past studies mostly defined perceived behavioural control as an individual perceived control over a given behaviour (Sun, Law & Schuckert, 2020; Hsu & Huang, 2012; Hansen, 2008). It refers to how intended action was constrained by resources available and opportunity. Element such as ability, knowledge, finance and emotion can influence an individual perception to act a specific behaviour (Weiner, 1985). In general, people who perceived that they

have strong ability to control their resources in acting a specific behaviour; they tend to have greater behavioural intention (Ajzen, 1991). Purchasing intention among consumer can be predicted by both internal and external factors (Suprpto & Wijaya, 2012). In Connell (2010)'s study, it was pointed out that the availability of sources and financial circumstances were the external barriers for the consumer to engage in eco-conscious apparel. In Thailand, people are more aware of quality standards of food products. People looked into the source of origin, nutrition facts and health certifications of a product before making their purchase decision (Van Doorn & Verhoef, 2011).

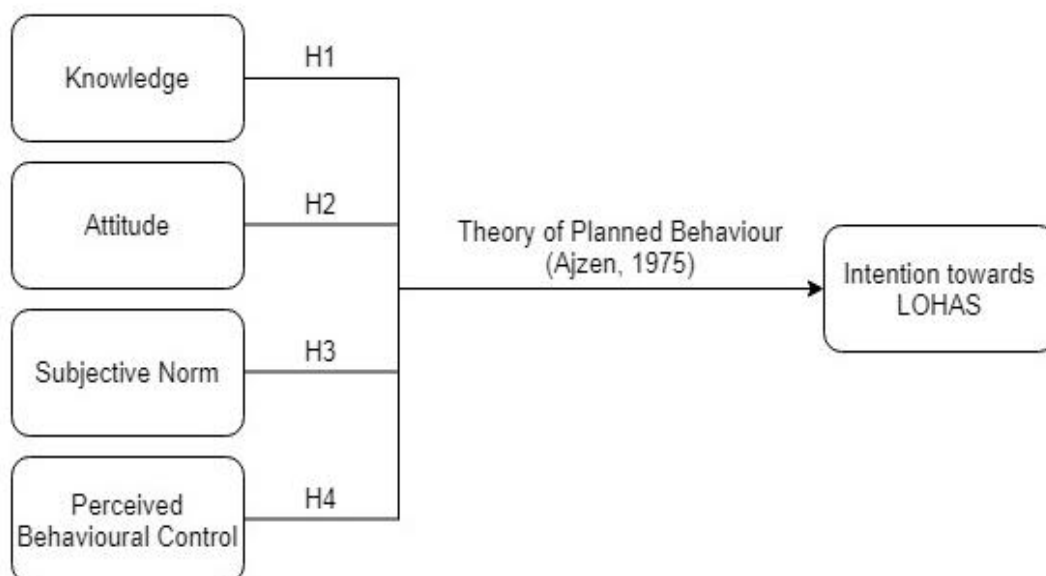
Consumer knowledge can be measured through their familiarity towards a brand or product. Individual who are familiar with the brand or product has previous purchase experience and the product information was stored in their memory (Philippe & Ngobo, 1999). Consumer knowledge was closely related to their attitudes and behavioural patterns. Consumers who show greater concern towards environmental issues are those who have more environmental knowledge (Kim & Damhorst, 1998). Individuals who have greater environmental knowledge are more likely to perceive their control and efforts in solving the environmental problems compared to those with lesser (Ellen, Wiener & Cobb-Walgren, 1991).

Attitude refers to consumers' favourable or unfavourable to conduct specific behaviour. An individual tends to perform certain behaviour if he or she has a positive attitude toward that behaviour (Ajzen, 1991). When a consumer has a more favourable attitude towards certain behaviour, their perceived behavioural control is greater (Alam & Sayuti, 2011). As a result, individual tends to have a stronger intention in performing certain behaviour when they have a positive attitude towards that behaviour (Yazdanpanah & Forouzani, 2015).

RESEARCH METHODOLOGY

Figure 2 illustrates the proposed conceptual framework that showed the network of relationship among the independent variables and dependent variable. Based on the framework, there are four independent variables which are the consumer knowledge, attitude, subjective norm and perceived behavioural control. The dependent variable in this study is the consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).

Figure 2: Proposed Conceptual Framework.



The target population was consumers in Klang Valley which covers Kuala Lumpur and Selangor. This is to examine respondents' attitude and intention towards the concept of "LOHAS". Klang Valley is selected because LOHAS consumers tend to be from the wealthier population with higher needs and wants in their lifestyle. Other than that, the LOHAS-related products can be found easier the organic stores in the downtown. The survey questionnaire will be distributed to the public

aged 18 and above. The data collection period took around 7 weeks; begin from 26 December 2019 until 10 February 2020. Hypermarket such as Aeon, Aeon Big; healthcare chain store Watson; and the organic or natural retail shop in the shopping mall were selected as locations to collect data. This is because most healthy foods and sustainable eco-friendly products are widely available in these shopping points. A total number of 160 responses were collected and 159 of them are valid.

Questionnaire Design

This study used a questionnaire which consists of four sections, to collect data. Section A encompassed the demographic questions such as gender, ethnicity, age, highest educational attainment and the monthly gross income. Section B included questions to seek the respondents' knowledge and awareness towards Lifestyle of Health and Sustainability (LOHAS). This section is indicated by four yes-no questions. In section C, respondents were asked about their perceptions towards Lifestyle of Health and Sustainability (LOHAS). This section consisted of 12 questions and was in the form of the five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree). The questions in both section B and C were designed to measure the independent variables in this study. The last section of this questionnaire posed four questions to assess the respondents' intention towards LOHAS. Items in this section were used to measure the dependent variable in this study and were also in the form of a five-point Likert scale. Each of the questions was the compulsory question where the researcher will receive a full response.

DATA ANALYSIS

A total sample of 159 samples was collected for this study and the first section of the survey questionnaire consists of five demographic questions which are gender, ethnicity, age, highest educational attainment and monthly gross income. Refer to Table 1 for respondents' demographics profile.

Table 1: Respondent Demographics Profile

Demographic Profile	Details	Frequency	Percentage (%)
Gender	Male	57	35.8
	Female	102	64.2
Ethnicity	Malay	19	11.9
	Chinese	125	78.6
	Indian	13	8.2
	Others	2	1.3
Age (years old)	18-29	64	40.3
	30-39	38	23.9
	40-49	36	22.6
	50-59	16	10.1
	Above 60	5	3.1
Education Level	Primary	1	0.6
	Secondary	50	31.4
	A-Levels/ Diploma	40	25.2
	Bachelors Degree	49	30.8
	Post Graduate	19	11.9
Monthly Income	<RM3000	35	22
	RM3001-RM5000	36	22.6
	RM5001-RM7000	29	18.2
	RM7001-RM9000	13	8.2
	>RM9000	14	8.8
	No Income	32	20.1

Table 1 shows the summary statistics for respondents' profile according to their demographic characteristics. From the total of 159 valid respondents, 64.2% of them are female, and the remaining 35.8% respondents are male. Moreover, Chinese respondents were reported significantly more than the other three groups with 78.6% of the total 159 valid respondents. The second-largest group was the Malay respondent which made up of 11.9%, followed by the Indian respondent (8.2%) and

“Others” (1.3%). Majority of the respondents were aged between 20 and 29, which account for 40.3% of the total respondents. The remaining age groups of the respondent were between 30 and 39 (23.9%), between 40 and 49 (22.6%), between 50 and 59 (10.1%) and above 60 (3.1%). Also, it is observed that most of the respondent’s highest educational attainment was the secondary education, an amount for 31.4% and the Bachelor’s Degree, an amount for 30.8%. The remaining respondents had achieved their education level of Pre-University or Diploma (25.2%), Master’s Degree or PhD Degree (11.9%), and lastly the primary education (0.6%). In term of monthly gross income, 22.6% of the respondents have income level between RM3001 and RM5000 and 22% respondents have income level of less than RM3000. One-fifth of the respondents have no income at that moment. Besides, 18.2% of the respondents were account for income level between RM5001 and RM7000, and 8.2% of the respondents were account for income level between RM7001 and RM9000. Lastly, there are 8.8% of the total respondents earning income above RM9000 every month.

Reliability Analysis

Cronbach’s alpha score was used to determine the reliability of the items for this study. Based on the rule of thumb proposed by Nunnally (1978) that measurement scale is acceptable when α value is greater than 0.7. Hair et al. (1998) declared that a reliability value between 0.6 and 0.7 was the lower limit of acceptability.

Table 2: Reliability Analysis

Variable	Cronbach’s Alpha
Knowledge	0.705
Attitude	0.886
Subjective Norm	0.884
Perceived Behavioural Control (PBC)	0.753
Intention	0.890

The results of reliability analysis are presented in Table 2. In this study, all four factors have the sufficient internal reliability consistency which “Intention” have the highest α of 0.890, followed by “Attitude” ($\alpha = 0.886$), “Subjective Norm” ($\alpha = 0.884$), “Perceived Behavioural Control” ($\alpha = 0.753$) and lastly “Knowledge” ($\alpha = 0.705$). Cronbach’s alpha for all variables has greater than 0.7 which indicate that all variables are valid and reliable.

Pearson’s Correlation Coefficient

It measures the strength of the relationship between two variables. Table 3 shows the correlation between the independent variables (knowledge, attitude, subjective norm, perceived behavioural control) and the dependent variable (intention) is significant at 0.01 levels, two-tailed. The result shows that all the variables are positively correlated to each other except “knowledge”. There is moderate correlation ($0.41 < r < 0.70$) between the variables with the highest of 0.649 (PBC-Intention). There is a small but definite ($0.21 < r < 0.40$) negative relationship between knowledge and other variables.

Table 3: Correlation between Variables

	Knowledge	Attitude	Subjective Norm	PBC	Intention
Knowledge	1				
Attitude	-0.502	1			
Subjective Norm	-0.274	0.510	1		
PBC	-0.326	0.571	0.490	1	
Intention	-0.477	0.619	0.417	0.649	1

Multiple Regression Analysis

Multiple regression analysis was used to test the hypotheses of the study, which involved the relationship between the four independent variables (knowledge, attitude, subjective norm, perceived behavioural control) and the intention towards LOHAS (dependent variable).

Table 4: Multiple Regression Analysis

Multiple Regression Analysis	
Multiple R	0.737
R-Squared	0.543
Adjusted R-Squared	0.531
Standard Error	0.503
Observations	159

Table 4 represents a summary of the regression output. The adjusted R square value (0.531) revealed that 53.1% of the variance of Intention to LOHAS (dependent variable) can be explained by the independent variables.

Table 5: Coefficients

	Coefficients	Std. Deviation
Intercept	1.737	0.443
Knowledge	-0.433	0.140
Attitude	0.288	0.0081
Subjective Norm	0.018	0.064
PBC	0.437	0.072

Table 5 shows the coefficient results of the regressions analysis. Result indicated that all the independent variables except "subjective norm" are significant to the dependent variable. First, "Knowledge" and "Attitude" found to be a significant predictor of intention towards LOHAS with P-value equal to 0.002 and 0.001 respectively. Hence, hypothesis 1 and 2 were supported. However, "Subjective Norm" was found not statistically significant (P-value > 0.05) towards the dependent variable with P-value of 0.782. Thus, hypothesis 3 was not supported. Lastly, "Perceived Behavioural Control" and intention towards LOHAS was statistically significant (P-value = 0.000), supporting hypothesis 4. Besides, the figures of the coefficient (beta) indicated that "Perceived Behavioural Control" was the strongest predictor of the dependent variable ($\beta = 0.436$). This is in line with the past studies which indicated that perceived behavioural control had strongest positive impact on an individual's intention (Acheampong, 2017). Therefore, the equation can be expressed as:

$$I = 1.724 - 0.443K + 0.29A + 0.019SN + 0.436PBC$$

where:

I = Intention towards LOHAS

K = Knowledge

A = Attitude

SN = Subjective Norm

PBC = Perceived Behavioural Control

CONCLUSION AND DISCUSSION

Based on the results, the correlation between independent variables and dependent variable are positive. The strongest correlation with the intention towards LOHAS was an item for attitude with $r = 0.607$, followed by perceived behavioural control and subjective norm. Besides, there is a negative correlation between knowledge and the dependent variable (intention towards LOHAS) which indicates that the increase in the independent variable causes the dependent variable to decrease. In addition, results generated from the regressions analysis showed that 53.1% (adjusted R square = 0.531) of the dependent variable can be explained by the independent variables. The coefficients for each independent variable are -0.443 (knowledge), 0.288 (attitude), 0.018 (subjective norm) and 0.437 (perceived behavioural control) respectively.

Table 6: Summary of the Result of Hypothesis Testing

Hypothesis	Significant Level	Findings
H₁: There is significant relationship between consumer knowledge and their intention towards Lifestyle of Health and Sustainability (LOHAS)	Sig = 0.002 P < 0.05	Accept
H₂: There is significant relationship between consumer attitude and their intention towards Lifestyle of Health and Sustainability (LOHAS).	Sig = 0.001 P < 0.05	Accept
H₃: There is significant relationship between subjective norm and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).	Sig = 0.782 P > 0.05	Reject
H₄: There is significant relationship between perceived behavioural control and consumer's intention towards Lifestyle of Health and Sustainability (LOHAS).	Sig = 0.000 P < 0.05	Accept

Consumer knowledge is one of the important drivers of their purchase behaviour. Consumers who are more aware and concern about the environmental issues showed greater intention to purchase healthy and sustainable products. They are aware and spend effort searching for eco-brands as their desire to protect the environment (Prakash & Pathak, 2017). The regression analysis also indicated that knowledge was the significant factor of consumer intention towards LOHAS. Besides consumer knowledge, their attitude towards a specific behaviour also influences their intention to practice it. A positive attitude will encourage people to consume healthy foods (Teng & Wang, 2015). Sustainable apparel purchase intention also influenced by consumer attitude (Jacobs, Petersen, Hörisch & Battenfeld, 2018). This study examines the relationship between consumer attitude and their intention towards LOHAS and results showed that there is a positive significant relationship. It explained that a strong positive attitude result in strong intention towards LOHAS. This outcome is consistent with the TPB model which attitude affect an individual' intention and is supported by past studies (Jung, Choi, & Oh, 2020; Ueasangkomsate & Santiteerakul, 2016; Vermeir & Verbeke, 2008).

The subjective norm is another decisive determinant of behavioural intention. Joshi and Rahman (2017) proved this statement by showing that subjective norm was one of the top predictors of sustainable purchase among Delhi consumes. The younger generation was found more likely to be influenced by others when coming to decision making (Coleman, Bahnan, Kelkar & Curry, 2011). This study research how subjective norm affects consumer intention towards LOHAS and the result showed that it is positively related to the dependent variable, but insignificantly. This study indicated that perceived behavioural control has the strongest significant relationship towards intention. This result is in accordance with past studies in the field of green sportswear (Nam, Dong & Lee, 2017), sustainable consumption behaviour (Wang, Liu & Qi, 2014) and green furniture (Xu, Hua, Wang & Xu, 2020).

Several implications can be concluded from this study and provide insights into several parties. First, practitioners could offer more variety of LOHAS products or services. This is to capture a larger market and satisfy different consumer needs. By exposing more LOHAS products or services to the marketplace, it helps to foster consumer awareness towards LOHAS. Plus, this study revealed that perceived behavioural control is the greatest predictor among others with a coefficient of 0.436. This indicates that consumers are more emphasize on the ease and difficulty to reach the resources. If the consumer finds convenient to buy healthy and sustainable products, they will have greater intention to purchase or consume. Therefore, companies that wish to integrate LOHAS concept into their business, they need to ensure that their products or services are highly available to their target market.

Meanwhile, attitude is another variable that positively and significantly related to consumer intention towards LOHAS. This implies that consumers who have positive perception toward LOHAS are more intended to purchase LOHAS products or practice a healthy and sustainable lifestyle. Therefore, policymakers should create more awareness among the public on the benefits of LOHAS. Educational or communication campaigns can be run to improve public perception of sustainable developments. When people perceived favourably towards sustainability issues, they are more willing to spend on sustainable products.

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BAFE039:
**EXAMINING THE PSYCHOMETRIC PROPERTIES OF THE
EXECUTIVE SKILLS QUESTIONNAIRE-REVISED IN THE
MALAYSIAN WORKING CONTEXT**

Nasir, Hira^a, Tan, Chee Seng^b, Peh, Kai Shuen^c

^aFaculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Malaysia,
Email: hira.nasir@utar.my

^bFaculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Malaysia,
Email: tcseng@utar.edu.my

^cFaculty of Arts and Social Science, Universiti Tunku Abdul Rahman, Malaysia,
Email: pehks@utar.edu.my

Abstract

Executive functioning (EF) is a set of high-level cognitive and behavioural monitoring skills that are important in determining employees' work performance. Nevertheless, there are limited valid and reliable measures of EF in the organizational context. Strait and colleagues (2019) developed the revised Executive Skills Questionnaire (ESQ-R) for practitioners and researchers to assess non-clinical adults' EF deficits. The ESQ-R consists of 25 items and 5 factors namely plan management, time management, materials organisation, emotional regulation and behavioural regulation. However, the usability of this newly developed scale in diverse cultural settings remains unclear, hence the present study evaluated the psychometric properties of the ESQ-R in a sample of working adults in Malaysia ($N = 325$). Confirmatory factor analysis was performed to compare 3 competing models (i.e., single-factor model, 5-factor model, 5-factor second-order model). The results showed support for the theoretical 5-factor second-order model. The ESQ-R also showed excellent internal consistency. Convergent validity was supported by the association between ESQ-R and Executive Functions Index. The weak relationship between the scores of ESQ-R and Self-Rated Creativity Scale supports discriminant validity of the ESQ-R. Concurrent validity was evident by the relationship between the scores of the ESQ-R and the Utrecht Work Engagement Scale-9. The findings indicate that the ESQ-R is a useful tool for assessing and identifying employees' EFs and offering suggestions for developing intervention programmes helping employees with deficits in EFs.

Keywords: Executive functioning, Psychometric properties, Confirmatory factor analysis

BAFE040:
**ENVIRONMENTAL KNOWLEDGE AND PRO-ENVIRONMENTAL
ATTITUDE AMONG MALAYSIAN BUSINESS UNDERGRADUATES**

Lee, Ah-Suat^a, Tan, Swee-Kiow^b, Ng, Yen-Hong^c, Tan, Min-Khen^d, Wong, Tai-Seng^e

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: leeas@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: sktan@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngyh@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: tanmk@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: wongts@utar.edu.my

Abstract

Environmental issues and concerns have always been one of the current issues discussed globally. Literatures often suggests environmental behavior could be changed by knowledge; hence environmental problems could be solved through environmental education. The younger generations today are the leaders and consumers tomorrow. As such, young generations when exposed to more environmental awareness and education from preschool, primary and secondary school, up to tertiary education could increase their environmental knowledge. Applying the social learning theory to youths' learning at tertiary education, the undergraduates are likely to have developed environmental knowledge and awareness through interactions with their social networks including society, families, friends, university, and other social units. However, there is a lack of studies carried out to examine the environmental attitude of Malaysian business undergraduates with informal environmental education compare to those undergraduates with formal environmental education. Have the environmental awareness and education provided to these youths since young age been effective? The goal of this paper is to discuss the impact of environmental knowledge on pro-environmental attitude among Malaysian business graduates today, in hope to provide some insights on the usefulness of environmental knowledge and awareness provided to them since young age.

Keywords: Social learning theory, environmental attitude, environmental knowledge and awareness

INTRODUCTION

Environmental deterioration, such as water pollution, air pollution, soil pollution, greenhouse effects, etc, as a result of on-going human projects and developments have always raised concerns. Environmental deterioration has always been one of the current issues discussed frequently by people of all ages. One major concern is on what actions could be taken by individuals to safeguard the environment. As suggested by Zheng, Wang, & Zhang (2018), environmental knowledge plays an important role to provide people with better ideas for preserving and protecting the environment.

In Malaysia, efforts have been carried out by educators, starting from preschool and primary school to embed the environmental knowledge and awareness to the young children. With better environmental knowledge and awareness, more and more people of all ages, would be able to have pro-environmental attitude, which leads to pro-environmental behavior (Ugulu, Sahin, & Baslar, 2013). The pro-environmental behavior, could then be transform into performing environmental friendly actions, which results better environmental preservation and improvements (UNESCO-UNEP, 1991). As stressed by Leeming, Dwyer, & Bracken (1995), attitude and knowledge shapes better at young age. Hence, this explains the actions carried out by educators to enrich the children at young age with more environmental knowledge and awareness. Early exposure of environmental knowledge and awareness to young children is important as it is a crucial period in shaping the environmental attitude and thinking of these youths and adults (Leeming et al., 1995). After all, the children today are leaders

for tomorrow. As a matter of fact, environmental knowledge and awareness activities did not stop at school levels. In fact, Malaysian corporations, government bodies, as well as organisations have been organizing environmental-friendly events regularly for the general public, for instances, Earth day, Green events, conferences on environmental issues, etc.

Though environmental education has an important role in protecting the natural environment, limited studies were conducted in Malaysia to compare the environmental knowledge and awareness, and environmental attitude of business undergraduates whom have informal environmental education, compare to those undergraduates with formal environmental education. In fact a study conducted by Heyl, Moyano Diaz, & Cifuentes (2013) at a Chilean University has reported significant differences between students pursuing environmental related qualifications and students who are not pursuing environmental related qualifications. Furthermore, despite observing a wider emphasis on environmental education both formally and informally at the tertiary education, there are lack of evidences for growing trend of pro-environmental behaviours among Malaysian undergraduates. Hence, the answers to the research question as to whether there exist an association between environmental knowledge, environmental attitude and pro-environmental behaviour among Malaysian undergraduates are worthy of further investigation.

LITERATURE REVIEW

Theoretical foundation

The Bandura (1997)'s social learning theory postulates that a person's behaviours are reinforced as a result of continuous interplay between the actual behaviours taken, the social environment the person interacts with, and the person's cognition towards the responses resulting from his/her behaviours. Following this theory, learning take places when individual interacts within the social environment via observing, imitating and modelling through examples illustrated. Applying the social learning theory (Bandura, 1997) to youths' environmental learning at tertiary educational level, the undergraduates are likely to have developed environmental knowledge and awareness through interactions with their social networks including society, families, friends, university, and other social units. The learnings take place when the youths observe, imitate and expose to examples of environmental protection practices from the social networks they interact with. Hence, learnings via informal environmental education are likely to be subjected to the influence of role modelling from people such as parents, teachers, friends, opinion leaders whom engaged in environmental practices (Abrahamse et al., 2007; Bandura, 1997). Similarly, such learning is also shaped by social norms for environmental protection (Abrahamse et al., 2007; Bandura, 1997). In turn, these environmental learnings are likely to have shaped the undergraduates' attitude for environmental conservation, that eventually influence their likelihood to take actions for environmental protection. In addition, Bandura (1997) posits that when youths receive endorsement for their pro-environmental actions, this would reinforce their attitude for environmental protection, and provide further support for their pro-environmental behaviour. Henceforth, underpinned by Bandura (1997) theory of social learning, informal environmental education via social networks serves as an important predictor of pro-environmental behaviour via its influence on environmental attitude for environmental protection.

On the other note, environmental researchers postulated information strategies as a major intervention to foster pro-environmental behaviour (Abrahamse & Matthies ,2018). Underpinned by this premise, formal environmental education at tertiary level, such as a degree study in environmental sciences, increases extensively the environmental knowledge and awareness of the undergraduates. As a result, these undergraduates are likely to have a more favourable attitude for environmental protection as well as pro-environmental behaviours. Henceforth, following information strategies postulation, this study proposes that formal environmental education contributes to formation of attitude for environmental conservation. Nevertheless, it is notable that additional environmental learnings via formal education are normally conducted via class room lectures, tutorials, and laboratory testing. These methods of learning are possibly lack of role modelling from social interactions, hence may be less effective on attitude formation (Abrahamse et al., 2007; Bandura, 1997); in this context environmental attitude. In view of this conflicting conceptual predictions, this study calls for further empirical investigation to determine whether any differences exist between the effects of formal environmental education and informal environmental education in fostering environmental attitude and environmental behaviour among Malaysian undergraduates.

Pro-environmental attitude

Environmental attitude refers to one's consistent tendency to react to the natural environment in a positive or negative manner. A person is regarded as in possess of pro-environmental attitude when he or she responds favourably towards the needs for conserving the natural environment. The presence of favourable environmental attitude within an individual is manifested by the person's feels of affection for the natural environment, his/ her involvements in supports of environmental actions, and beliefs in the need to conserve the natural environment. Extant literature indicated a strong power of environmental attitude in predicting pro-environmental behaviour (Kaiser, Wölfling, & Fuhrer, 1999; Roczen, et al., 2014; Scott, & Willits, 1994). In this study, pro-environmental behavior refers to "actions which contribute towards environmental preservation and conservation" (Kaiser, Wölfling, & Fuhrer, 1999, p.1).

Environmental education

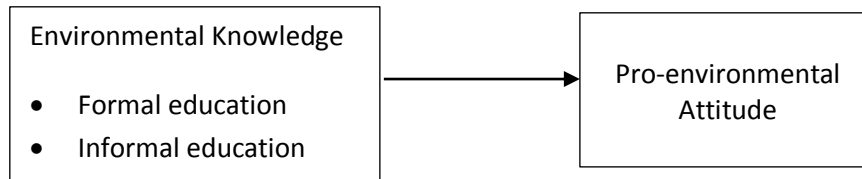
Environmental education refers to the developments in environmental knowledge and awareness. According to UNESCO-UNEP (1991), environmental education is important in providing students today, who would be the leaders and citizens of tomorrow to participate actively in environmental friendly activities and actions. Environmental education requires the development of environmental friendly skills and behaviour in a long-term duration to promote pro-environmental values (Ugulu et al., 2013). It is essential that citizens are motivated to act together (i.e. collectively) in order to have greater impact in preserving and protecting the environment. A study conducted by Gardner & Stern (2002) energy and pollution waste resulted by big institutions and business organisations stands for two-third of total pollution in United States. As such, if environment improvement is the goal, the most effective actions would be collective efforts by everyone, including individuals who could pressure the big institutions and business organisations to perform environmentally friendly actions and activities. After all, the ultimate goal in providing environmental knowledge and awareness is to solve environmental problems (Chawla & Flanders Cushing, 2007). However, individual actions have its limitation, thus in order to solve environmental problems, it is essential to have collective public actions, including institutions and organisations.

The review of past literatures seemed to suggest piling of environmental knowledge through educational programs to encourage pro-environmental attitude (Heyl et al., 2013; Ugulu et al., 2013; Zheng et al., 2018). In other words, when one has richer environmental knowledge, he will have a greater environmentally friendly attitude. Besides, a study conducted by Heyl et al. (2013) has shown formal education to students pursuing environmental related diplomas has significant difference in terms of environmental knowledge and attitude, compared to students who do not have formal environmental related education. This shows the importance of environmental education and learning in developing positive environmental attitude and pro-environmental behaviour (UNESCO-UNEP, 1991).

However, Leeming et al. (1995) commented the comparability of past studies are unknown due to absence of common scale in measuring environmental attitude and knowledge. As such, a study was carried out by Leeming et al. (1995) using a measurement scale, namely Children's Environmental Attitude and Knowledge Scale (CHEAKS) to measure the respondents' environmental attitude, as well as environmental knowledge. This study proposes to apply CHEAKS in measuring environmental attitude and knowledge of Malaysian undergraduates whom are studying a formal environmental degree program and business undergraduates without formal environmental education, so that results could be more comparable. The findings of this study could provide insights about the usefulness of environmental education acquired by Malaysian business undergraduates from the interactions via their social network, as well as their' environmental attitude and environmental knowledge.

THEORETICAL FRAMEWORK

Figure 1: Proposed theoretical framework



Source: Developed for this research based on social learning theory (Bandura, 1977).

Prepositions and conclusion

Figure 1 illustrate the theoretical framework underpinning the current study. Based on the preceding discussions, the following prepositions are established:

P1: Formal environmental education is positively related to pro-environmental attitude among Malaysian undergraduates.

P2: Informal environmental education is positively related to pro-environmental attitude among Malaysian under graduates.

P3: There is a significant difference in the level of environmental attitude among undergraduates with formal environmental education compare to business undergraduates with informal environmental education.

CONCLUSIONS

Due to seriousness of environmental issues today, more environmental education has been provided to younger generations during their primary and secondary education. However, there is lack of studies in examining on pro-environmental attitude and knowledge of younger generations, who are the leaders of tomorrow. This proposed study intends to provide insights to environmental educators, government bodies and also teachers who design the syllabus of environmental education.

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BAFE042:
**THE INFLUENCE OF BIG FIVE PERSONALITY TRAITS ON
LEARNING ORIENTATION AND JOB PERFORMANCE: A
CONCEPTUAL FRAMEWORK**

Teh, Hong-Leong^a, Ng, Shwu-Shing^b, Lim, Yong-Hooi^c, Chong, Tun-Pin^d, Yip, Yen-San^e, Wong,
Kee-Luen^f

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: tehl@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: nsshing@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: limyh@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chongtp@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: yipys@utar.edu.my

^fFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: wongkl@utar.edu.my

Abstract

Although many researchers have examined the relationship between personality traits and performance, there is a lack of studies that examined the “*motivational mechanisms*” through which personality traits influence job performance. The current paper therefore proposes a conceptual framework whereby big five personality traits influence an employees’ learning orientation, and that in return impacts the employee’s work performance. The current paper fills the gap within literature by using learning orientation as a construct to explain this motivational mechanism. Learning orientation is also proposed to be the missing link between personality and job performance.

Keywords: Personality, Motivation, Learning orientation, Job Performance.

INTRODUCTION

The salesforce acts as the very basis of a firm's competitive advantage, and it's role pivotal to the success of any retail business (Piercy, 2006). The relationship between personality traits, learning orientation, and sales performance have gained increasing attention through the years (Johnson & Sohi, 2017; Sok, Sok, & De Luca, 2016). Despite this, there is a lack of studies that examine how these constructs interact to influence job performance. More specifically, there are a lack of studies that examine how personality influences learning orientation, and whether this subsequently influenced sales performance. The current paper thus proposes a conceptual model, whereby the Big Five personality traits (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience) are said to have a significant impact on a salesperson’s influence Learning orientation. And this increase in learning orientation would have a positive impact on a salespersons’ performance in the long run.

LITERATURE REVIEW

Job Performance

Job performance is “an individual level variable of how well an employee performs their job”. Thus, retrospectively, a salesperson scoring high on this variable would by all means create an upper hand for the firm, by giving it a boost in competitive advantage, and thus adding value to the organization as a whole. According to ‘role theory’, a proper job performance measurement system is one that accounts for multiple roles played at work. In other words, an employee’s job performance

can be conceptualized by the extend of how well certain roles are performed. Researchers who posit the usage of roles to conceptualize job performance argue that this form of measurement takes a more comprehensive view of performance, and is central in understanding employee's behavior (Welbourne, Johnson, & Erez, 1998). According to Welbourne, Johnson, and Erez (1998), Job performance can be conceptualized by the extend of how well an employee plays the following five roles: (i) *Job roles* (ii) *Organization roles* (iii) *Career roles* (iv) *Team roles* and (v) *Innovator roles*.

The 'job holder role' is the traditionally held perspective of employee performance (Welbourne, Johnson, & Erez, 1998). To elaborate, it is closely related to how well an employee performs tasks specifically related to his or her 'job description'. The 'organization member role' is closely associated with the concept of "organizational citizenship behavior" as proposed by Organ (1988). In other words, 'organization roles' measure the degree to which an employee is willing to go beyond the call of duty for the benefit of the firm, while placing personal interest as secondary. The 'career role' represents behaviors of the employee that are associated with his/her progression within the organization. Career roles are an important aspect of job performance as employees should put effort to enhance their value to their employers by taking responsibility for career planning. The 'team role' is closely associated with how well the employee works within a team for the success of the firm. Teamwork has been an important component of organizational performance for years. The 'innovator role' is related to employee's who are creative and innovative in the job and also in the organization as a whole. According to Schein (1980), it is imperative for firms that intend to remain competitive in a dynamic environment to have employees who are creative on behalf of the organization.

Personality and sales performance

Personality is defined as the *durable characteristics of an individual over time* (Goldberg et. al., 2006). Due to this, personality traits are useful predictors of behavior because they are relatively consistent and ever present within an individual. Within personality literature, the Big 5 taxonomy of personality traits are commonly used by researchers. The Big 5 personality traits proposed within literature are extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience.

Conscientiousness is a personality dimension associated with individuals that are hardworking, responsible, and organized. Individuals scoring low on conscientiousness are careless, irresponsible, and disorganized. *Extraversion* is a personality dimension, used to describe individuals that are talkative, sociable, and assertive. Individuals scoring low on extraversion are quiet, less sociable, and cautious of strangers. *Agreeableness* is a personality dimension, used to describe individuals that are kind, warm, and trusting. Individuals scoring low on agreeableness are cold-hearted, uncooperative, and intolerant. *Emotional stability* is associated with the tendency to be calm, relaxed and emotionally firm. Individuals scoring low on Emotional stability (high Neuroticism) instead tend to experience negative emotions such as anxiety, depression, and anger. *Openness to experience* is associated with individuals that are curious, imaginative, and creative. Individuals scoring low on openness are unimaginative and less creative (Barrick & Mount, 1991; Goldberg et. al., 2006)

A local study conducted by Ramayah and Yeap (2003) on retail stores in Malaysia revealed that '**personal interaction**' by the salesperson is an important factor because it increases the probability of a consumer's purchase behavior occurring. In-line with this, Shamdasani and Balakrishnan (2000) also suggested that the salesperson's level of '**friendliness**' and approachability also play a contributing factor in influencing a consumer's purchase decision. Next, Wong and Sohal (2002) further advocated the importance of '**trust**' between the customer and the salesperson. The greater the degree of trust between the customer and the salesperson, the more influential the salesperson would be over the customer. And as a result, a customer that has a higher degree of trust with the salesperson would be more easily convinced or persuaded to buy a product. According to Ramayah and Yeap (2003), the diligence or '**reliability**' of the salesperson also play a vital role in influencing consumer purchase decision. As discussed in the previous section, all this further supports the revelation that the salesforce acts as the very basis of a firm's competitive advantage, and its role of paramount importance to the success of any retail business (Piercy, 2006; Taylor, 2000).

As evident from the above, it is interesting to note that the *four elements*: **personal interaction**, salesperson's **friendliness**, salesperson's **trustworthiness** and salesperson's **reliability**

appear to be linked with dimensions of personality. For example, salespeople that are extraverted are also more likely to engage in '*personal interaction*' with his or her customers, as the former has a natural predisposition to be more sociable and talkative. Secondly, 'extroverts' that score higher on the 'agreeableness' dimension have also been purported to radiate optimism and '*friendliness*' to those around them. Thirdly, individuals with high 'Agreeableness' are also more likely to increase the level of '*trust*' with those they interact with, as opposed to their low agreeableness counterparts who are meaner by nature. Lastly, a salesperson's '*reliability*' also shares similarities with the 'conscientiousness' dimension of personality.

Learning orientation and sales performance

A salesforce with high learning orientation has a stronger motivation to improve and master their selling techniques. Thus, they are more driven to improve their abilities continually and to view situations as opportunities to improve their performance (Dweck and Leggett 1988; Shervani and Challagalla, 1998). In contrast, a salesforce with low learning orientation are less inclined to improve themselves, and thus less likely to pick up new skills or grow in their careers.

CONCEPTUAL FRAMEWORK

Figure 1: Relationship between personality, learning orientation and job performance.

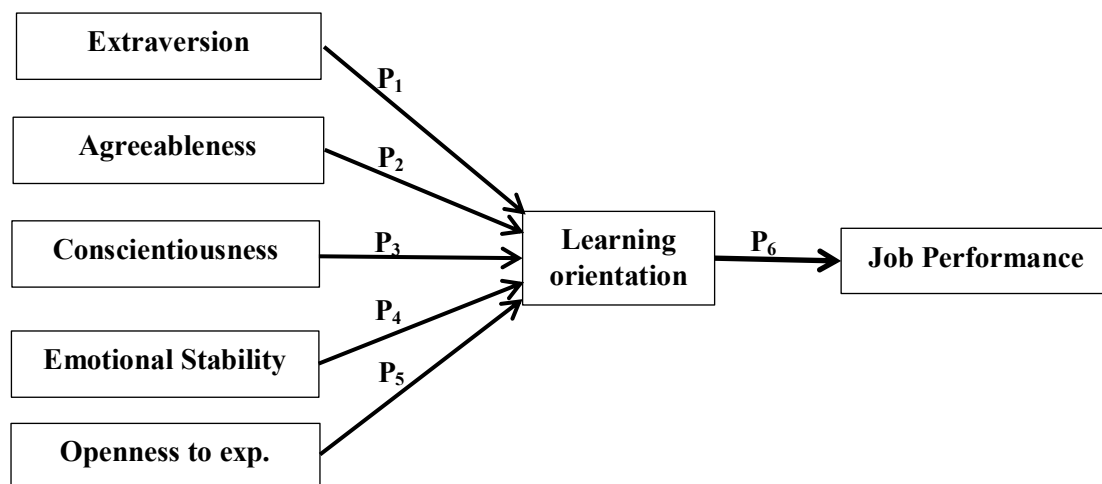


Figure 1 illustrates the relationships between our constructs. It is proposed that the Big Five personality traits (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience) have a significant impact on a salesperson's learning orientation. And this increase in learning orientation would have a positive impact on a salespersons' performance.

Proposition between Extraversion and Learning orientation

Extraverted salespeople are talkative, sociable, and assertive. Since extraverted salespeople are often active and talkative and, it is arguable that these traits positively enhance the salesperson's ability to manage relationships. Thus, when an extraverted salesperson comes into contact with customers, they are more likely to *learn* about customers' preferences and gain knowledge on how to act in ways that benefit the company. This is supported in a study by Payne, Youngcourt, and Beaubien (2007) which found that extraverts are more inclined towards learning orientation. In other studies, extraversion was found between to have a significant impact on learning orientation (Bipp, Steinmayr, and Spinath, 2008; Zweig and Webster, 2004). Based on the above literature, we posit that:

Proposition 1: *A positive relationship exists between extraversion and learning orientation.*

Proposition between Agreeableness and Learning orientation

Agreeable individuals are kind, warm, and trusting. Individuals scoring low on agreeableness are cold-hearted, uncooperative, and intolerant (Costa & McCrae, 2006; Pervin, 2003). High agreeableness can be advantageous in many facets in a salesperson's line of work. A salesperson needs to communicate and build connections with many stakeholders (Sengupta et al., 2000). This includes the formation of networks within the organization (McDonald & Woodburn, 2007). Because highly agreeable salespeople are more cooperative and trusting, they are more likely to establish rapport with stakeholders, customers, other employees and the organization. The positive relationship between Agreeableness and Learning orientation is also supported by other studies (Bipp et al., 2008; Zweig & Webster, 2004). Based on the above literature, we posit that:

Proposition 2: A positive relationship exists between agreeableness and learning orientation.

Proposition between Conscientiousness and Learning orientation

Individuals high in conscientiousness are determined and goal-directed (Barrick, Mount, & Li, 2013; Costa & McCrae, 2006; Pervin, 2003). These individuals that also hardworking, responsible, and organized. Being determined and goal-directed can be associated with feeling the need to learn how to drive value for the organization and customer. Thus, highly conscientious individuals are more likely to place a priority on learning new behaviors in order to achieve goals. Previous studies also back the positive relationship between conscientiousness and learning orientation (Costa & McCrae, 2006; Payne et al., 2007; Pervin, 2003). Based on the above literature, we posit that:

Proposition 3: A positive relationship exists between conscientiousness and learning orientation.

Proposition between Emotional stability and Learning orientation

Individuals who score high on emotional stability tend to be calmer, more relaxed and emotionally firm. Individuals scoring low on emotional stability (high neuroticism) tend to experience negative emotions more easily. The latter are also more susceptible to psychological distress. Highly neurotic salesmen have the tendency to be worrywarts, insecure, jittery, nervous, and inadequate (Costa & McCrae, 2006; Pervin, 2003). They also feel the pressure to be seen by others as being adequate and as a good sales performer. Thus, it is debatable that a negative relationship exists between high neurotics and learning orientation. Since high neurotics feel the need fill that inadequacy by learning to improve themselves. High emotional stability salesmen tend to be *unemotional and more satisfied with the status quo*. Low emotional stability salesmen are thus arguably *better suited for sales because they are more included to improve from training* (Sengupta et al., 2000). Said another way, neurotics perform better, as they feel the pressure to be seen as a *high-performing salesperson*, rather than having a nonchalant attitude due to satisfaction with the status quo. These results were also corroborated by other studies (Bipp et al., 2008; Payne et al., 2007). Based on the above literature, we posit that:

Proposition 4: A negative relationship exists between emotional stability and learning orientation.

Proposition between Openness and Learning orientation

Individuals high in openness to experience are genuinely curious, creative, imaginative, and un-traditional (Costa & McCrae, 2006; Pervin, 2003). Thus, they are more interested in learning new skills and techniques, as opposed to being comfortable with the status quo. Previous studies also corroborate this relationship, whereby a link was seen between openness and the motivation to learn new things (Bipp et al., 2008; Payne et al., 2007; Zweig & Webster, 2004). Individuals low on openness are more comfortable with routine, and thus less motivated as opposed to their high openness counterparts. Based on the above literature, we posit that:

Proposition 5: A positive relationship exists between openness and learning orientation.

Proposition between Learning orientation and Job performance

A salesforce with high learning orientation has a stronger motivation to improve and master their selling techniques. Thus, they are more driven to improve their abilities continually and to view situations as opportunities to improve their performance (Dweck and Leggett 1988; Shervani and Challagalla, 1998).

The need to achieve and the motivation to acquire new knowledge is important for many types of jobs, including in sales. Pertaining to the sales force, employees that are properly trained perform better because they are equipped with the proper sales knowledge and skills (Barrick et al., 2002; Payne et al., 2007). Based on the above literature, we posit that:

Proposition 6: *A positive relationship exists between learning orientation and job performance.*

THEORETICAL IMPLICATION

The conceptual model in the current paper contributes to Personality-Sales performance literature in two ways. Firstly, our model *extends* previous work done on the 'Personality-Job Performance' relationship by the inclusion a 'mediating' component (learning orientation), thus outlining the motivational mechanism within the Personality-Performance relationship. Thus, we also examine the motivational mechanisms in the traditional Personality-Performance relationship. Secondly, our model challenges the long-standing notion that high emotional stability is essential for sales performance. Salespeople who are *unemotional and satisfied with the status quo may actually be counter-productive as training candidates*. Due to this, people who exhibit low emotional stability tend to show their emotions and may arguably be *better suited for sales*. In other words, neurotics are better salesmen because of the pressure to be seen as a high-performing salesperson, rather than a nonchalant attitude due to satisfaction with the status quo.

MANAGERIAL IMPLICATION

During the recruitment and selection of sales personnel, personality traits can be used as a gauge to determine sales performance. Special attention should be given to candidates high on neuroticism (low emotional stability). Despite previous research either having mixed results or labeling high Neurotics as having poor job performance, the current conceptual model proposes otherwise. It is arguable that highly neurotic salespeople experience eustress, and this motivates them to take training more seriously, for fear of failure.

CONCLUSION

To conclude, the current paper proposes a conceptual framework, whereby personality is mediated by learning orientation to influence sales performance. And that it is debatable that neuroticism may be beneficial for sales training, and this subsequently enhances sales performance.

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BAFE043:
**SELF-LEADERSHIP TRAINING AND PERFORMANCE DURING THE
COVID-19 OUTBREAK: A CONCEPTUAL FRAMEWORK**

Teh, Hong-Leong^a, Ng, Shwu-Shing^b, Lim, Yong-Hooi^c, Chong, Tun-Pin^d, Yip, Yen-San^e, Wong,
Kee-Luen^f

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: tehl@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: nsshing@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: limyh@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chongtp@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: yipys@utar.edu.my

^fFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: wongkl@utar.edu.my

Abstract

With the recent Covid-19 outbreak, uncertainty and change is inevitable for many organizations. Due to this uncertainty and the dynamic nature of organizations, *adaptation* is a fundamental requirement for individuals to thrive in an organization that is rapidly changing. In line with adaptation, self-leadership is the process through which individuals influence and control personal behaviour, cognition and motivation at the workplace. Self-leadership therefore increases an individual's ability to perform complex tasks that require adaptation. Self-leadership literature also proposes that individuals can be trained to practice self-leadership in order to drive performance. The current paper therefore outlines a conceptual framework whereby self-leadership training is posited to increase employee self-leadership behaviors, and this subsequently enhances performance. This is even more crucial during the Covid-19 pandemic when a lot of employees may now be required to Work-from-Home in the absence of a physical leader. As individuals learn how to self-lead and self-regulate, they eventually become more competent in adapting when dealing with unexpected events.

Keywords: Leadership, Self-leadership, Performance, Training.

INTRODUCTION

On 11 March 2020, the World Health Organization (WHO) declared the Coronavirus (Covid-19) a global pandemic. During the Covid-19 pandemic, many companies and industries were negatively affected. Unpredictability and uncertainty is part and parcel of the business environment (Baard, Rench, & Kozlowski, 2014). Other unpredictable events include the presence of a new competitor, changing government regulations, and change in company policies. Employees that experience these changes are subject to increasing amounts of stress (Pulakos et. al., 2002). Interestingly however, according to Pearce and Clair (1998), if an organizational crisis occurs due to any of these factors, employees that engage in *self-regulatory* behaviors can still perform well in the organization. According to Baard et al. (2014) employees that are unable to self-regulate experience poorer performance and lower job satisfaction.

Due to this, it is important for employees to have sufficient self-regulatory behaviors in other to weather the storm when crisis or change occurs. As suggested by Breevaart et al. (2015) an important type of self-regulatory behavior among employees is "*self-leadership*" regulatory behavior. In the absence of a physical leader, employees with "self-leadership" build their own intrinsic motivation, engagement and goal-related behaviors on their own. This is even more crucial during the Covid-19 pandemic when a lot of employees may now be required to Work-from-Home in the absence

of a physical leader. Previous studies also attest to the positive linkage between “self-leadership” behaviors and performance (Lucke & Furtner, 2015).

Despite the possible linkage between “self-leadership” behaviors and performance, not only did Covid-19 come at an unexpected time. The economic ramifications and consequences of Covid-19 were pervasive and long-lasting. Thus, many organizations were not prepared for this, and thus did not adequately train employees to engage in “self-leadership” behaviors. In relation to this, there also appears to be a lack of studies that examine the effect of self-leadership training on self-leadership behaviors, and whether these behaviours improve individual performance. The current paper therefore outlines a conceptual framework whereby self-leadership training is posited to increase employee self-leadership behaviors, and this subsequently enhances adaptive performance. As individuals learn how to self-lead and self-regulate, they eventually become more competent in managing themselves in the absence of a physical leader.

LITERATURE REVIEW

Self-leadership

Self-leadership theory states that individuals can self-regulate and set their own goals and follow up chasing these goals, in the absence of a physical leader. (Manz, 1986). According to Neck and Houghton (2006), these individuals motivate themselves intrinsically and are less dependent on external rewards or circumstances. Individuals high on self-leadership are able to influence and control (I.e. regulate) their own behaviour, cognition, emotions and motivations at work (Neck & Manz, 2010). This is possible via three methods namely by having behaviour-focused strategies, adopting constructive thought pattern strategies and designing natural rewards

Performance

Employees that are able to perform at work in the midst of an organizational crisis are valuable assets to the organization (Jundt et al., 2015). Performance is “an individual level variable of how well an employee performs their job”. Thus, retrospectively, a salesperson scoring high on this variable would by all means create an upper hand for the firm, by giving it a boost in competitive advantage, and thus adding value to the organization as a whole. According to ‘role theory’, a proper Job Performance measurement system is one that accounts for multiple roles played at work. In other words, an employee’s Job Performance can be conceptualized by the extend of how well certain roles are performed. Researchers who posit the usage of roles to conceptualize job performance argue that this form of measurement takes a more comprehensive view of performance, and is central in understanding employee’s behavior (Welbourne, Johnson, & Erez, 1998).

CONCEPTUAL FRAMEWORK

Figure 1: Relationship between personality, learning orientation and job performance.

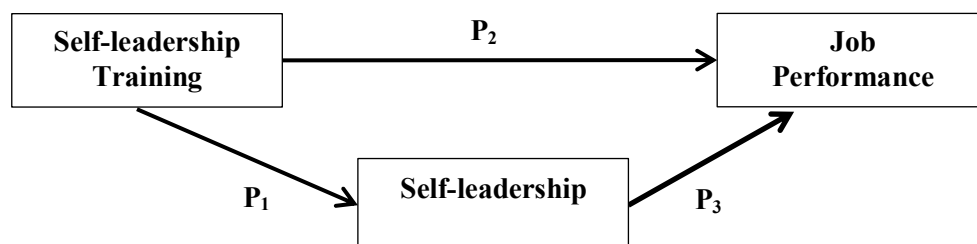


Figure 1 Illustrates the relationships between our constructs. It is proposed that self-leadership training increase self-leadership behaviors, and this subsequently increases adaptive performance.

The link between Self-leadership *training* and Self-leadership (P_1)

According to Houghton et al. (2005), self-leadership training infuses the appropriate self-leadership behaviors in employees. Self-leadership training equips employees with important skills

such as self-direction, higher mental performance, constructive thinking, and goal-oriented behaviors towards intrinsic rewards.

According to Politis (2006), self-leadership training also guides employees how to manage their thought patterns and emotions, and to self-lead when aiming for a goal. Training also helps employees regulate and manage their workflow and to be proactive. More importantly, during the absence of a leader, self-leadership training teaches employees how to manage themselves to adapt when facing obstacles towards a goal (Hauschildt & Konradt, 2012; Lucke & Furtner, 2015). Based on the above literature, we posit that:

Proposition 1: A positive relationship exists between self-leadership training and self-leadership

The link between Self-leadership and Performance (P₂)

Previous literature has found that as employees learn to self-lead, they perform better at work because they adapt and grow in the process (Furtner, Rauthmann, & Sachse, 2015). Employees with self-leadership are more apt in adapting their goals or finding different sources of motivation to achieve a task (Neel & Manz, 2010).

These individuals also develop constructive thought patterns and design effective strategies toward goal achievement. Employees with self-leadership also have a more positive attitude towards their work environments, and this has a positive impact on work performance (Stewart et al., 2011). As employees master self-leadership, they are also more apt in crafting natural reward strategies to drive their behaviors towards work performance. Based on the above literature, we posit that:

Proposition 2: A positive relationship exists between self-leadership and performance

The link between Self-leadership training and Performance (P₃)

Previous literature suggests that self-leadership training has a positive impact on employee's performance at work (Barber, Bailey, & Justice, 2018; Castanheira, & Rego, 2015). Self-leadership training improves performance by increasing awareness of the environment and to have the proper mindset when making decisions (Manz, 1986). Self-leadership training thus helps employees to perform complex tasks in order to perform at work (Stewart et al., 2011). According to Marques-Quinteiro et al. (2015), self-leadership training builds constructive thought patterns and this is positively correlated with work performance. When faced with uncertainty, self-leadership training also helps individuals to engage in mental imagery to simulate alternative strategies to achieve a task. These employees are thus more apt in combining goal setting with mental imagery to simulate pathways towards an organizational goal. Based on the above literature, we posit that:

Proposition 3: A positive relationship exists between self-leadership training and performance

IMPLICATION

The conceptual model in the current paper contributes to self-leadership training-performance literature in two ways. Firstly, our paper *extends* previous work done by examining self-leadership behaviors as a mediating mechanism between the training and performance relationship. Previous studies did not sufficiently examine this mediating mechanism.

Secondly, our paper highlights the importance of self-leadership training as a means to regulate employee behavior, especially in a post Covid-19 scenario, where work-from-home scenarios are common. It is important for employees to have sufficient self-regulatory behaviors in order to weather the storm when crisis or change occurs. In the absence of a physical leader, employees with "self-leadership" build their own intrinsic motivation and engage goal-related behaviors on their own.

CONCLUSION

The current paper therefore outlines a conceptual framework whereby self-leadership training is posited to increase employee self-leadership behaviors, and this subsequently enhances

performance. This is even more crucial during the Covid-19 pandemic when a lot of employees may now be required to Work-from-Home in the absence of a physical leader.

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BAFE045:
**GAMERS' MOTIVATION TO PARTICIPATE IN eSPORTS: THE
TECHNOLOGY ACCEPTANCE MODEL WITH SERVICE
MECHANISMS AND GRATIFICATION**

Loh, How-Zheng^a, Seow, Ai-Na^b, Chang, Jing-Jing^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lohhowzheng@1utar.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: seowan@utar.edu.my

^cFaculty of Information and Communication Technology, Universiti Tunku Abdul Rahman,
Malaysia,
Email: changjj@utar.edu.my

Abstract

eSport refers to a form of sports where electronic system is used to facilitating the players using human-computer interfaces. The purpose of this study is to examine the influence of two external variables (service mechanisms and gratification) using Technology Acceptance Model (TAM) to understand gamers' intention to participate eSports. The target respondent are the students from higher institutions who are joining the video game clubs and societies of universities in Malaysia. A self-administered questionnaire using quantitative method will be applied for data collection. The results obtained from the sample are analyse using Partial Least Square Structural Equation Modelling (PLS-SEM) for the measurement and structural model. It is expected that the findings of this research could provide valuable insights and ideas for the policymakers, management and marketing expertise of eSports, as well as future researchers and other relevant parties.

Keywords: Malaysia, eSports, competitive video game, video gamers, gratification, service mechanisms, Technology Acceptance Model (TAM)

INTRODUCTION

eSports sector started to experience a tremendous growth in the early 2000s and become a popular leisure activity in the world (Bányai, Griffiths, Király, & Demetrovics, 2019). The term eSports or electronic sports, is a professional competitive video gaming, where gamers compete with each other for the purpose of winning the game. It involves experienced organisers who invested in the competition and trained professional gamers or teams who account for prize money and salaries. Based on the Global Games Market reports by Newzoo, all game segments show an attractive result. The engagement and revenue of gaming industry have recorded 145.7 billion dollars to 159.3 billion dollars from year 2019 to year 2020. It is forecast that the revenues will continue to grow to 200.8 billion dollars in year 2023. The growth of eSports industry has also increased the recognition of eSports as a form of traditional sports. eSports teams are usually managed and covered by sports management such as ESPN, Turner Sports, and Philadelphia 76ers (Pizzo et al., 2018). Due to the popularity of competitive video gaming, it cannot be considered as merely a recreational activity. There are people playing the game professionally and spend time to improve their gaming skills (Bányai et al., 2019). Hence, eSports is under the consideration of the Olympic Council of Asia as a medal event in the formal sports event of 2022 Asian Games in China (Bányai, Griffith, Demetrovics, & Király, 2019).

The existence of eSports in the academy industry has created a new form of eSports trend in college and university. For instance, the National Association of Collegiate Esports (NACE) was set up by a non-profit membership association that was managed by colleges or universities in United States. This organization is formed to establish the official varsity competitive video gaming activities on campus. The main goal of 'NACE' is to instill collegiate-level eSports and provide a good opportunity of scholarship for the potential professional eSports gamers (GameDesigning, 2020). As

of year 2019, there are 126 colleges and universities have joined the NACE (GameDesigning, 2020). Recently, the newly emerging sector of competitive gaming has raised the scientific interest of academicians. Several studies have conducted regarding the consumption motivation and spectatorship (Hamari & Sjöblom, 2017; Jang & Byon, 2019; Neus, Nimmermann, Wagner, & Schramm-Klein, 2019; Pizzo et al., 2018; Sjöblom, Macey, & Hamari, 2019). Like media and information technology adoption research, the study on user intention is commonly interested in what, why and how people be motivated to use certain media and information technology. Professional gamers and game caster put a lot of effort in attracting the spectators and provide them a great watching experience. People are now spending more time to watch eSports through online. Besides, some gamers have started live stream their games for entertainment purposes and show some game tips in playing the game. Given these points, the questions about what makes gamers interested in participating eSports is worth to study.

Nevertheless, there are challenges facing by the current eSports scene. eSports games required internet connectivity to play online. The mechanisms relating the gamers' privacy issues and slow internet speed in Malaysia have created the obstacles to the development of eSports sectors (InMyArea, 2019; Shin & Shin, 2011). Further, gamers play the video games for the purpose of winning the competition as well as to fulfill their gratification needs. As such, the unhealthy gaming habits has led to the negativity of people perception about eSports as not beneficial as traditional sports (Xiung, 2018). The current studies related to the factors that affect gamers intention in theoretical perspectives is limited. With the identified problem statement, the main research objective of this study is to examine the factors that affect intention to participate in eSports.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) which introduced by Davis (1989) is used to predict and explain technology adoption of an individual. Over the past decade, TAM has gained numerous attention of scholars in the field of information technology and system. This theoretical model is an adaptation of Theory of Reasoned Action (TRA). The basic concept of TRA is about the attitude of an individual will be affected by belief which is the subjective probability of consequences for a particular behaviour of an individual, and eventually forms behavioural intention. According to TAM, it explains the intention of an individual by addressing the main factors of TAM which are perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her performance" (Davis, 1989) while perceived ease of use is defined as "the degree to which using the technology will be free of effort" (Davis, 1989). Both perceived usefulness and perceived ease of use affect the intention of an individual towards the adoption of technology. The intention to use is defined as "the degree to which a person has formulated conscious plans to perform or not perform some specified future behaviour" (Warshaw & Davis, 1985).

Both perceived usefulness and perceived ease of use are subjected to the effects of external variables. For instance, according to the study of Rafique, Almagrabi, Shamim, Anwar, and Bashir (2020), they employed TAM to predict the acceptance of mobile library application. Habit and system quality have been proposed as external variables for their study. The results of their study indicated that both external variables were significantly affecting the perceived usefulness and perceived ease of use of mobile library applications. As a result, a good internet usage experience and services provided by web-based service provider served as the important factors towards the acceptance of technology. Moreover, in gaming perspective, Park, Baek, Ohm, and Chang (2014) proposed perceived control and skill and perceived mobility as the external variables in their research model to predict the intention to use the games. The integrated model of their study showed a good variance in explaining the intention to use. Further, TAM is found to be more favourable and parsimonious capable in explaining information technology (IT) adoption behaviour and intention (Samaradiwakara & Gunawardena, 2014). Besides, as compared to Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB), TAM is considered as the modest theoretical model. This is because it provides a more efficient way in determining the general behaviour of an individual towards technology adoption. For instance, Rahman, Lesch, Horrey, and Strawderman (2017) stated that the TAM was found to be more predictive and significantly more variance in behavioural intention than

other models. In this study, TAM is applied to determine the gamers' intention for participating in eSports. Therefore, the following hypotheses are proposed in the context of eSports participation:

H1: There is a positive relationship between perceived usefulness and intention towards eSports.

H2: There is a positive relationship between perceived ease of use and intention towards eSports

External Variables

Additionally, in order to increase the acceptance of eSports tournaments, enjoyment and usefulness of game contents served as important factors in all entertainment services and systems (Park et al., 2014). In addition, the technological or computerized hardware and software are also recognized as critical elements towards the acceptance of new media and technology (Jang & Byon, 2019). Therefore, in this study, service mechanisms and gratification are added as the external variables in TAM, and assume to affect gamers' participation intention in eSports.

Service Mechanisms

Service mechanisms referred to "the services that provided by game service provider to protect the gamers' accounts and maintain rules adherent in order to ensure better gaming experience"(Tseng & Teng, 2011). From the perspective of information technology, technology access and quality serve as important components that influence the level of satisfaction and behaviour of an individual (Rita, Oliveira, & Farisa, 2019; Shahid Iqbal, Hassan, & Habibah, 2018). In term of technology usage, individual acceptance of media and technology are significantly linked to the conditions and situation of that technology. For instance, the internet connectivity and speed as well as the availability of digital devices (Kim, Chang, Chong, & Park, 2019).

Besides that, service mechanisms served as the media should not be treated as a mere technical channel, but it should be considered as a method that includes policies, media users, resources, games rules, security commitment, and incentives (Wu, Wang, & Tsai, 2010). It is also considered as an important item that includes incentive, security, and fairness which is assumed to enhance the issues of network connection, customer service, security and fairness (Wu, Wang, & Tsai, 2010). Incentive is referred to "the motivational tool that used for increases the interest and engagement of a gamer as well as to retain their usage repeatably" (Reiners & Wood, 2015). Security is referred to "the perception of a gamer towards the security of the games, such as the essential personal information, integrity, application, software availability that needed the protection of security services from the game developer" (Chang & Chen, 2009). Lastly, the term fairness is referred to "the perceived quality that occurs through a stage of social judgement associated with what is rightful in a given circumstances" (Kelly, Watts, & Payne, 2016).

Due to the significant role of technological-based mechanisms, it has attracted numerous researchers to study individual behaviour towards media and technology usage. For instance, based on the study of Jun, Jiao, & Lin (2020), they assert that the usefulness of game mechanisms and game thinking which provided by service provider is able to assist the gamers in solving problems, self-contribution and improve their sense of immersion as well as subjective acceptance. As a result, the gamer will be motivated to play virtual corporate social responsibility (CSR) game. Their study also indicated that game reward mechanisms served as the most important factor in increasing the intention of a gamer to participate in virtual CSR games. Besides that, according to the study of Liu and Tang (2018), the development of online mechanisms of e-shopping is able to minimize risk and uncertainty, easy to understand and control, security and privacy protection, as well as to improve the value of both the seller and the buyer. From the findings of past studies, it can be predicted that when gamer perceived the usefulness of the video game and required less effort to develop a better understanding, the intention of gamers to participate in eSports will increase. Accordingly, the following hypotheses are proposed:

H3: There is a positive relationship between service mechanisms and perceived usefulness.

H4: There is a positive relationship between service mechanisms and perceived ease of use.

Gratification

Gratification is referred to “the fulfilment of a need through an activity such as media use” (Chiu & Huang, 2015). The study on sports consumption is similar to media-related research which mainly emphasised on the motivations of why people use it, how they use it, and what types of needs a particular kind of media might gratify. In the context of eSports, the actions of players are displayed in computer-mediated systems. Thus, the aspect of eSports has made sports as an interesting topic of media and communication research. The gratification approach is suitable in explaining the impact of gratification on users’ intention to adopt particular media or technology (Kim, Lee, & Preis, 2020). In this research, gratification is defined as the need derives from participating in eSports, such as the needs for enjoyment and social. Based on the study of Wu et al. (2010), they categorized three types of gamer motivations, which include enjoyment, social interaction and presence. The accessibility and availability of technology are recognized for the connection between the media structure and personal user. However, the intention and gratification are regarded as indications of technology use about the reciprocal interaction between persons (Wu et al., 2010).

Like other media and technology, the concept of gratification is suitable in explaining the behaviour and intention of gamers towards eSports participation, in which the gamers are able to play the same game to fulfill their needs and motives. Based on the previous studies, for instance, Magsamen-Conrad, Dowd, Abuljadail, Alsulaiman, and Shareefi (2015) asserted that the customers perceived the usefulness of mobile devices when it helps the customers in information searching, relationship building, style, spending time as well as playful. Furthermore, Huang (2008) supported the significant relationship between entertainment gratification and perceived usefulness and ease of use in explaining the acceptance of B2C websites among consumers. While employing the concept of gratification in this study, it is predicted that when gamers gratified their needs for enjoyment and social from video gaming, the gamers will tend to ignore the difficulty associated with eSports and simply enjoy the process itself. Therefore, it can be assumed that gratification is significantly affected by both the perceived usefulness and ease of use of video game and shape the intention towards eSports participation. Hence, the following hypotheses are proposed:

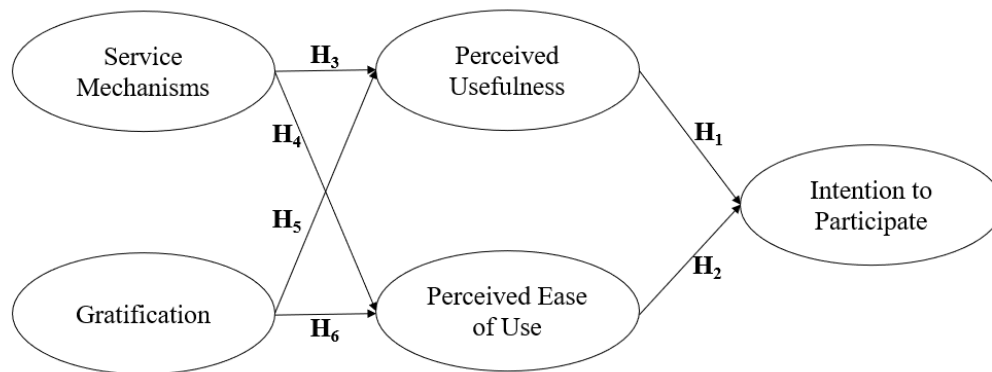
H5: There is a positive relationship between gratification and perceived usefulness.

H6: There is a positive relationship between gratification and perceived ease of use.

PROPOSED CONCEPTUAL FRAMEWORK

Based on the discussion of literature review, a proposed conceptual framework is formed corresponding to the notion of TAM as well as two critical external antecedents which are service mechanisms and gratification. Figure 1 shows the conceptual framework of this study. The framework indicates that the intention of a gamer is affected by both the main beliefs of TAM which are perceived usefulness and ease of use. Additionally, these beliefs are subjected to the external factors based on current situation including service mechanisms and gratification.

Figure 1: Proposed Conceptual Framework of Study



RESEARCH METHODOLOGY

Quantitative method that applies a descriptive research design is employed to validated the relationship and significance between variables with statistical information. For the measurement of gamers' intention to participate eSports tournament, Technology Acceptance Model (TAM) together with two critical external variables were chosen as the measurement instruments. Each scale was measured with a five-point Likert scale from 'Strongly Disagree' to 'Strongly Agree'. The items on service mechanisms and gratification are adapted from Wu et al. (2010). While the items of perceived usefulness and perceived ease of use as well as the intention to participate are adopted from Davis (1989), Hsu and Lu (2004), and Chen et al. (2017). Besides, cross-sectional research method is used to observe and obtain information on certain phenomenon at a single point of time. For data collection methods, as this study is to examine the perception and behaviour of the gamers, primary data collection method will be employed as it is able to obtain specific information for the purpose of verifying the hypotheses development. The target population is the university or college students who are expose to video games activity. This population is targeted because a large portion of eSports enthusiasts are university or college students. A simple random sampling method will be used to select the respondents. Online survey through google form will be conducted to collect the data from respondents. In addition, Partial Least Square – Structural Equation Modelling (PLS-SEM) will be used to analyse the collected data and to access on measurement and structural model.

EXPECTED OUTCOMES

It is expected that the findings could provide useful knowledge and information for the policymakers and other relevant parties who have a close relationship in eSports industry, so that they can understand what is the current gamer preferences and consider appropriate rules and regulations in order to fulfill their desires. Besides that, the results of this study could provide guidelines and knowledge for future scholars to conduct researches related to competitive video gaming. Furthermore, the sport marketing and management would gain reliable and relevant knowledge in strengthening current immature eSports in a more professional way. In addition, the findings could provide useful knowledge and information for the media businesses, game producers and gaming companies, so that they can understand which factors are able to motivate the gamers to participate in eSports.

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BAFE048:
FACTORS INFLUENCING HIGHER EDUCATION STUDENTS'
BEHAVIOURAL INTENTION FOR ONLINE LEARNING IN
MALAYSIAN PRIVATE UNIVERSITIES

Lim, Mei-King^a, Seow, Ai-Na^b, Lam, Siew-Yong^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: limmk5@utar.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: seowan@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lamsy@utar.edu.my

Abstract

Industrial Revolution 4.0 has led on to the much-anticipated technological innovation in the education sector. Due to the Covid-19 pandemic, online learning in Malaysia is now required by the government for all HEIs in Malaysia. As such, web-based technologies are growing rapidly and has been given a push and reality check. Nevertheless, students' perception on online learning remains ambivalent, for instance, some may still perceive that online learning is inferior compared to classroom in-situ learning. The limitations can be caused by the lack of social presence, lack of social interaction, and lack of student motivation. The purpose of this study is to investigate the factors influencing higher education students' behavioural intention for online learning in Malaysia. A conceptual framework is proposed using the extended model of Theory of Planned Behaviour (TPB). A total of 500 questionnaires will be distributed to private HEIs students for data collection. Reliability analysis will be used to assess the suitability of the variable dimensions. The partial least square approach will be used to examine the relationships among the variables with structural equation modelling analysis. The results of the study can help the policymakers, institutions and stakeholders to further understand how to positively influence students' behavioural intention for online learning.

Keywords: Online Learning, Behavioural Intention, Higher Education Institutions, Theory of Planned Behaviour

INTRODUCTION

Industrial Revolution (IR4.0) allows the connectivity of the internet across the world into technological breakthrough. With the ability of such connectivity, higher education institutions (HEIs) are able to leverage technology advancement by providing online learning courses regardless of physical distance (Brahmasrene & Lee, 2012). In 2018, the then Minister of Higher Education Datuk Seri Idris Jusoh instructed public universities in Malaysia to comply to at least two subjects to be completed via Massive Open Online Courses (MOOCs) (Sani, 2018). Hence, the moves have jumpstarted the era of online learning among Malaysian universities (Sani, 2018). Online learning refers to learning facilitated wholly by the use of digital tools (Fullan, Quinn, Drummy & Gardner, 2020). Many tertiary institutions in Malaysia have in the past few years set up portals and used various online learning platforms to offer a learning environment electronically. The portals have been set up for two reasons – as teaching aid to support traditional teaching approach and as a teaching medium for distance learning or off-campus programmes (Khalid, Yusof, Heng, & Yunus, 2006). Mohammad, Mamat and Isa (2012) found out that majority Malaysian public universities were already well-equipped with their own learning management systems (LMS) in 2011.

Amaro & Fitzgerald (2013) found that while perceptions of online degrees have slowly changed for the better, there are still negative perceptions among hiring managers in education institutions. Online courses were perceived as not providing students with sufficient opportunities to develop important social skills from interacting with educators and other students. Due to the instance, students found constant engagement in class a challenge. Interaction and discussion have always

been face-to-face, but learning virtually has eliminated the need for students and lecturers to meet in person. Students who do not have access to libraries and internet facility at home may find it difficult to cope. Students from low-income family and first-generation sitting for first degrees are at the most risk. Some do not have access to computers or have to share and they demanded fees to be lessened due to their perception that online learning does not provide the same value as face to face learning. As such, these most vulnerable students could increase dropout rate (Gurley & Gordon, 2020).

In addition, challenges are met when students' parents think fully-online learning is not a good substitute for face to face university classes (Jaschik, 2020). Friends and family of the students may or may not agree to online learning, citing inferior quality compared to face-to-face learning. Doubts and fear may grow regarding their own ability to learn online. Additional expenses would have to be incurred by students on getting data for internet connectivity or a computer hardware upgrade due to increased computer usage. Further, students reported a higher level of anxiety, anger and boredom when online learning. A lower level of enjoyment was also reported. Some felt lonely because of isolation from peers (Stephan, Markus, & Gläser-Zikuda, 2019). Students found difficulties following schedule and studying regularly as distraction may unwantedly occur at home. While some may take more time to adjust themselves to not having friends sitting down and working together on tasks, others reported to feel sad due to the lack of socialising opportunity with peers (Sun, 2014). The dropout rate for online courses was found to be significantly higher than traditional classes (Hart, Friedmann, & Hill, 2018). Getting discouraged by their lack of discipline and inability to catch up with lessons would eventually cause many to give up online learning.

Recently, the Covid-19 pandemic has caused disruption to university students' studies around the world. Although web-based technologies have seemingly provided solutions to the HEIs during the pandemic. However, it is unsure that online learning would provide a favourable outcome, so as to be continued in the universities after the pandemic is over. The challenges of online learning have to be overcome to ensure continuous benefits to the university students. Hence, it is important for the researchers to identify factors influencing students to continue online learning in Malaysian HEIs. Identifying the appropriate digital learning approaches is important after having given students the full technology-supported learning during the Movement Control Order (Rajaendram, 2020). By incorporating the use of technological advancements into learning and teaching, Malaysian HEIs could remain relevant and competitive in the education field (Halili, 2019; Sani, 2018). The purpose of this study is to investigate the factors influencing HEIs students' intention for online learning.

LITERATURE REVIEW

Theoretical Background

Psychologist have been trying to predict human behaviour with theories. Among the famous theories developed to understand human behaviour are Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB). TRA is a general theory suggesting the actual behaviour of an individual is affected by their intention. Fishbein and Ajzen (1975) argued that attitude of the person and opinions of the friends and family around the person have strong relationships with the person's intention to perform the behaviour, provided the behaviour is volitional. TRA mentioned behavioural implications are considered before taking any action, thus the name-reasoned action. Martin Fishbein and Icek Ajzen in the 1970s argued that behaviour may not be voluntary at all times. They thus developed TPB, with the aim of increasing predictability on human behaviour (Zhang, 2018) which included external factors that are out of the person's control.

Past studies regarding online learning have included testing user acceptance of computer technology (Davis, Bagozzi & Warshaw, 1989) and perceptions of online courses experience (Dobbs, Waid & del Carmen, 2009). Bolliger and Halupa (2018) investigated the relationships between student engagement perceptions, transactional distance and learning outcomes, while Dumford and Miller (2018) discussed online learning engagement in higher education. Majority online learning related studies were done using TAM (Rodriguez & Lozano, 2011; Tarhini, Hone & Liu, 2014; Teo & Noyes, 2011). In the study of Ndubisi (2004), it was stated that one of the most systematic methods to study students' learning adoption is TPB model. Robinson and Doverspike (2006) did an experiment using TPB variables, to predict students' choice of online course against traditional course. From the literature, past studies on using TPB, specifically on online learning behavioural intention is limited.

TPB states that attitude, subjective norms, and perceived behavioural control (PBC), together shape an individual's behavioural intentions and behaviours.

Attitude, Subjective Norm and Perceived Behavioural Control

Attitude refers to a learner's positive/favourable or negative/unfavourable perception of online learning behaviour (Ajzen & Fishbein, 2000). Picciano (2017) in his study argued that attitudes could influence a person's preferred learning environment via personality types. Subjective norm (SN) is defined as the social pressure cast on the individual whether to perform a certain behaviour (Fishbein & Ajzen, 1975). It means a learner's opinions of whether their social circle (eg. close family members and friends) finds online learning behaviour acceptable or unacceptable. Subjective norms have been discovered to be important in the early stages of innovation implementation when users are still inexperienced from developing an attitude towards online learning (Ndubisi, 2004; Taylor & Todd, 1995). Perceived behavioural control (PBC) is defined as the perception of how easy or difficult it is to perform an action. PBC strongly links to the self-efficacy concept in TRA (Ajzen, 1988). It was introduced to predict in situations that has less control over (Forward, 2009). PBC is hypothesised to be a positive direct influence of both intention and behaviour. However, the direct relationship from PBC to behaviour is at times, unnecessary. The direct link from PBC to behaviour does not exist when the behaviour is new to the subjects (Ajzen & Madden, 1986).

Emotion

The original TPB conceptualised by Ajzen does not take emotions into consideration. Ajzen argued that emotion can be accounted for in the model if and only if it influences the underlying beliefs that determine the Attitude towards the Act and Subjective Norms (Ajzen, 1988). The subjectivity of emotional description in written form also brings difficulty for precise identification and labelling on different types of emotions (Cleveland-Innes & Campbell, 2012). Moreover, according to Bagozzi, Dholakia & Mookerjee (2006), although TPB may be useful for prediction, it cannot predict emotion-driven behaviour. Armitage & Conner (2001) argued that mood and emotion were found to have effects on behaviour intention or actual behaviour. Their study found out that participants' attitude was closely related to intention when in a negative emotional state and subjective norm was closely related to intention when in a positive emotional state (Armitage & Conner, 2001).

Emotion means strong feelings. Hope, frustration, contentment, happiness, excitement, anger and anxiety are some of the emotions that tertiary students have when trying to learn online. Feelings of learners—their emotions can impact learning in online and blended environments, specifically motivation, self-regulation and academic achievement (Rienties & Rivers, 2014). According to Schröder, Stewart and Thagard (2014), humans consistently do evaluations on a particular situation with the emotion system of the brain, believing these evaluations to be an essential building block of intentions. The feelings which mean emotions of the learners can impact learning in online and blended environments, particularly motivation, self-regulation and academic achievement (Rienties & Rivers, 2014). Hence, emotion could be one of the factors influencing online learning intention.

Behavioural Intention

Behavioural intentions are commands that one gives to themselves for certain behaviours. A meta-analysis of meta-analyses was done by Sheeran (2002) on how well an intention could determine a behaviour (Triandis, 1979). It was found that if the behaviour is an action per se, for example playing a recorded lecture, then intentions are likely to predict the behaviour. If the behaviour is a goal which can only be achieved by doing several single actions, then intentions are not good predictors for the behaviour, for example graduating with an online degree. This is because graduating with an online degree requires a series of actions—attending lectures, completing assignments and sitting for examinations.

Hypotheses Development

Attitude and Online Learning Intention

Attitude has given great impact on online learning intention as when the attitude of the student has positive beliefs towards online learning, their perception towards online learning is positive,

leading to greater online learning intention (Chu & Chen, 2016; Yang & Su, 2017). It was found in the survey of 272 animation students in Taiwan that attitude had a strong influence on students' behavioural intention when learning on MOOCs platform, specifically in practice-oriented courses (Yang & Su, 2017). Carswell & Venkatesh (2002) used TPB and found out that attitude has a significant influence on the acceptance outcomes of involvement and engagement in distance education environment. In a study investigating 177 United States college students' online learning, attitude was discovered to have positive influence on their intention (Cheon, Lee, Crooks & Song, 2012).

A study done by Ndubisi (2004) had used Theory of Planned Behaviour (TPB) to explain that attitude influences directly on the intention of adopting online learning. In other words, a positive attitude towards online learning would significantly influence online learning behaviour and the positive correlation is also shown in Chiu, Hsu, Sun, Lin & Sun (2005). Likewise, a study by Yeou (2016) in a Moroccan university also concluded that attitude of students towards online learning systems has very strong and significant influence over online learning platform usage behavioural intention. Thus, this study will test the relationship between attitude and online learning intention using the hypothesis below.

H1: There is a positive relationship between attitude and online learning intention.

Subjective Norm and Online Learning Intention

The relationship between subjective norm and online learning intention had been investigated in the past studies (Cheung & Vogel, 2013, Chu & Chen, 2016). Subjective norm has been found out to be a significant determinant on online learning behavioural intention in Lebanon, especially for less experienced female learners who received less education (Tarhini et al., 2014). Subjective norm was discovered to have positive influence on the 177 students' online learning intention (Cheon et al., 2012). A research by Yang & Su (2017) showed subjective norm has a direct and positive influence on the students' behavioural intention to learn online. However, Cheung & Vogel (2013) made a study on 136 full-time degree students that were learning online and discovered that subjective norm was represented by instructors and the mass media, but did not show a significant effect on the students' online learning intention.

A study on Swedish traffic offenders discovered that subjective norm was found to be not significant in a study regarding drivers' intention to violate traffic rules (Forward, 2009). Some employers prefer students from traditional classroom learning to those who obtain degrees via online learning (Adams, Lee & Cortese, 2012). Marson, Pittman-Munke & Stanton (2016) found out that social service agency directors are heavily suspicious towards online education for potential social workers candidates. Nevertheless, subjective norm by peer influence was found to have a positive relationship with behavioural intention (Cheung & Vogel, 2013). Therefore, it is hypothesised that:

H2: There is a positive relationship between subjective norm and online learning intention.

Perceived Behavioural Control and Online Learning Intention

A study done by Abbad, Morris and de Nahlik (2009) in Jordan found that heavy internet-user students are more likely to use online learning systems. There were 177 United States college students' Perceived behavioural control (PBC) was discovered to have a positive influence on their online learning intention (Cheon et al., 2012). Adams et al. (2012) found that job applications with coursework taken in a traditional-classroom learning setting were overwhelmingly preferred over applicants with a degree earned partly or wholly online. Chu & Chen (2016) and Yang & Su (2017) suggested that PBC has a direct and positive influence on the students' behavioural intention to learn online. Eagley and Chaiken (1993) argued that a positive relationship between PBC and intention may only be expected for positively evaluated behaviours. A survey of 237 respondents from Ghanaian educational institutions found out that PBC has the biggest influence towards an individual's behavioural intention for online learning (Budu, Mu and Mireku, 2018).

In the context of this study, students who have confidence in their capability to wrap their heads around particular online learning systems without any help, are also more likely to become the users of the system. Further, students also believed that the easier it was to use, the more useful the

online learning systems would be. It is believed that students who preferred to take an online course in the future also expressed greater confidence in their ability to learn online (Artino, 2010). Hence, a hypothesis is developed in this study as stated below.

H3: There is a positive relationship between perceived behavioural control and online learning intention.

Emotion and Online Learning Intention

Researchers have found that emotions do play a role in the online learning experience (Cleveland-Innes & Campbell, 2005; Zembylas, Theodorou & Paylakis, 2008). Artino (2010) found out in his research of 564 undergraduates who have taken an online course that emotions, especially achievement emotions, are good predictors of students' future choice, in other words, their intentional behaviour. Artino (2010) found that emotions which are achievement related, namely boredom, frustration and enjoyment, could predict students' online learning intention in the future. You & Kang (2014) stated in their study involving 426 online courses-registered Korean college students that enjoyment had a significant and direct relationship with online learning while boredom and anxiety also showed significant moderating effects between perceived academic control and online learning.

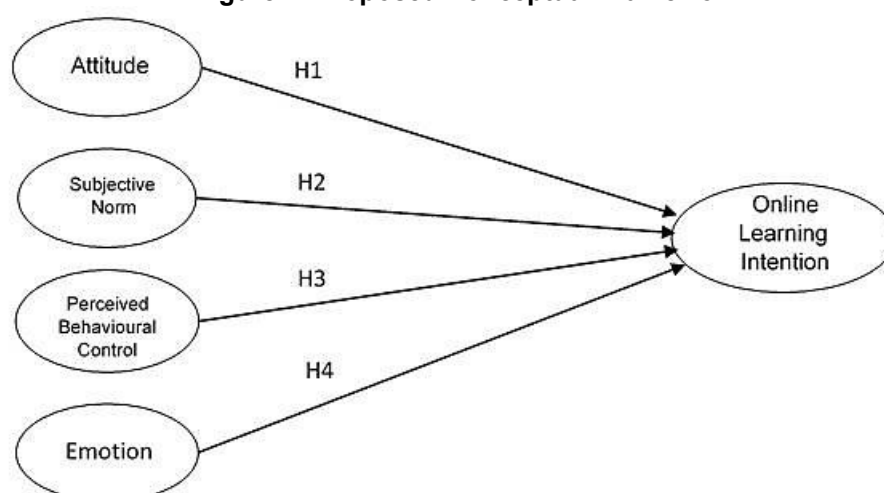
Emotional support should be given and the students' emotional state monitored especially if learning is done via online (Chelms, 2020). Payne, Jones & Harris (2002) also found out that stress could weaken the relationship between intention and behaviour. Similarly, emotional well-being of a learner has been identified as one of the barriers of online learning (Fullan et al., 2020). Picciano (2017) argued that learning is not only about the content, but also supporting students emotionally. Emotions are being recognised as an important component of student learning (Linnenbrink-Garcia & Pekrun, 2011). This is because it has been related to important learning behavioural, motivational and achievement outcomes, it is highly suspected that emotions will highly influence online learning intention (Artino, 2012). Hence, the hypothesis below is developed in this study.

H4: There is a positive relationship between emotion and online learning intention.

CONCEPTUAL FRAMEWORK

All of the main predictor variables (Attitude, Subjective Norm and Perceived Behavioural Control) from TPB with the additional construct of Emotion will be tested in predicting students' online learning intention. The theoretical framework for this research is presented in Figure 1 below:

Figure 1: Proposed Conceptual Framework



RESEARCH METHODOLOGY

This study will adopt a cross-sectional quantitative research design to examine the relationships as stated in the hypotheses development. Survey questionnaire is developed to collect data from selected respondents who are private HEIs students in Malaysia. Judgmental sampling

technique will be used to select samples based on the university ranking and the number of student enrolment, determining selected universities. A total of 500 questionnaires will be prepared for distribution to private HEIs students who will be approached randomly at different hours of the day. The minimum sample size required is 384 (Krejcie & Morgan, 1970). In 2019, there were 357,081 HEIs students in Malaysia (Statistik Pendidikan Tinggi, 2019). Hence, the targeted response to complete the questionnaires is sufficient.

Questionnaires will be distributed via face to face and online survey platforms. The survey will be conducted in selected private universities in Malaysia who have used online learning platforms in the past. An explanation regarding the purpose of the survey will be given to every respondent and only voluntary participation is solicited. The returned questionnaire will be checked to ensure all the survey questionnaires are complete. The measurement items for the questionnaires are mainly adapted from Chu and Chen (2016) and Pekrun, Goetz, Frenzel, Barchfeld, and Perry (2011). Partial least square structural equations modelling (PLS-SEM) will be used to measure the reliability and model validity. Prior to the actual survey, the questionnaires will be given to online learning experts and students for pilot study.

EXPECTED OUTCOME AND CONTRIBUTIONS

The use of Theory of Planned Behaviour in this research can provide more insights into online learning intention. The finding will benefit higher education institutions by understanding students' behaviour towards online learning, especially the faculty staff and the department concerning student enrolment. This study will provide an understanding on whether friends and family are important to the students could influence the students' intention to continue online learning. The university would be able to gauge if students have the capability for online learning. The findings will serve as a guideline to focus on the relevant factors influencing students' behavioural intention for online learning. HEIs could utilise the factors to facilitate the students effectively and increase their standard. This research will serve as a win-win for students to know more about how they stay motivated and also to educational institutions on how to provide the best kind of online learning experience to attract more students with better programmes. This study could be used to supplement extra reading for the future trend in online learning. Data presented in the study can be used as reference for academic institution or researchers for other related studies.

In addition, policy-makers could make use of this research to improve the HEIs quality to ensure the overall reputation for Malaysian HEIs is maintained. Through this study, they would gain insights into online learning system and identify the underprivileged groups who are in need. The findings of this study will contribute to the Malaysian economy, especially for HEIs by attracting more foreign students to enrol in Malaysian universities online degree programmes and boost its reputation as an international education hub, in line with the country's nation to be the world's education hub in 20 years (Menon, 2020).

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BAFE050:
**DIVERSITY WITHIN BOARD COMPOSITION: A CORPORATE
GOVERNANCE PERSPECTIVE**

Thiam-Yong, Kuek^a, I-Chi, Chen^b, Yuen-Onn, Choong^c, Saw-Chin, Khor^d, Bobby Boon-Hui,
Chai^e, Timothy Tzen-Vun, Yap^f

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: kuekty@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chenich@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: choongyo@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: sckhor@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chuabh@utar.edu.my

^fFaculty of Computing and Informatics, Multimedia University, Malaysia,
Email: timothy@mmu.edu.my

Abstract

This article attempts to review the importance of board diversity within board composition from the corporate governance perspective. Most of the available literatures tend to focus on demographic diversities, particularly on gender when researching about board diversity. However, there are other types of diversity that are important in diversity such as social capital and human capital. Hence, three types of diversity were reviewed here, which are board gender diversity, board social capital diversity and board human capital diversity. A quick glimpse on how Malaysia is approaching the board diversity can also be found in the discussion of this article. In general, all the three types of diversities contribute positively to companies, especially in terms of the performance. However, there is a lack of board human capital diversity literature available from empirical view and as such empirical research need to be conducted more to enrich its literature.

Keywords: Board Composition, Diversity and Corporate Governance

INTRODUCTION

Board composition remains a core component in corporate governance as past research have shown that with the right composition in the company it can bring wonders to the company such as in the company financial performance (Mahadeo, Soobaroyen & Hanuman, 2012), corporate social responsibility (Rao & Tilt, 2016) and innovation (Sharma, 2016). While past empirical studies conducted by the likes of Matthew (2013), Wetukha (2013) and Rahman & Saima (2018) tend to explore more on the conventional dimensions of board composition such as size, independence of directors and CEO duality, there is a need to expand the horizon to look at the possibility of other dimensions that might be influential within board composition. And one of such possible dimensions is diversity (Ferreira, 2010; Ooi, Hooy & Som, 2015; Pechersky, 2016). In the management literatures, there has been contradiction of results on the effect of diversity in the top or senior management of companies. For example, Homberg and Bui (2013) did not find any effect to the corporate performance while Nielsen and Nielsen (2013) found it otherwise. However, one should take note that senior or top management and board members are two separate entities as the roles and functions that they played are definitely different (Knockaert, Bjornali and Erikson, 2015). Hence, in this article, the focus will be on the board members. According to Rao and Tilt (2016), diversity in this context refers to the board members that possess different traits and characteristics such as in terms of gender, age, cultural and etc. However, not all such characteristics or dimensions have similar importance as pointed out by the authors. Perhaps one of the more prominent diversity that has caught the attention of researchers in recent years is demographic aspect (Liao, Luo & Tang, 2015), e.g. gender diversity. However, one of the drawbacks in this aspect is where researchers might not

explore or lack the focus in exploring other dimensions of board diversity that might have a similar potent effect as gender. This was pointed out by Johnson, Schnatterly and Hill (2013) in their research where human and social capitals, such as industry experience and personal relationships & affiliations, too act as an important determinant in diversity that significantly influence the organization in some manners.

In this article, we will look at how diversity influence corporate governance by examining some of the dimensions that are deemed to play an important role in it. Finally, under discussion, we will have a quick look at Malaysia stand in terms of board diversity.

LITERATURE REVIEW

Board Gender Diversity in Corporate Governance

The demand for improvements to corporate board composition is global and is motivated by the publication of corporate rankings on diversity, media coverage, stakeholder calls, improvements in laws or regulations and the implementation of good corporate governance practices. The global response is either oppressive, encouraging, or laissez-faire (Labelle, Francoeur & Lakhali 2014). The mandatory quotas on female participation in corporate boards, known as feminization legislation, are being implemented by certain European countries (De Beaufort and Summers, 2013). Women are capable of making more informed decision-making and of giving boards contrasting opportunities than all men (Rose, 2007). As the number of females in boards increases, the impact of females on the decision-making process is increased (Elstad & Ladegard 2010). The moral impact on human beings is the product of this (Nekhili & Gafoui, 2013). The gaps in the ethics of decision-making between men and women are discussed in a series of literature. The female marketing professionals have a higher ethics study assessment relative to their male counterparts (Akaah 1989). Bernardi, Bosco and Columb's (2009) results indicate that a higher percentage of women on the board is related to being listed as one of the 'Most Ethical Organizations in the world' if the businesses are Fortune 500. Research findings conducted by Ben-Amar, Chang and McIlkenny (2017) indicate that gender diversity increases the performance of the board and encourages the implementation of sustainability programmes in stakeholder management. Their findings show the positive influence of board diversity on corporate social responsibility activities (Zhang, Zhu & Ding, 2013) and on the consistency of financial reporting (Gul, Srinidhi & Ng, 2011). Literature suggests that there is a link between corporate governance, in particular, gender diversity and corporate success on the board (Fan, 2011). However, Wagana and Nzulwa (2016) stated that while there is a clear record of the diversity of board members on the financial performance, the fact that few studies have been carried out to investigate whether this involves non-financial performance measures. It is well known and argued in the literature. In addition, research on gender diversity have been carried out primarily in developed countries, which differ from developing countries, such as Malaysia, in terms of economic and socio-cultural structure. Meanwhile, Kim and Starks (2016) showed that gender diversity increases company worth where female directors bring additional experience to the boards and contributing to improved consultancy performance. They also demonstrated that women diversify the experience of boards more than their men do and offer their company boards specific skills. These results show that women directors can increase the efficacy of advisory boards by putting different skills together. Therefore, a gender-divergent board has the potential to increase the valuation of the company, in conjunction with the findings by Kim and Starks (2015) that greater director heterogeneity and experience is correlated with greater company value. However, the question on the proportion in having male and female directors on board in ensuring the board effectiveness remain unclear till this day.

Board Social Capital Diversity in Corporate Governance

According to Booth-Bell (2018), another significant dimension in board diversity is social capital which is given to the board by virtue of the directors. Social capital is the idea that membership in a group will help the individual and the society. Adler and Kwon (2002) clarified that social capital is driven by a central intuition of goodwill, such as the friends and acquaintances' kindness, confidence and forgiveness. Lin, Vaughn and Ensel (1981) view social capital as the resources inherent in the social network of a person and accessible through both direct and indirect links. Portes (1998) describes social capital as 'the capacity of actors to gain benefits through social networking or social system participation.'. In theory, a person, community or organization must have

relationships to others in order to have social capital, and this relationship is a real source of social capital value (Portes, 1998). Hence, additional services, such as credibility (Khoury, Junkunc & Deeds., 2013), guidance, consulting and other organizations (Hillman & Dalziel, 2003), or other social capital assets that the director can give to the company as a result of selection from the board, may be given to that company. It may also act as a means of covering or bridging structural gaps or vulnerabilities. Social capital can also impact the results of the board (Tian, Halebian & Rajagopalan, 2011). Team success relies in part on the capacity of participants to access and exchange information from their internal and external relations networks (Borgatti & Cross, 2003). Boards that have good links within the business and with other strategically linked companies have greater access to more and higher quality information, leading to better advice and financial results (Carpenter & Westphal, 2001).

Tian, Halebian and Rajagopalan (2011) further elaborated that social capital consists of two types within corporate governance context; internal and external. Internal social capital is built through the experience of working together of group members. Shared co-working experience offers group members the ability to build a "bonding" type of social capital that all group members own collectively (Adler & Kwon, 2002). Executive director familiarity enhances the board's ability to develop implicit, company-specific expertise. While independent directors can obtain information about the company from secondary sources, secondary information can hardly be viewed and interpreted within the context of a business by directors unless they have sufficient business-specific knowledge. Second, co-work experience gives directors the ability to communicate and organize their own individual skills and know-how, so directors strive to develop a shared understanding of who knows what on the board over time. Research shows that the experiences of co-working help groups to identify, communicate, and organize their individual experiences (Littlepage., Robison & Reddington, 1997). In a similar vein, directors with long co-operation experience will build shared knowledge on a group level based on their own understanding of the skills of each other and the interactional dynamics of each other (Cramton, 2001). The board's external governance network is an important source of its external social capital (Hillman & Dalziel, 2003). Wide interlocking work has shown that links play a significant role in the dissemination of information among companies (Burt, 1980). These connexions minimize the costs of scanning (Bazerman & Schoorman, 1983) and improve access to competitive knowledge and opportunities (Pfeffer, 1991), which perhaps explains the positive impact of the market when a CEO is invited to join another company as a board member (Rosenstein & Wyatt, 1994). Interestingly, there is a lack of study that examine board social capital diversity on the corporate performance. Ooi, Hooy and Som (2015) documented such relationship and it was found that there is a significant relationship between the two. Although the focus in their research centered on the tourism industry, the author further added that it is robust enough to apply to other industries.

Board Human Capital Diversity in Corporate Governance

Human capital is characterized as the resources embedded in people (Becker, 1962). Human capital is a vital organizational asset that specifically coincides with the creative service tendance of meeting consumer needs and increasing company performance (Dotzel, Shankar & Berry, 2013). Colombo & Grilli (2005) and Hsu (2007) highlighted that businesses with higher human capital capacity are likely to better appraise their productivity and that workers can increase their employment performance and eventually boost the efficiency of the business as human capital continues to grow. This conclusion can also be found in other sources of literature (Nawaz, 2017). Companies constantly strive to create and maintain competitive advantages by investing in the internal stock of knowledge or in the acquisition of external experts. This increases knowledge distribution among organizational members, facilitates the development of common meanings and allows the synthesis and reconfiguration of existing capacities (Galunic and Rodan, 1998). Similarly, the company can restructure its knowledge portfolios and achieve important synergies through its knowledge assets through newly acquired external expertise through recruitment (Zahra and George, 2002). The competitive capacity of companies is therefore derived from unique combinations of preserving and the acquisition of new knowledge assets (Afuah, 2002). The principle of human capital has also recently begun to attract attention on boards of directors in literature (Johnson, Schnatterly & Hill, 2013). Some of the previous work has been hypothetical but it should have the same effect based on what that had been discussed earlier. While the human capital of directors has received considerable empirical attention, only a few studies have tried to relate the board's human capital directly to meaningful company performance. Khanna, Jones and Boivie (2014) managed to

prove that human capital can enhance company performance as long as information processing demands that directors need to face is relatively low. A similar result was discovered by Ooi, Hooy and Som (2015), however it should be noted that social capital tends to be more influential than human capital. Nevertheless, it is still an important result as it provides literature on human capital and corporate governance that focused on connecting highly specific human capital indicators with specific outcomes (Carpenter & Westphal, 2001). There is a need to continue to explore on the board human capital diversity on an ongoing basis in order to discover its nature for example, its antecedents and consequences within the boardroom activities based on empirical research and analysis.

CONCLUSION AND DISCUSSION

Malaysia stand on board diversity can be clearly seen through its Malaysian Code on Corporate Governance (MCCG) 2017, particularly under Principle A - Board Composition from practice 4.1 to 4.7. For example, under Practice 4.6, it stated that at least 30% of the board members to be women for large companies shows that it does consider gender diversity as an important agenda within the board composition. Large companies in this case refer to companies on the FTSE Bursa Malaysia Top 100 Index or with market capitalization of RM2 billion and above. As for social and human capital diversity, it does explicitly state its stand, for example under Practice 4.6, appointment of board members is based on objective criteria, merit and with due regard for diversity in skills, experience, age, cultural background and gender. While this is a good indicator, this are still a few grey areas that need to be ironed out. For example, why the at least 30% women directors is applicable to large companies but not to small and medium companies? And MCCG is only made compulsory to listed companies and not to unlisted companies. Hence, the probability of unlisted companies not comply with those practices is always there. Even among the listed companies, due to the nature of hybrid approach of MCCG, some of these companies might choose not to follow as long as they can justify the reason(s) for that. Malaysia authority need to look into this matter if it seriously wants companies to reap the benefits of the board diversity to the companies. At the end of the day, it is still about making sure the companies understand the importance of diversity and taking the steps to make sure they follow it. This is after all for the betterment of corporate governance in Malaysia.

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BAFE052:
**INDIVIDUAL FACTORS THAT PREDICT SALES PERFORMANCE OF
THE MALAYSIAN LIFE INSURANCE AGENTS**

Sue, Chye

Lee Kong Chian Faculty of Engineering and Science, Universiti Tunku Abdul Rahman,
Malaysia,
Email: suec@utar.edu.my

ABSTRACT

Despite extensive research on sales performance in sectors such as automobile, construction, healthcare, and pharmaceutical manufacturing, very limited studies have been carried out on factors influencing the sales performance of life insurance agents even in Western countries, and the results have been inconsistent and have failed to obtain any definitive findings that could be generalized in the Malaysian context for any reason. Based on the literature review, this study focuses on analyzing factors affecting sales performance in the life insurance agents of Malaysia, the system of production that stimulates productivity and salesperson readiness to produce. This study deepens the existing knowledge of sales performance by exploring the effect of individual salesperson's relational behaviour (selling orientation, customer orientation and adaptive selling skill) on salesperson performance. Data gathered from 221 life insurance agents were analyzed to test the hypothesized relationship. The result suggests that the use of Adaptive Selling Behaviour (AD) improves the overall Sales Performance of the salesperson. Overall, selling orientation is the most important factor in predicting sales performance, and its effect is substantive compared to that of customer orientation. Customer orientation was found to be unrelated to sales performance. The attitude that assumes the "more customer-oriented the better the performance" should be abandoned.

Keywords: sales performance, selling orientation, customer orientation, and adaptive selling behavior

INTRODUCTION

Within the service industry as in the segment of the insurance market, high-quality service based on knowledge is not enough as insurance services are very distinct (Ankitha & Basri, 2019). It is important that customer and salesperson communicate. In addition, confidence and integrity are the foundations of life insurance company (Aziz et al., 2016). Unfortunately, most life insurance sales practitioners concentrate on the sales of individual transactions as they don't understand relevant selling habits that allow them to create long-term consumer relationships (Noor & Muhamad, 2005; Tseng & Su, 2013). Relational marketing behaviors such as sales orientation, consumer orientation, and adapting selling that offer customer loyalty are essential factors in the service-oriented industry, because they can influence sales efficiency. The previous research explored the effect of sales experience, adaptive selling behaviour, organizational commitment, sales orientation, consumer orientation, demographic and personality influences on company-wide sales success (Saxe & Weitz, 1982; Harindranath et al., 2019; Chen et al., 2018; Singh & Das, 2013). Few studies have examined the effect of relational factors (sales experience, sales orientation, customer orientation, and adaptive selling) on an insurance salesperson (Singh & Das, 2013; Kavoosi et al., 2014). This study looks at the antecedents of life insurance salesperson performance in Malaysia from the perspective of relational behavioral selling skills (sales orientation, consumer orientation, and adaptive sales). The finding of this study would help life insurance companies discover the factor that affects sales success and create sustainable long-term consumer relationships to ensure longevity for the business.

Reviews of literature indicate that very few studies were performed in Malaysia within the service-oriented life insurance field (Nik Kamariah, 1995; Noor & Azila, 2005; Sherif & Azlina Shaairi, 2013). Most of the previous salesperson behavior and sales success research has been performed in Western culture and the corporate environment (Baldauf & Lee, 2011; Panagopoulos et al., 2011). This means that very few researches pertinent to sales behavior and performance were done in less

developed countries, like the Malaysian market. This means that knowledge on how sales are conducted is still under-researched in less developed markets. Hence, there is a gap in the literature, as there are very few studies have been conducted within sector or industry, or indeed within the life insurance industry in Malaysia (Nik Kamariah, 1995; Noor & Azila, 2005; Sherif & Azlina Shaairi, 2013). Furthermore, past research focused mainly on a sales activity, focusing on behavioral attributes such as consumer orientation or adaptive selling that would affect various outcome constructs such as organizational engagement, work satisfaction or company efficiency (Noor & Azila, 2005; Plouffe et al. , 2010; Limbu et al., 2016; Singh & Das, 2013). Singh & Das (2013) had pointed out that to boost the sales performance level in the life insurance sector, further studies relating to the service sector need to be carried out. This work examines the behavioral effect of salesperson and customer relationship antecedents and measures the direct sales behavior relationship (sales orientation (SO), customer orientation (CO), and adaptive sales behavior (AD)) on sales performance.

LITERATURE REVIEW

Selling Orientation (SO)

Selling Orientation (SO) refers to when a salesperson solely focuses on immediate sales of the service or product being offered instead of selling the product or service in response to consumer desires or advantages, and likely at the cost of long-term buyer satisfaction. Saxe & Weitz (1982) and Koshksaray et al. (2020) draw a distinction between consumer orientation and sales orientation. Sale focused approach focuses on marketing operations (Jaramillo et al., 2007) and focuses mainly on meeting short-term needs. Salespeople using a selling-oriented sales strategy may be less concerned about the customer's interest if they can make a fast, relatively effort-free sale (Jaramillo et al., 2007). Thus, in the course of achieving the fastest processing time in sales, the SO salesperson would possibly be able to forgo customer satisfaction in return for immediate selling of the product or service (Liu, 2019).

Salespeople are much more likely to use a sales orientation when assessing the salesperson on outcome-based metrics (e.g. financial performance) because they are more interested in monetary compensation and competitive rewards to fulfill the organization's demands and objectives (Wachner, et al., 2009; Koshksaray et al., 2020). Many empirical studies have reported a link between sales orientation and job performance in the settings of both Business to Consumer (B2C) (Jaramillo et al., 2007, Boles et al., 2001) and Business to Business (B2B) (Anaza et al., 2018).

However, findings about the strength and nature of the sales-oriented effect on results have often been contradictory and contentious as the determinants of sales performance have remained largely unclear (Agnihotri et al. 2016); much needs to be known about the relationship between sales-orientation and sales performance. (Jaramillo et al. 2007) pointed out that there are insufficient studies available which used the Selling Orientation (SO) and Customer Orientation (CO) separately and these two constructs may have a different effect on sales results. (Wachner et al., 2009) found that both CO and SO had a positive performance impact. Guenzi et al. (2011) found that CO-SO had multiple effects on the efficiency of the organization. Thus, we expect that SO and CO should each impact sales performance in their way.

Guenzi et al. (2011) found that CO-SO had various effects on the efficiency of the company and that SO was not negatively correlated with the production of superior consumer satisfaction. That seems to suggest that SO may not be detrimental to outcome performance in certain sales settings. It is also necessary for customers to demand some degree of SO action to meet the needs of the customers. We argue therefore that high SO can help the salesperson perform better in a situation where customers want SO behaviour. Thus, we propose the hypothesis:

Hypothesis 1 (H1): There is a positive relationship between salespeople's Selling Orientation (SO) and Outcome Performance (OP).

Consumer Orientation (CO)

Consumer Orientation (CO) refers to the degree to which salespeople participate in practices that fulfill both customer needs and organizational goals by displaying empathy for the customer, actively assisting their customers in making decisions and implementing organizational approaches

that will address the issues of the customers and better serve the needs of the customers than rivals. This activity was aimed at marketing activities to please the customers and prevent disappointment. It aims to build a personal relationship with customers. Saxe & Weitz (1982) found out that salespeople engaged in CO are supposed to improve "long-term consumer loyalty" through engagement with customers and "avoid acts that compromise customer interest to increase the possibility of immediate sales." (CO) was described as a selling behavior (Habel et al., 2020) and a performance antecedent (Boles et al., 2001). Previous research shows a company CO is positively linked to the CO of salespeople (ELSamen & Akroush, 2018). Guenzi et al. (2011) found that CO has a positive and substantial impact on sales success in behaviour. The results of the relationship between consumer orientation and success of salespersons vary from being direct linear (Keillor et al., 1999; Boles et al., 2001) to curvilinear (Homburg et al., 2011; Singh & Venugopal, 2015).

Most research in the past merely illustrated and validated the positive relationship between CO and sales success through literature, without really proving it. Work by Saxe & Weitz (1982) conceived a questionnaire to assess customer orientation in sales workers and suggested that customer orientation contributes to sales performance (ELSamen & Akroush, 2018). Some studies have found no substantial positive relationship between CO and self-rated sales success measures (Templer et al., 2020; Franke & Park, 2006; Jaramillo et al., 2007). Plouffe et al. (2010) found that CO "just has a poor relation with subjective performance and is not at all linked to objective sales performance." While Singh & Koshy (2011) found no relationship at all between CO behavior and customer satisfaction. There's some scientific proof to the contrary, on the other hand. Jaramillo et al. (2007) verified the existence of the CO-Sales Success Link. Few other researchers have argued for a positive impact of CO on the success of salespersons (e.g. Koshksaray et al., 2020).

Koshksaray et al. (2020) also argues from a literature review that this relationship persists across multiple sales contexts. Wachner et al. (2009) concluded that unique selling skills have to be present for consumer orientation to be a predictor of sales performance. Salespeople are best off using a sales-orientation strategy without the appropriate selling skills. Wachner et al. (2009) concluded that the influence of both a "sales orientation" and a "customer orientation" on sales success is moderated by different selling abilities. This study compares the combination of "good sales skills and strong consumer orientation" with the highest level of success observed. Salespeople with poor sales skills do not tend to benefit from customer-oriented approach.

Customer-orientation (CO) has been conceptualized as a selling activity according to previous research (Habel et al., 2020), a performance antecedent (Boles et al., 2001). Guenzi et al. (2011) discovered that CO has a profound and important impact on generating superior value for the consumer. Empirically they have shown that the CO of salespeople is positively linked to a meaningful organizational outcome. We expect the direct effect of CO on behavioural sales results to be positive considering the findings from past studies. The high CO salesperson adapts to customer-specific requirements that go hand in hand with time and extra costs. CO salespeople engage in their sales activities by seeking to help their clients make buying choices that meet the needs of their customers. This activity aimed to sell activities to please customers. It helps to build a professional relationship with clients. Specifically, a customer-oriented marketing strategy has a positive effect on the salesperson, the marketing company, and results in sales behavioral performance (ELSamen & Akroush, 2018; Wachner et al., 2009). Therefore, we propose the following hypothesis:

Hypothesis 2 (H2): There is a positive relationship between salespeople's Customer Orientation (CO) and Behavior Performance (BP).

Adaptive Selling Behaviors (AD)

Adaptive Selling Behaviors (AD) emphasis on the consumer nature of the sales transaction consists of collecting customer information, designing sales tactics with the ability to adapt to consumer customer behaviour. There is no single bestselling way. A strong, adaptive enough salesperson must collect information, create and execute a sales plan customized to the personality of the customer. Since the first known paper published in 1918, sales success has always been one of the main issues for many forms of research on personal sales (Churchill et al. 1985; Agnihotri et al. 2016). Since the sales performance determinants have remained largely unclear (Agnihotri et al. 2016), Verbeke et al., (2011) reaffirmed Churchill et al.'s (1985) suggestion to concentrate on

prominent sales performance antecedents. (Churchill et al., 1985) the meta-analysis included sales performance study from 1918 through 1982.

Adaptability is one of the most important desirable habits in current business strategies, probably the most successful form of marketing (Kaynak et al., 2016). Accordingly, the adaptive selling behaviour (AD) has been researched and evaluated over the last three decades (Limbu et al., 2016) and has gained considerable scholarly attention (e.g., Leach et al., 2020; Alnakhli et al., 2020; Jaramillo et al., 2007; Wong & Tan, 2018; Franke & Park, 2006; Kadic-Maglajlic et al., 2019; Spiro & Weitz, 1990; Saxe & Weitz, 1982). The Weitz (1981) Contingency framework remained the foundation of sales analysis. The generally positive effect of AD on salesperson success is confirmed by clear empirical evidence (Kaynak et al., 2016; Charoensukmongkol & Suthatorn, 2020; Leach et al., 2020; Jaramillo et al., 2007; Wong & Tan, 2018; Agnihotri et al., 2017). Limbu et al., (2016) found that AD predicts sales performance in both objective and subjective terms significantly.

Adaptive individuals are continually revising, modifying and evolving personal behaviours to match new knowledge that they receive. To achieve greater behavioural efficiency, they can change their approach based on specific sales criteria (Plouffe, et al. 2009; Plouffe et al. 2013). Weitz et al. (1986) postulated, under the Adaptive Selling Paradigm, that salesperson action (the method of adaptive selling) contributes to performance. Limbu et al. (2016) suggested that adaptive selling behaviour (AD) completely mediated the impact of relationship quality (RQ) on sales performance, which means that salespeople can exploit the quality of the relationship they have formed by adapting to their clients. We argue that AD will achieve better relationships not only with its customers but also with managers leading to better performance in behaviour. With this study, therefore, we are adding value to the increasing body of information on AD's effect on behavioural results with the following hypothesis:

Hypothesis 3 (H3): There is a positive relationship between salespeople's Adapting Selling Behavior (AD) and Behavior Performance (BP).

Sales Performance

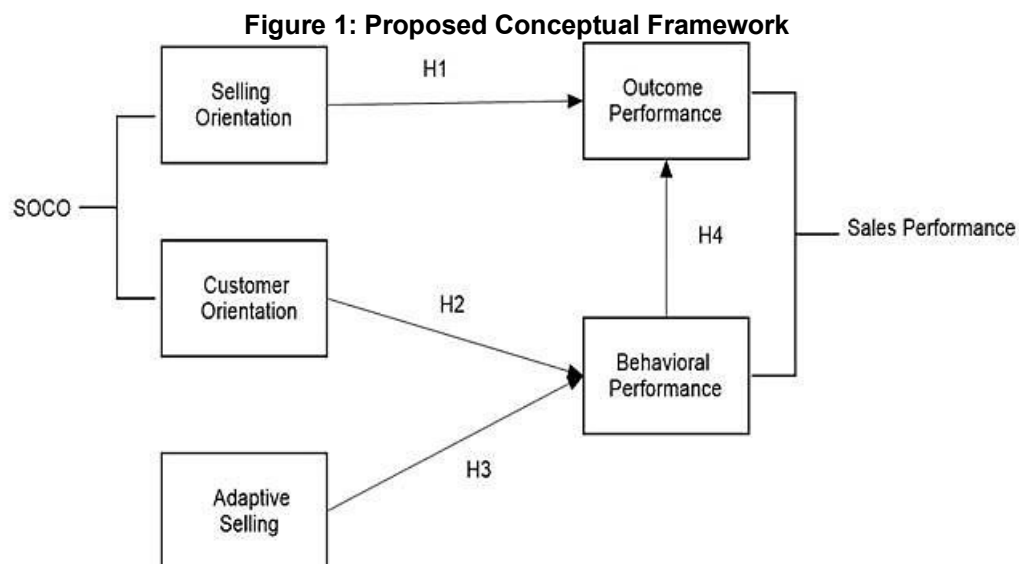
Sales Performance is a measure of the extent at which a salesperson meets the salesperson and the organizational objectives. The dimensions included in this construct: performance in meeting sales quota and goals, use of technological expertise to make successful sales presentations, customer experience and sales account management, supplying suitable information to prospective buyers, and managing excessive expenses. Objective sales performance assessment is based on quantity production such as annual sales volume, annual sales volume growth rate, quota percentage and (self-reported) annual earnings. Subjective performance is based on the Manager's evaluation performance ranking.

Purohit (2018) and Oliver & Anderson (1995) described sales performance as salespeople's assessment of what they generate (sales results) and what they do (sales behaviours). They postulated sales performance as behavioral performance (BP) and outcome performance (OP). Sales behavioural success includes the different skills and behaviours which are necessary to fulfill the sales job responsibilities. Outcome performance is composed of outcomes due to the initiative of the salesperson (sales strategy, new customers or target, selling steps, market share and new account). Indeed, (Miao et al., 2007) reported substantial positive associations between success in the behaviour and outcome. Moreover, earlier studies have shown that sales performance components of behavioral and outcome performance are conceptually distinct and different, but also with a positive causal relationship (Jaworski & Kohli, 1991; Sundaram et al., 2007; Purohit, 2018). The relationship between behavioural and outcome performance was established and proven by a study (Miao et al., 2007) from the sales control literature. In addition, a recent study showed that there is a positive relationship between behavioural performance and outcome performance, in which this behaviour is regarded as a type of adaptive selling and customer orientation (Kadic-Maglajlic et al., 2019). And we're suggesting the following hypothesis:

Hypothesis 4 (H4): There is a positive relationship between Behavioral Performance (BP) and Outcome Performance (OP).

CONCEPTUAL FRAMEWORK

This research focuses mainly on the salesperson's social behaviour, examining the salesperson's sales performance antecedents and the behavioral effects of the salesperson. To explain the sales success antecedents, past researchers used predictors that are rooted in salespeople's behaviors (market orientation, consumer orientation, adaptive selling skills) (Saxe & Weitz, 1982; Harindranath et al., 2019; Chen et al., 2018; Singh & Das, 2013). In the previous study (Weitz, 1978; van Zeeland & Henseler, 2018) indicated that the success of salespersons is determined by the impact of salespersons on customer preference. They further argued that success for salespersons depends on the nature of the customer relationship. Hence, a model with a focus on the antecedents of sales performance of salespeople and the implications of their actions are described in this paper. The conceptual model presented is largely supported by the findings obtained in the exploratory qualitative study. We encountered numerous underpinning hypotheses that pervade our research about the essence of our analysis. The most dominant underpinning theory of our model is the Contingency Theory (Fiedler, 1964). This study supports the contingency theory (CT) proposed by Weitz (1981) and the Adaptive Selling System (Weitz et al. 1986) based on prior works by both Walker's (1979) and Weitz's (1981), arguing that adaptive selling is a significant determinant of sales efficiency. The contingency model – which stresses the importance of tailoring sales approaches to particular sales circumstances (Weitz, 1981; Weitz et al., 1986) – suggests that sales effectiveness can best be understood by examining sales behaviour's interactions; salesperson's resources; the essence of the purchasing role of the consumer; and salesperson and customer characteristics (Mier et al., 2020). A quantitative survey was conducted, and the data were collected and analyzed using PLS-SEM analysis.



RESEARCH METHODOLOGY

Sampling Design

The key survey concept included the delivery of the completed paper-based survey questionnaire to the life insurance companies that participated. The researcher had provided 500 questionnaires for this report. Life insurance salespersons associated with the main and branch offices of Malaysia's top three life insurance firms were selected as the sample frame. Only the participants who indicated that they were 20 years of age and over were given access to the survey as full-time life insurance salesperson in the life insurance field. This meant that all respondents had some expertise and experience in sales work so that they could respond correctly to the questionnaire. Part-timers have been omitted from the analysis because part-timers typically view the organizational climate as negative, they would be less active and expend less effort, resulting in reduced work performance (Pedulla, 2016). The researcher obtained data from a total of 242 participants. Twenty-one questionnaires, however, have been excluded from the survey because they

have not been thoroughly answered. The set of relevant questionnaires for this study is therefore composed of 221 participants.

Pilot Study

A basic focus group interview session was conducted with two people from a chosen insurance company to obtain an expert view of potential measurement items. A few life insurance salespeople, five from each company (three selected companies) were asked to fill in the survey questionnaires during a pilot test. The aim was to validate and test the suitability of the terms, tough words, to arrange objects, to arrange item choices, and to check the ease of completion. In the pilot test, 15 responses were complete with all questions answered. The SmartPLS program was used to test the PLS-SEM measurement model with the pilot data, to test the model constructs' reliability and validity. Analysis findings showed that all structures fulfilled acceptance criteria. The Cronbach's alpha and composite reliability were greater than the required minimum value of .70 and the average variance extracted (convergent validity) was greater than .50 (Hair et al., 2011; Ringle et al., 2015) (see Table 1 for details).

Research Procedure

The objective of this research is concerned with the assessment of the factors that lead to the sales performance of Malaysian life insurance salespersons. The instrument to measure sales performance was assessed with a seven-item self-evaluation measure adapted from Behrman & Perrault (1982), Plouffe, et al., (2009) and redefined by Miao & Evas (2007) for measuring behavioral and outcome performance (BP and OP). All seven items (were anchored on 7-point Likert scales.

Table 1 Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability	AVE
Adaptive Selling	0.819	0.853	0.546
Behavioral Performance	0.845	0.928	0.866
Customer Orientation	0.786	0.842	0.530
Outcome Performance	0.932	0.949	0.787
Selling Orientation	0.819	0.871	0.582

In this study, the ten SOCO scale introduced by Thomas et al. (2001) was used to hold the number of items at a reasonably low count. This scale consists of five consumer orientation items and five selling orientation items. As suggested by Noor & Azila (2005), the wording of the scale was slightly changed to suit the scope of local life insurance companies. In view of the broad usability of the ADAPTS-SV scale (Adaptive Selling Scale) (Franke & Park, 2006; Homburg et al., 2011; Alnakhli et al., 2020), and the fact that the ADAPTS-SV scale demonstrates equivalent or better reliability, this study used a shortened 5-item ADAPTS-SV to measure adaptive selling.

Structural equation modelling based on partial least squares (PLS-SEM) was used to evaluate the proposed structural model using SmartPLS 3.0. PLS-SEM was chosen, as it matches the investigation characteristics and the essence of the data collected (Hair et al., 2011). Firstly, this option was made because of the study's explorative nature. PLS Path Modeling (PLS-PM) is considered more as an exploratory approach than as a confirmatory one. Second, as measurements have been established with a Likert scale, data are distributed in a non-normal way. PLS does not require any assumptions of normality and manages reasonably well non-normal distributions (Hair et al., 2017). PLS-SEM is also an effective technique for the prediction analysis and the expansion of variance in the main target constructs of a multi-dimensional research model (Hair et al., 2017). Following Hair et al. (2011) guidance, we used bootstrapping with 5,000 sub-samples to estimate the t-values in order to determine the degree of significance for coefficients in the direction.

DATA ANALYSIS

Modelling of data processing in the structural equation is divided into two phases (Hair et al., 2019). The first step involves a review of the measurement model where the assessment of product

validity and reliability is conducted. The second stage involves the analysis of the structural model where the evaluation of the relationship between the hypotheses and latent constructs is verified. Since PLS does not require a large sample size, does not require normally distributed input data, can be applied to complex models, and is useful for predictive purposes (Hair et al., 2011; Hair et al., 2017; Richter et al., 2016).

Measurement Model

Table 2 summarizes the consistency metrics used to determine the reliability and validity of the measurement model. The consistency parameters are Average Variance Extracted (AVE), Composite Reliability, and Alpha at Cronbach. The AVE is a measure of a construct's convergent validity and is defined as the mean of the construct's squared load indicators. Following Fornell and Lacker's (1981) requirements for a sufficient convergent validity, the proposed minimum threshold of AVE is .50. It is said that convergent validity is reliable if the AVE is above 0.50 (Fornell & Larcker, 1981).

Composite reliability is like the Cronbach Alpha, which acts as a criterion for reliability in internal consistency. For Composite reliability and Cronbach's alpha the same minimum of .70 is suggested. Composite reliability is an estimation of the internal accuracy of things foreseen for measuring a single construction (Hair et al., 2014). Table 2 showed that the AVE values and composite reliability were higher than the threshold value suggesting that higher reliability levels and constructs explain more than half of the variance of their measures (Fornell & Larcker, 1981).

Table 2 Convergent validity and reliability for the constructs

Construct	Composite Reliability	Cronbach's Alpha	AVE
Adaptive Selling (AD)	0.864	0.818	0.564
Customer Orientation (CO)	0.876	0.838	0.588
Selling Orientation (SO)	0.856	0.800	0.556
Behavioral Performance (BP)	0.885	0.742	0.794
Outcome Performance (OP)	0.931	0.907	0.728

Discriminant Validity

Discriminant validity implies a construct's uniqueness or distinctness as compared with those in the model. It is to what degree a latent variable (LV) discriminates against other latent variables. It is assessed by the Fornell-Larcker criterion (Fornell and Larcker, 1981) (Table 3) or by examining indicator cross-loadings (Table 4) (Hair et al., 2014). For evaluation of the Fornell-Larcker criterion, the square roots of the AVEs are entered in the diagonal of Table 3. This criterion tests the amount of variance the build collects in relation to the amount of variance due to error of measurement (Fornell and Larcker, 1981). It compares the square root of AVE values to the correlations of the latent variable. In particular, the square root of the AVE of each construct should be greater than its maximum correlation to any other construct (Hair et al., 2014). As shown in Table 3, the values in the diagonal are much larger than the correlations shared between the construct.

Table 3 Discriminant Validity (Fornell-Larcker Criterion)

Construct	AD	BP	CO	OP	SO
AD	0.751				
BP	0.457	0.891			
CO	0.176	0.156	0.767		
OP	0.423	0.329	-0.096	0.853	
SO	0.211	-0.064	-0.231	0.353	0.746

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations

Another popular approach for establishing discriminant validity is the assessment of cross-loadings. Discriminant validity is established when an indicator's loading on a construct is higher than all its cross-loadings with other constructs (Hair et al., 2014). Table 4 shows the loadings and cross-loadings for every indicator. Overall, cross-loadings, as well as the Fornell-Larcker criterion provide evidence for the constructs' discriminant validity.

Structural Model

The next step after measurement model is structural model. Given the non-parametric approach involved in the PLS-SEM analysis, bootstrapping was used to assess the path coefficients' significance. The minimum number of bootstrap samples is 5,000, and the number of cases should be equal to the number of observations in the original sample (Hair et al. 2011, p. 145). Hypotheses were tested in this step. R^2 values and path coefficient were obtained. The explained variance R^2 is also referred to as the coefficient of determination. The higher the R^2 score of a dependent variable, the better is its prediction (Hair et al., 2016). R^2 acceptable level depends on research context and discipline (Hair et al. 2010; Henseler et al., 2015). The $R^2 = 0.264$ of variability was obtained between predictor variables (customer orientation, adaptive selling behavior), and the dependent variable (behavioral performance) and $R^2 = 0.249$ of variability was obtained between predictor variables (selling orientation, behavioral performance) and the dependent variable (outcome performance). In this study, the R^2 value is relatively low that is, less than 50%, this is attributed to the field of study. In another word, a high percentage of the variances for Behavioral Performance and Outcome Performance is explained by other factors including errors in measurements. Table 5 shows a summary of the results of the PLS-SEM analysis conducted on the empirical data.

Table 4 Discriminant Validity (Cross Loading)

Construct	Items	AD	BP	CO	OP	SO
Adaptive Selling	AD1	0.577	0.089	0.109	0.359	0.247
	AD2	0.787	0.379	0.082	0.250	0.304
	AD3	0.845	0.340	0.080	0.391	0.177
	AD4	0.790	0.290	0.059	0.526	0.192
	AD5	0.728	0.436	0.283	0.203	-0.007
Behavioral Performance	BP1	0.354	0.869	0.121	0.288	-0.037
	BP2	0.453	0.912	0.154	0.298	-0.074
Customer Orientation	CO1	0.072	0.088	0.626	-0.053	-0.114
	CO2	0.021	-0.011	0.712	-0.137	-0.289
	CO3	0.162	0.141	0.856	0.035	-0.230
	CO4	0.113	0.139	0.817	-0.154	-0.199
	CO5	0.197	0.088	0.800	-0.163	-0.164
Outcome Performance	OP1	0.321	0.170	-0.211	0.828	0.328
	OP2	0.368	0.240	-0.112	0.859	0.292
	OP3	0.355	0.224	-0.067	0.864	0.353
	OP4	0.359	0.350	-0.013	0.864	0.308
	OP5	0.398	0.388	-0.040	0.852	0.231
Selling Orientation	SO1	0.153	-0.036	-0.238	0.309	0.838
	SO2	0.095	0.011	-0.095	0.054	0.413
	SO3	0.185	-0.076	-0.270	0.287	0.841
	SO4	0.242	-0.022	-0.093	0.328	0.832
	SO5	0.072	-0.097	-0.152	0.215	0.713

Table 5 Summary of SmartPLS: Path coefficients and hypothesis testing

Endogenous LV	Exogenous LV	Path Coefficient	t Value	p Value	Significance	Hypothesis test results
BP	CO	0.048	0.593	0.746	Not significant	Not supported
	AD	0.311	5.034**	0.000	Significant	Supported
OP	SO	0.375	7.544**	0.000	Significant	Supported
	BP	0.353	5.961**	0.000	Significant	Supported

The result of the hypotheses is shown in Table 6.

Table 6 Summary of Hypothesis Results

Hypothesis	Description of Hypothesis	Alternate Hypothesis	Null Hypothesis Testing
H1	Salespeople's Selling Orientation influences their Outcome Performance	Supported	Reject Null
H2	Salespeople's Customer Orientation influences their Behavior Performance.	Not Supported	Retain Null
H3	Salespeople's Adapting Selling Behavior influences their Behavior Performance.	Supported	Reject Null
H4	Salespeople's Behavioral Performance influences their Outcome Performance	Supported	Reject Null

CONCLUSION AND DISCUSSION

Previous studies have examined the direct effects of relational factors on results in developed countries, primarily in the United States and Western countries, whereas our research is conducted in Malaysia (an emerging market i.e. EM) and hypotheses (H1, H2, H3, and H4) have not been examined in insurance and related industries in EMs so far. This study deepens existing knowledge of the performance of a salesperson by exploring the effect of the relational behaviour of the individual salesperson (i.e., customer orientation, sales orientation, adaptive selling) on the performance of salespersons. The important contribution of this study is its proposed linear view of the client and latent variables for selling orientation. Overall, sales orientation is the most important factor in predicting sales performance, and its effectiveness compared to customer orientation is substantive. Furthermore, we distinguish between behavior and outcome sales performance, showing that the output of behavioural salespersons greatly affects outcome performance. As behavioural performance results in sales efficiency. Sales activity includes the different skills and activities that are necessary for the fulfillment of the responsibilities of the sales job. The outcome performance consists of the results due to the initiative of the salesperson (sales strategy, new customers or target, sales steps, market share and new account) (Bolander et al., 2020; Piercy, Cravens & Morgan, 1998; Baldauf, Cravens & Piercy, 2005). Since previous studies based on conceptualizing sales result output variation have either ignored behavioural dimensions or considered only a few behavioural dimensions (Baldauf & Cravens, 2002; Avlonitis & Panagopoulos, 2007), this should be taken as an independent research contribution.

Our study finding is consistent with the earlier work of (Saxe & Weitz, 1982; Wachner et al., 2009), which distinguishes between sales orientation and consumer orientation. Salespeople following a "revenue mentality" seek to optimize short-term sales gains by increasing product demand than salespeople following a customer-oriented approach are much more likely to cultivate long-term

consumer relationships by selling goods only in response to customer needs or wishes. As suggested by Keillor et al., 1999; Boles et al., 2001, the results of the relationship of this study between the customer orientation of salespersons and their success have taken a simple, linear approach. Our findings are consistent with the study (Wachner et al., 2009; Noor & Azila, 2005) which casts doubt on how customer orientation influences performance as a result largely inconclusive of customer orientation and performance outcomes of individual salespersons. Our result shows that with $\beta = 0.375$ (Table 5), the higher the selling orientation (SO), the higher the salespeople are likely to achieve outcome performance. Overall, sales orientation is the most significant factor affecting sales results, and its impact is considerable relative to consumer orientation, which accounted for just 4.8 percent of the behavioural sales performance variance. This is in line with Wachner et al. (2009), which suggested that salesmanship was found to be by far the best factor of sales success when all skills are viewed separately.

That is, our finding shows that the behavioural output would not be affected by a consumer-driven salesperson. Customer-oriented salespeople can put too much focus on customer satisfaction, thus de-emphasizing the effort to make a sale. Customer-oriented selling behaviour, rather than using closing strategies to complete the sale, can cause a salesman to be more passive with the customer (Jin-Xia et al. 2017). In a specific situation, the sales manager should examine the optimum degree of customer orientation that a salesperson can practice. CO and SO are also distinct in terms of the essence of their market success partnership (Guenzi et al., 2011). Kadic-Maglajlic et al. (2017) indicated that the continuous development of increasingly customer-oriented salespeople, and the constant building of long-term relationships with retail customers, might not always be true, as "too much of the good thing" (in this case CO) can slow down positive performance outcomes. Circumstances that are discussed in this analysis, we show that selling orientation also has a positive effect on the outcome performance. People who do SO (as a non-relational approach to selling) are less in need of help from the boss compared to when they do CO. In cases where salespeople do SO, the importance lies inside the product and price rather than in the building of relationships (Kadic-Maglajlic et al., 2017).

Therefore, a black and white understanding of the relationship between SO and CO is no longer valid. Salespeople may not be good judges of their CO or they may not effectively convey their CO to customers and managers. Perhaps the importance of customer-orientation actions as a performance concept lies in the type of result output a sales manager wants. If sales managers concentrate on operations and performance, then they are searching for salespeople who rapidly make sales to meet the desired goal. Conduct to consumer orientation might not be a crucial factor. In this situation, sales managers should promote the use of SO and ask salespersons for their use, as customers demand it.

Our finding suggested that the use of the Adaptive Selling Strategy (AD) increases the salesperson's overall Sales Performance. The practice of adaptive selling is behaviour that relates to dyadic experiences of the individual. AD focuses on the individual dynamics of the sales transaction consisting of collecting customer information, designing sales strategies with the potential to modify individual consumer actions (Spiro & Weitz, 1990; Agnihotri et al. 2016). The results of this study support the contingency hypothesis suggested by Weitz (1981) and Weitz et al. (1986), stating that a significant determinant of sales success is adaptive selling. The result is consistent with Leong Wong & Tan (2018) which showed the positive relationship between behavior-based control and behavioural success which is part of the dimensions of adaptive selling behaviour. Salespeople engaged in adaptive sales in their work can use learned behaviours such as information gathering, using the communication method, and developing solutions as they communicate with their buyers (Itani et al., 2017). Adaptive selling behaviour in line with current research has positively guided salesperson efficiency (Harindranath et al., 2019; Limbu et al., 2016; Franke & Park, 2006). Salespeople who can customize their communications to suit the needs and desires of their customers are more likely to please the customer. And it's more likely that a happy consumer will make a purchase, so AD can boost overall SP. The two latent variables with direct presumed causal relationships against BP, AD have the most impact and predictive value of BP, as noted earlier. AD is a skill that is acquired and can be evaluated and strengthened. Wong & Tan (2018) explains that salespeople who learn to act adaptively concerning product or service offerings at work can build high quality and enduring customer relationships.

The results of this study highlight the importance of AD as an influential factor for adopting relationship selling behaviours that contribute to the performance of salespersons. Adaptive marketing activity characterizes the interaction between the salesperson and the client, which defines involves prospecting, nominating, engaging with and educating them (Spiro & Weitz, 1990; Weitz et al., 1986). Our finding shows that higher levels of AD will increase behavioral sales performance. Since adaptive selling behaviours are trainable habits obtained through preparation and company investments in salespersons (Charoensukmongkol & Suthatorn, 2020; Jaramillo et al., 2009; Wong & Tan, 2018; Franke & Park, 2006; Weitz et al., 1986), salespersons in general and sales managers, in particular, can attach importance to utilizing AD and its ability. Sales managers should also be aware of the interplay between selling skills and control systems in shaping salesperson AD. A standardized training curriculum can be built to instill adaptive behavioural competencies. When behaviour management is stronger than when it is weak, salespeople are more likely to use their marketing abilities to adaptive sell. Therefore, sales managers must be seen by salespeople to be close enough to the sales experience through behavior-based control to improve AD practice within their sales team. Sales performance would increase if salespeople can handle these interpersonal relationships by practising AD.

As any other analysis, when analyzing the results, some limitations of our study are recognized. Limitation discussion may serve as an essential opportunity to identify the need for more study as an avenue. The existence of the samples that were analyzed relates to a limitation. The sample of salespeople was taken only from selected branches of Malaysia's life insurance industry. The generalizability of our findings is therefore limited to the sample examined (i.e. the Malaysian life insurance industry) and should be interpreted with caution. Since the skills required for sales efficiency appear to differ across market contexts (Koh et al., 2011; Noor & Azila, 2005), future research is encouraged to replicate our findings using Salesforce samples from various industries. This research did not examine potential mediating or moderating factors that could affect the relationships between selling behaviours (Adaptive Selling Behavior (AD), Consumer-Focused Selling Behavior (CO), and Selling Orientation (SO)) and the behaviour and sales performance of salespeople. More information can be derived from research studies if the study design and data-collection strategy involve measures of mediating and moderating variables. Therefore, as a possible mediator or moderators of various relationships, such as AD-BP, CO-BP, LB-BP and SO-OP, more research may explore, for example, emotional intelligence (Wisker & Poulis, 2014). We agree that previous research has found no evidence of sales success by the moderators of AD or CO (Frank & Park, 2006). Further studies may be used to assess the moderating effect of AD on the CO-BP relationship.

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BAFE054: **DIGITAL BUSINESS ADAPTATION AMONG THE MALAYSIAN PUNJABI WOMEN**

Kaur, Charanjit^a, Kaur, Ashwinder^b, Kaur, Parveenpal^c

^aFaculty of Creative Industries, Universiti Tunku Abdul Rahman, Malaysia,
Email: charanjit@utar.edu.my

^bFaculty of Creative Industries, Universiti Tunku Abdul Rahman, Malaysia,
Email: ashwinder@utar.edu.my

^cCentre for Foundation Studies, Universiti Tunku Abdul Rahman, Malaysia,
Email: parveenpal@utar.edu.my

Abstract

The involvement of Punjabi women in business has been a new trend lately. This is because as a society that practices the patriarchal system, men are responsible to be the bread winner to the family. Women are expected to carry out domestic duties such as managing household matters and caring for children (Charanjit & Sarjit, 2020). Even so, the Punjabi women are seen active in online business to generate income for their families. Various forms of business are run by them using technology to market their products and services to consumers. Digital technologies enable Punjabi women to venture into a small business that uses digital tools such as a website with mobile, online booking, or e-commerce capabilities including online directories or third-party marketplaces. They engage with numerous social media and online marketing networks as well to enhance the businesses productivity and effectiveness. Thus, this article is exploratory which examines the involvement of Punjabi women in digital business. This is a new social reality that offers an opportunity to bypass traditional power structures which largely is still dominated by the men. The paper looks at how Punjabi women use social tools and elevate their status as women entrepreneurs which directly changes their domestic role.

Keywords: Punjabi women, digital business, technology, entrepreneurs

INTRODUCTION

Kirschner and Karpinski (2010) highlighted that social media is an integral part in our daily lives today. Multiple social media platforms are used by millions of people every day to update family and friends of their daily activities and do businesses globally. Hoffman & Novak (2012) stated how marketers are trying to get more people to know about their products or services through social media as it continues to become a platform where people spend hours on daily. Gone are the days where sellers wait for customers to come to them. Today, sellers globally rely on social media to reach out to customers. Social media allows business owners to directly communicate with their buyers and ultimately persuade them to make the purchases. Social media today has replaced the traditional word-of-mouth publicity more effectively as customers who are happy with their purchase experiences leaves or writes a review of the particular product or service on their social media handle and that review can be tagged to the seller's page and also read by all the people in their friend list (Chen, Fay and Wang, 2011). This view is also supported by Stephen & Toubia (2010) in which they stated that an entrepreneur can have multiple benefits by bringing their business over to social media; "increase in its number of fans and advertisement views and/or an increase in sales and return on investment (ROI)" (Hashim, Nor, & Janor, 2016, p.83).

One of the most attractive point of doing business on social media is the cost. An entrepreneur is able to reach her target market at an affordable price. Zimmerman & Ng (2012) interestingly pointed at the fact that academically, there is a lack of understanding and discussion on the social aspect of social media, or better known as social commerce (s-commerce) among business owners. The focus of the current study would be on Malaysian Punjabi women-entrepreneurs. The concept of entrepreneurship was brought forward by an economic thinker, Richard Cantillon (1755)

mainly for men in the 17th century. Women in business or women entrepreneurs only started being welcomed widely at the start of the 19th century, thanks to feminism. This move was further fuelled by the speed of technology in the 21st century, which opened wider doors for women entrepreneurs. According to Winn (2005), women worldwide are more likely to own micro businesses compared to their male counterpart.

However, as technology moves at light speed globally, many countries, especially developing ones are seeing the need to empower women to participate in the ever-growing world of digital economy. Many governments of developing countries are working hard to close the digital gap between urban and rural folks. As stated by Hafkin & Huyer (2006) and Maier & Nair-Reichert (2007), in order to empower women in rural areas, some governments have launched ICT based projects to overcome poverty and elevate rural communities' status socio-economically. Malaysia happens to be one of the few countries who continuously work on bridging the digital gap between its urban and rural folks. The government is always working hand-in-hand with the private sector to close the digital gap as much as they can. Budget 2020 announcement by ex-Finance Minister, Lim Guan Eng saw a huge amount being allocated to "further boosting the capabilities of local SMEs and start-ups, strengthening digital content, embracing digitisation, enhancing e-commerce, and adopting 5G technology" (Ismail, 2019, p.1). Pikom, an association representing the ICT industry in Malaysia stated that the Budget 2020 allocation by the government indicates that it is serious in helping its people and agenda to achieve the Shared Prosperity Vision 2030. JEN II (Jendela Informasi Anda) was another initiative taken by the government back in the day to reduce fear of ICT among illiterate women. The Malaysian government always worked on ensuring its people (Razak, et al., 2010; Shaipulah, et al. 2011).

The society needs to be vigorous and bolster the formation of "telecentre" (Razak, 2016, p.53) in order to close the digital gap in Malaysia. Both Shaffril, et al. (2009) and Razak et al. (2010) studies looked at how ICT can further elevate the economy status of rural women in Malaysia. However, there are multiple obstacles women face in either using ICT to further bolster their business or even get into business. Haque & Quader (2014) as cited in Razak (2016) indicated how women entrepreneurs in Bangladesh had to deal with "society's perceptions, role and stereotypes towards women" (Razak, 2016, p.53). Mat & Mansor (2010) highlighted "psychology and environmental dimensions" (Razak, 2016, p.53) as reasons for which Malaysian Islamic women participation is low in the online business arena. Norizan (2012) as cited in Razak (2016) brought forward issues such as "internet access, limited financial literacy, low understanding of e-commerce, lack of skills and trust issues" (Razak, 2016, p.53) as leading factors which deters Malaysian Muslim women to venture into e-commerce. Azmi et. al (2014) respondents (250 Muslim women entrepreneurs) stated "personal skills, family supports, suppliers, government and their rights as Muslim women" (Razak, 2016, p.53) as reasons to avoid or fear using ICT to further enhance their business.

Brush, Carter, Gatewood, Greene, & Hart (2006) stated that women venturing into business have a rather slow business development and less chances of succeeding in maintaining the business compared to men entrepreneurs. Carter & Shaw (2006) study showed that the number of women venturing and owning business have triple fold in the past decades. The number of women entrepreneurs however is still below than 1/3 compared to men worldwide (Reaves, 2008). One of the main reason for this could solely be attributed to the stereotype of men being the breadwinner of the house and women are often caught between the need to have a career and yet maintaining full responsibility as a mother, wife, and daughter-in-law (Stanger, 1990). This notion was however quashed by Farhat and Mijid's (2018) study which discovered if women entrepreneurs are given the "same human capital, preferences and industrial-clusters" (Basit, Wong, Hassan, & Sethumadhavan, 2020, p.123), they would have the same growth, survival and profit rate as their male entrepreneur counterpart.

Tambunan (2009) discovered that most Asian and South East Asian women-entrepreneurs owns micro enterprises, or better known as MIEs. These sorts of enterprises are deemed easy to run as the requirements as easily fulfilled; small fund, skills & technology. Malaysian businesses too are mainly male controlled. Hussein (2016) quoted World Economic Forum (2016), in which it stated that Malaysian economy and political arena is lopsided when it comes to gender participation (106/144, lowest quartile). The number of women representatives are rather low in these two fields. Mason & Ibrahim (2012) and Rashid et al. (2015) highlighted insufficient institutional assistance such as "macro-environmental issues" (Basit et al., 2020, p.123) to be among the reasons why it becomes

difficult for women-entrepreneurs to achieve success. Tanusia et al., (2016) built on this notion by discovering a positive correlation between governmental support and women-owned business. The study also further stated how women-entrepreneurs are getting the short end of the stick due to insufficient “knowledge, skills and social network to support their businesses in Malaysia” (Basit et al., 2020, p.123). The extent to which this is true among Punjabi women will be discussed in this article. Is it true that Sikh women also do not have sufficient knowledge and skills in running an online business? Is it true that they do not get support and attention from the government or the community itself? Do their social networks help in business? These are among the questions to be answered in this article.

Research Objectives

This study is exploratory as no preliminary study has been done on Punjabi women in the online business aspect. There are three main objectives to be achieved namely:

1. What is the main reason Punjabi women are involved in online business?
3. How does their family dynamic influence their business growth or success?
2. What are the challenges faced by the Punjabi women in this business?

These three objectives will help the researchers to understand digital business adaptation among the Malaysian Punjabi women well.

LITERATURE REVIEW

Social Networking Sites

According to Marsden (2011), there are multiple networking sites which are famously used by users globally today; Facebook, Twitter, Youtube, Wikis, Skype, Whatsapp, Instagram, and Pinterest. Social networking according to Kirschner and Karpinski (2010) is a platform where entrepreneurs are able to engage their buyers further by communicating with them, indirectly building a relationship with more followers and have better engagement and connection. Another benefit of social networking sites are the user friendly design which heavily focus on communication aspect; swap ideas, post updates and comments, or participate in activities and events, while sharing their wider interests” are also reasons why social networking sites are so popular among entrepreneurs (Kaplan & Haenlein, 2010; David et.al., 2014 as cited in Hashim, Nor, & Janor, 2016, p.84). Kemp (2020) on wearesocial.com in January highlighted that there are 4.5 billion users connected to the internet with more than 3.8 billion people using social media. The average user spends about 6 hours and 43 minutes daily online, which equals to about 100 days in a year. Thanks to the current Covid-19 pandemic, researchers in the current study believe the number would have surely increased by now 45% (3.6 billion) of the world population.

S-Commerce

According to Wang & Zhang (2012), S-commerce can be seen as a part of e-commerce which still very involves social media but is more focused on the seller and buyer social interaction which enables selling and purchasing of products and services. Stephan & Tobia’s (2010) study indicated that s-commerce is a fast-growing trend in which the seller can be a representative of a firm or individual entrepreneur. S-commerce functions to persuade buyers to make the purchase. Yadav *et al.* (2013, p.312) defined it as “exchange-related activities that occur in or are influenced by an individual’s social network in computer-mediated social environment, where the activities correspond to the need recognition, pre-purchase, purchase, and post-purchase stages of a focal exchange”.

S-commerce allows hundreds of buyers to be in the comforts of their own home in various geographical location and yet stay connected with the seller (Kuppuswamy & Narayan, 2010). The Covid-19 pandemic has truly further pushed s-commerce to the forefront as people worldwide go in lockdown mode, all transactions began taking place socially through online platforms. Researchers in current study observed hundreds of Facebook Live in which entrepreneurs were going live on their Facebook channel and promoting their products and services with many users posting questions in real-time seeking more information about the products and services. Anderson *et al.* (2011) stated that entrepreneurs who engage in s-commerce are more likely to keep their customers happy and satisfied as they rely on their customers reviews and to build a bigger customer base (Weijun & Lin,

2011). Wang et.al. (2012) study which focused on 292 respondents discovered that communication among peers online on products and services had a positive impact on purchasing decision. Vries et al. (2012) also discovered a positive correlation between positive comments, number of likes and purchasing decision. S-commerce allows more connectivity for entrepreneurs due to the speed and reach of reviews left by consumers (digital word-of-mouth) (IBM, 2009) and this directly leads to more buyers or consumers for the sellers (Curty & Zhang, 2011).

An entrepreneur is an individual who kick starts a business and oversees the entire operation to gain money (Merriam-Webster, 2020). A more detailed definition is given by Burns (2011) in which he described an entrepreneur as “a person who starts a business in order to make money. It is an individual who runs a so-called small business, works as an employee, and assumes all the risks and rewards of a given business venture, idea, or good or service offered for sale” (Burns, 2011 as cited in Hashim, Nor, & Janoh, 2016, p.86). Hisrich (2011) further outlined the role of an entrepreneur as someone who “perceives an opportunity and often exhibits biases in taking the decision to exploit the opportunity. This exploitation of entrepreneurial opportunities includes the designing of the actions to develop a business plan, acquiring the human, financial and other required resources, and responsible for the success or failure” (Hisrich, 2011 as cited in Hashim, Nor, & Janoh, 2016, p.86). Among the many benefits of social media, entrepreneurs gain the most from the vast reach the social media has to offer. It offers an interactive mode of communication between seller and buyer to cross verify all information and doubts before making a purchase. Researchers in the current study would be focusing on Malaysian Punjabi women entrepreneurs who have been selling products or services via social media and gaining profit through s-commerce.

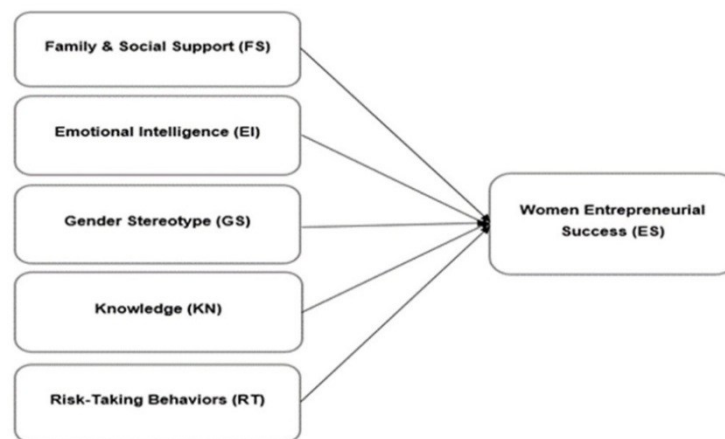
An article in marketingmagine.com (2017) quoted Dheeraj Raina (MD of AdParlor Asia) saying that Malaysia is “the fourth largest market in the world for social commerce adopters, with social media users who are highly likely to convert into paying customers” (Dheeraj Raina, MD, AdParlor Asia, 2018). The article further stated that “Malaysia is one of the most digitally connected economies in Asia Pacific. Besides boasting a large, connected consumer base, this also means that global social and digital trends are likely to impact business here – fast. As such, social media and the socially connected consumer can be expected to continue pushing businesses to evolve quickly, or risk being left behind” (Marketingmagazine.com, 2017). This indicates that the digital space is today’s market where all buying and selling takes place. If one examines it closely, almost everything is available online today for sale; foods, clothes, accessories, beauty products, gadgets, daily household items and the list goes on.

CONCEPTUAL FRAMEWORK

Researchers in the current study would be utilizing a conceptual framework which was used by Basit et al., (2020) in their paper of Entrepreneurial Success: Key Challenges Faced by Malaysian Women Entrepreneurs in 21st Century. Researchers in the current study believes that the framework used by Basit et al., (2020) best encapsulates the focus of the current study.

According to Alam, Senik, & Jani (2012), women-entrepreneurs faces obstacles in maintaining a harmony and striking a balance between work and family life as they are often pressed for lack of time. Further adding to this point is Loveline’s (2014) study which indicated that women entrepreneurs are often seen holding and juggling multiple roles as a business owner and also as a wife and mother who has to ensure all household chores and children are well taken care off. This level of stress is often positively co-related to their dwindling success in business. Shelton (2016) discovered the key to success for many women-entrepreneurs come from their ability to role-share their responsibilities at home and work. However, Welsh, Memili, & Kaciak (2016) as cited in Basit et al., (2020) revealed that it’s not easy for women-entrepreneurs to “gain moral support and encouragement from their family and friends in venturing business as it leads to increase personal problems due to family authority and power to business interference” (Basit et al., 2020, p.125). According to Fernandes & Mota-Ribeiro (2017), women-entrepreneurs often faced difficulties in getting formal capital assistance, therefore women entrepreneurs’ initial investments are generally from near and dear ones as they continue to cast doubts over the success and sustenance of the business. Hahn, Minola, Bosio & Cassia (2019) through their study discovered the positive correlation between start-up businesses success and familial support and finance.

Figure 1: Women Entrepreneurial Success (ES)



Source: Basit et al., (2020, p.125)

Aldás-Manzano et al., (2012) as cited in Basit et al., (2020) stated that “women-entrepreneurs found less self-confidence, less optimism and higher fear of failure personality traits which has negative relations with performance but there is no proof of performance measurement link with their emotional-intelligence” (Basit et al., 2020, p.126). Mortan, Ripoll, Carvalho, & Bernal (2014) stated that by keeping emotions in-check and utilizing it positively can most certainly assist business owners in ensuring success as emotional intelligence is key in making a good leader, maintain a warm relationship with customers, harness innovation and entrepreneurship skills (Nghah & Salleh, 2015). Pollack, Burnette, & Hoyt (2012) stated that when it comes to making decisions pertinent to their business; women-entrepreneurs were discovered to lack self-esteem and self-efficacy, but Schneider’s (2017) study as cited in Basit et al., (2020) countered this by discovering “entrepreneurial self-efficacy adaptation has greater contribution to women-entrepreneurial success” (Basit et al., 2020, p.126). Similar pattern was observed in Ürü, Çalışkan, Atan, & Aksu’s (2011) study as cited in (Basit et al., 2020) which identified qualities such “aggressiveness, competitiveness and proactive behaviors (self-motivation and self-management in EI)” (Basit et al., 2020, p.126) were found to be the reason behind women-entrepreneurs irrational decision-making and findings from Nassif, Andreassi, & Tonelli (2015) validates this fact further as it was discovered that women-entrepreneurs are emotionally driven and this can hamper their professionalism and business growth.

Fairlie & Robb (2009) indicated that finance, good workers and prior business experience are factors which makes men more successful as entrepreneurs than women. Many a times living in a community which champions patriarchal values can also be considered factors which dampens the spirit of women-entrepreneurs for success (Ylinenpää & Chechurina, 2000). Stone aged practices which views men as more likely to be able to survive the ups and downs of the business pushes people to view women-entrepreneurs less ambitious. This view was further confirmed by Croson & Gneezy (2009) and Minniti (2010) in which the researcher’s highlighted women-entrepreneurs were discovered to avoid taking risks, not confident and intimidated when faced with risks. Bardasi, Sabarwal, & Terrell’s (2011) pointed that women-entrepreneurs are more likely to own businesses which yields less profit and has a slim margin of growth. However, further study on these women-entrepreneurs interestingly revealed their success mantra; “successful women-entrepreneurs are confidence, resilience, passionate, with leadership skills and single-mindedness that helped to scale their businesses” (Basit et al., 2020, p.126). Thanks to their risk-averse personality, women-entrepreneurs are discovered less likely to get in debt as discussed in literature above, women-entrepreneurs normally have problem getting their business financed. The chances of success for women-entrepreneurs is stated to be higher if they venture into feminine based businesses such as beauty, accessories, women clothing, women health supplements, etc. (Yacus, Esposito, & Yang, 2019).

Researchers in the past have revealed that a number of factors can hamper the success of women-entrepreneurs. Zhou (2010) through his findings indicated that women-entrepreneurs lack related industry knowledge, while Prasad, Naidu, Kinnera Murthy, Winkel, & Ehrhardt (2013) in their

study analysis discovered that women-entrepreneurs lacks work experience, and Mauchi (2014) stated that women-entrepreneurs have been discovered to have insufficient skills related to management or business. Women-entrepreneurs who takes over from a senior family member or SMEs' are more likely to have limited experience in running the business and this leads to hurdles in acquiring much needed financial boost and skilful workers which could help the business growth (Fairlie & Robb, 2009). Irrelevant of the nature of business, it is vital for women-entrepreneurs to have a skilful group of people driving the company's missions and visions and strategies. However, since many women-entrepreneurs runs a small-scale business, they are less likely concerned about structural positions (Loscocco, Robinson, Hall, & Allen, 1991). This view was however quashed by Krueger Jr, Reilly, & Carsrud, (2000) as they discovered that as long as women-entrepreneurs are confident about having the right tools such as skills and knowledge and some experience about the ins and outs of running a business, they are most likely to be successful and Aslam, Latif, & Aslam's (2013) study validated this through their study which discovered that despite being less educated, women-entrepreneurs can still make it big. Sousa, Carmo, Gonçalves, Cruz, & Martins (2019) however made a good point in which they stated that trainings to know more about the product or services they are selling; formal and informal are vital for the sustenance of the women-led businesses.

All the literature discussed above spoke of the emergence of s-commerce, women entrepreneurs and the challenges faced by them in order to have a successful business as well as the ideal and practiced reality of women's' role in a Sikh household can be looked into by focusing on Basit et al., 2020 conceptual framework. How does the Malaysian Punjabi women-entrepreneurs juggle between maintaining their household and running a business online, does running a business which is solely based online work in their benefit, how does their family dynamic influence their business growth or success, what sort of support is required by the Malaysian Punjabi women-entrepreneurs to further grow their business are all questions which will be explored through this framework.

RESEARCH METHODOLOGY

Sampling Design

The researchers in current study adopted a qualitative method for this research which is a focus group. Focus group method was decided due to its cost and time efficiency in gathering data. Overall, eleven Punjabi Sikh women, aged between 20-50 years mainly from Penang, Perak, Selangor, Kuala Lumpur and Johor. They were approached during an important prayer's session held in Kuala Lumpur which gathers many Sikhs from other states. The researchers gathered respondents with varying age and education level as the researchers wanted to find out if age and education can be considered as factors which either hampers or encourage the Malaysian Punjabi women-entrepreneurs business growth. All participants were informed of the topic and upon them consenting to be a part of the discussion, the researchers finalized the time and date for the group to attend and discuss. The focus group discussion lasted for about three hours.

Research Procedure

The researchers filtered the participants by asking them about the nature of their business and also about the social media platform which they advertise their products and services on and also their family and community dynamics (mainly in relation to work-life balance, the Sikh community support). Upon completing the sessions, the researchers began initial coding which saw a wide category of codes. Upon discussion and identifying recurring important themes, the researchers started focused coding in which the researchers combined some codes under a bigger theme while eliminating some themes which did not have much insights. The reason why researchers combined some codes under a bigger theme was simply because some of the ideas shared by the participants were eventually discovered to be recurring, but in different words. Hence it was important to connect the ideas to a bigger theme (Charmaz, 2006; Krueger, 1994; Ritchie & Spencer, 1994).

FINDINGS AND DISCUSSION

The findings of the study were related to digital business adaptation among the Malaysian Punjabi women. There were 11 respondents from different background in this study as shown in the Table 1 such as age, location, education and marital status. All participants in this study are Punjabi women.

Table 1: Demographic Information of Respondents (N=11)

Items	Information	n	%
Age	20-29	2	18.2
	30-39	4	36.4
	40-50	5	45.5
Location	Penang	1	19.1
	Perak	4	36.4
	Selangor	2	18.2
	Kuala Lumpur	2	18.2
	Johor	1	19.1
Education	SPM	1	19.1
	Diploma/Foundation	5	45.5
	Degree	4	36.4
	Masters	1	19.1
Marital Status	Single	2	18.2
	Married	6	54.5
	Divorced	3	27.3

The digital business adaptation of eleven Malaysian Punjabi women has been studied. Most respondents were in age range of 40-50 years with a total of 5 people (45.5%), followed by 30-39 years (36.4%) and 20-29 years with 18.2%. Majority of the respondents were from Perak with 36.4%, followed by Kuala Lumpur and Selangor with a percentage of 18.2%. Penang and Johor had the lowest percentage of 9.1% respectively. As for their education level, the highest percentage is 45.5% where respondents have a diploma or completed their foundation studies. It is found that 36.4% or four respondents are graduates from university while one respondent possess SPM and Masters respectively. The results show that the Punjabi women equipped themselves with good education background. The data above also provides the respondents marital status. The highest online entrepreneurs are married women with a percentage of 54.5%, followed by divorcees of 27.3% and single women with a percentage of 18.2%.

This article uses the conceptual framework by Basit et al., (2020) which examines entrepreneurial success among the Malaysian women entrepreneurs. Based on the data collected, researchers have identified five main themes that work on the situation experienced by Punjabi women entrepreneurs in an effort to use digital innovation in their business. The five themes are stereotypical gender-based business, digital adaptation and business survival, knowledge of social media, female role conversion to financial provider as well as risks and challenges of online business.

Theme 1: Stereotypical Gender-based Business

The discussion further looked at the nature of the business respondents ventured into online. Almost half of the respondents ventured into food industry. Food industry showed the highest number as most of the Punjabi women from young had been taught of kitchen responsibility. In today's modern world, women are able to break that stereotype and are able to change that into digital business that brings profit. Apart from that, many Punjabi women are interested to explore beauty industry, clothing, accessories and health supplements. These industries have become an option for Punjabi women to use the skills they have and transform them into a profitable business. The discussion further revealed that Punjabi women are forward thinkers as they view venturing into more online businesses to keep up with tough economic times ahead.

Theme 2: Digital Adaptation and Business Survival

Punjabi women are currently on par with the digital platform in the modern world. They have understood that in the competitive world it is important for them to step out from the stereotypical

thinking and upgrade themselves with the latest technology advancement. This was visible from the discussion held where all respondents spoke of utilizing social media such as Facebook, Instagram, and WhatsApp and also e-commerce platforms such as Lazada, Shopee and Mudah to run their online business. This suggests that Punjabi women are evolving themselves to penetrate the digital market. However, a few respondents also highlighted the fact that they prefer to do face to face or physical business as compared to solely going digital. The option of doing business through mix mode must be seen positively as this suggests that Punjabi women are getting themselves more equipped and comfortable with selling their products online.

In addition, many of the respondents feel that having digital presence in today's time is important for businesses to survive. This is a positive feedback given by the Punjabi women as they are beginning to see the future of business transactions in this IR 4.0 era. The traditional thinking where Punjabi women were expected to have the men actively involved with them in anything they do is slowly diminishing. Digital presence has pushed these women to have an independent identity which allows them to feel as an equal breadwinner. Only one participant from the 40-50 age category believes that digital presence is not important for business to survive. This could be attributed as a case of not exploring the digital world.

In the focus group, Punjabi women displayed a good understanding on the importance of digital presence. They have moved social barriers of fear and seeking permission to venture into activities which allows them to be independent. Among the benefits of going digital, respondents stated relevance, ability to connect to a wider range of audience regardless of geographical distance as well as speed of delivering information to customers as some of the most crucial advantages of having an online business. They also believe that evidently, Punjabi women are transforming themselves to be competitive entrepreneurs. Further understanding was seen as the respondents responded that:

"It's evolution of the market place. With digital presence, we are able to reach more audiences than marketing our products or services traditionally. Especially after COVID-19, the new norm is making online purchases".

(Jasmeen Kaur, 32, Penang)

"If we didn't do it before, we have started now. It also eliminates a major cost in terms of what comes along with maintaining a brick mortar/mom & pop shop. Of you want to stay relevant and reach a wider market, digitalisation is key in every business."

(Manjit Kaur, 46, Kuala Lumpur)

It is interesting to see that Punjabi women have changed their mindset and are able to distinguish the fact that the digital world and social media have endless possibilities and can be used to enhance their livelihood rather than just keeping in touch with family and friends. This was evident through one of the responses quoted above *"If we didn't do it before, we have started now"*. This excerpt exudes confidence in embarking on competitive journeys.

Theme 3: Knowledge of Social Media

Punjabi women entrepreneurs are more comfortable using Facebook (90.9%), followed by Instagram (63.6%) and WhatsApp (45.5%) to promote their products or services. Further discussion revealed these Punjabi women entrepreneurs are active on Facebook and have created a Facebook page called SIKHMOMS to gather all single, divorcees, married and teenagers to promote their products. This Facebook page has 5700 members to help Sikh women of any status to upgrade themselves. They believe in helping one another, encouraging them to step out the stereotypical thinking and rub shoulders with men in the world of business. Punjabi women in this group are seen to change their mindset and embrace changes with the modern world. In the focus group, ten Punjabi women entrepreneurs prefer using social media to promote their products and services due to its user-friendly design. They also claimed that connectivity is a big push for their online business as everyone is on social media. Besides that, it is really easy for them to share videos, pictures and testimonies online. In short, by going digital with their business, they have been able to save both time and money. This factor was seen as key in making Punjabi women entrepreneurs believe that they have taken a step in the right direction.

The data also showed that, majority of Punjabi women's online business target market are adults and young adults. This may be because many of them are from an educated group, know how to use social media and often buy goods online. Therefore, this motivates women traders to focus on the needs of this group. In addition, there are also products or services that are catering for senior citizens and teenager's needs. As online entrepreneurs, Punjabi women have access to all groups of races. Malays have been the highest percentage seen in helping the Punjabi women in their business. While Sikhs and Indians show a low percentage of 1 with the Sikhs at a margin. It is encouraging to see that these Punjabi women cater to all races and not limiting their products to a certain group in the society. This indirectly encourage other women to trail their footsteps as well.

Theme 4: Female Role Conversion to Financial Provider

In response to the question on the reasons behind venturing into online business, eight respondents claimed that it helps to generate income for themselves and their family, followed by six Punjabi women responded that online business serves as a side income. This is clear that the stereotypical mindset of traditional Punjabi families that men are the sole breadwinner is no longer applicable. Punjabi women, who have been typically perceived as mothers and wives have begun to play an important role in supporting their families financially. In today's modern and challenging times, Punjabi women no longer surrender to such cultural rules. They emerge as a strong and equal member who provides financially for the family. Three Punjabi women preferred being their own boss and are utilizing the skills they have. This percentage also reflects on Punjabi women taking ownership in a male dominant society that suppresses them constantly. This is a positive revelation to women to be leaders as well. Two Punjabi women sees online business as a hobby and one respondent gets an additional income from her online business besides her primary office income.

Inspiration plays an important role in a person's life. The data showed eight respondents ventured in online business purely based on self-motivation. Coming from a male dominant culture, this does not come as a surprise as women are not encouraged to develop themselves. Only four Punjabi women received family support. This boils down to the society's expectation of women being confined to domestic roles. Whereas, two respondents received inspiration from their friends that influenced them to take the bold step of stepping out of their stereotypical environment settings.

Theme 5: Risks and Challenges of Online Business

Any business be it online or face to face comes with challenges. Competitive pricing and competitors and also marketing and advertising are seen as some of the most common challenges faced by Punjabi women entrepreneurs. However, 4 out of 11 respondents showed that they are the victims of a judgmental Sikh society. This number is not alarming as the Sikh society has set rules for Punjabi women to be housewives, mothers and wives. These roles are instilled in them from a young age as men are always seen as superiors and dominant. Among the other challenges they have faced with going digital are gaining customers trust (3 out 11 respondents), fake reviews, less profit, and fraudulent customers (2 out 11 respondents) and product delivery, rapid changes in technology and family discouragement (1 out 11 respondents).

Despite the challenges faced by Punjabi women entrepreneurs, they have found ways in dealing with them rather than quitting. The survey showed that they have taken initiatives in joining the buying and selling groups, doing more promotion, participating in bazars to meet people face to face and help themselves to increase their skills. Some of these women pay for advertisements to have their products known in the market. In order to attract more customers, these women provide giveaways and try out new fusion recipes to improve themselves. They also provide free samples to customers and potential customers. These Punjabi women upgrade themselves by learning the best way to market their products. Besides, they use more online application to help them overcome these challenges. This is an important discovery as this indicates that age is not a barrier in allowing these women to improve themselves further and education can be seen as an encouraging factor in allowing these women to have a better understanding on how they can further improve their business. This also indicates that Punjabi women entrepreneurs are independent and values their self-made businesswoman identity as they try really hard to sustain their business and remain relevant in this digital age.

On a national level perspective, the discussion revealed that the government does not play an important role in assisting Punjabi women entrepreneurs. 5 out of 11 respondents claimed that the

government has not supported the non-Bumiputera's in their online business, while six respondents are unsure if there is such a support provided by the government. Some of the women entrepreneurs however claimed that the government have recently amped up assistance to the B40 category of non-Bumiputera women entrepreneurs by providing related trainings. However, generally the discussion revolved around minimal to no assistance at all from the government to non-Bumiputera women entrepreneurs. Respondents kept saying it is apparent that the government does not help as they have not seen anyone in their business circle receiving any help. However, they also admitted that perhaps the government do provide assistance, but it is unknown to them due to lack of awareness. It is interesting to note that only three individuals have registered their online businesses with Suruhanjaya Syarikat Malaysia (SSM) while eight of them are not registered with SSM. It is compulsory for anyone running an online business in Malaysia to register their business with SSM and obtain an e-commerce licensing. The process can be done both online and offline with a maximum RM100 fee. The fact that majority of respondents have not obtained an e-commerce licensing could be due to the fact that we often have this stereotypical thinking of all government related work would involve multiple levels of bureaucracy, hence costing us more time and money and also the racial stereotype "the government only helps the Malays, we non-Bumis will not get the license" mindset. The researchers believe with more efforts from SSM on social media sites, especially buying and selling groups and pages in regard to e-commerce licensing, this issue can be tackled.

CONCLUSION

Based on the study of Basit et al., (2020), women entrepreneurial success (ES) covers five main things namely family and social support, emotional intelligence, gender stereotype, knowledge and risk-taking behaviors. In this qualitative study, the researcher found that there are three similarities found namely gender stereotype, knowledge and risk-taking behaviors that are summarized as stereotypical gender-based business, knowledge of social media and risks and challenges of online business. However, through data collected from the focus group, researchers found that the experience of Punjabi women in online business is slightly different, especially in two main aspects, namely digital adaptation and business survival and female role conversion to financial provider.

Punjabi women are no longer seeing the fact that they are bound to or restricted to domestic roles alone. They have equipped themselves with the current knowledge pertaining online business. Online business has given them the opportunity to work anywhere at any time that helps them to juggle between home and work effectively. The public and Sikh society in general views them as educated women and have started to accept the fact that the Punjabi women make good entrepreneurs. Punjabi women have also contributed and improved their household economy. This has allowed Punjabi women to re-look and re-assess their roles and identity in a household. Online business has given them the chance to break the typical thinking where the men earns and supports the family. This has allowed to women to enjoy their own income and help the household combined salary. Besides, Punjabi women found that online business helped them to promote their brand and do marketing effectively as many people are buying online.

Multiple researchers (OECD, 2004; Bajpai, 2014; Krishnamoorthy & Balasubramani, 2014; Bhardwaj, Parashar, Pandey, & Sahu, 2012) have identified that women-entrepreneurs obstacles in order to achieve success are attributable to gender stereotype, lack of family and social support, weak personality traits, lack of education and knowledge (Basit et al., 2020, p. 123). In this study, gender stereotype can be seen as the main reason why Punjabi women are quite limited in running their business. Apart from focusing on products related to female gender such as beauty products, food (including appliances) and jewelry, the majority of them also still do domestic work such as managing the house and children. Therefore, technology and social media innovations make it easier for them to run an online business. Most of them are involved in these business activities to obtain financial resources and ensure family stability. The adaptation to this new role is actually evidence or a sign that the female gender is not subordinate in its status and does not need to depend on other individuals especially the male gender. In line with this, Ambepitiya's (2016) study highlighted remarkable contributions by women-entrepreneurs in developing countries to further advance business economically, socially and ecologically (Basit et al., 2020, p. 123). Researchers are confident that with a high level of education, determination and dedication, Punjabi women are also

able to generate to the country's economic growth as well as increase social awareness that women are able to do business and succeed.

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BAFE059: BE EDUCATION 4.0 READY: THE FLIPPED CLASSROOM CASE FROM MALAYSIA

Choy, Johnn-Yee^a, Ng, Annie-Cheng-San^b, Foo, Alex-Tun-Lee^c, Mah, Pei-Yew^d

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: choyjy@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ncsan@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: alexfoo@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: mahpy@utar.edu.my

Abstract

Industrial Revolution 4.0 combines technologies and human capabilities to bring convenience and change the way we live, learn and work. The emerging technological breakthrough has also changed the entire workforce. It requires the world to prepare human workforce with innovativeness, critical thinking, entrepreneurial and cognitive flexibility in their dealings with the robots. The change is particularly noticeable in the education industry as traditional learning and teaching methods had lost its effectiveness. The educators must keep in step with the Education 4.0, in line with the demands of IR 4.0 imposing upon the future workforce. Interdisciplinary trainings, prioritizing creativity and innovation, and greater personalized learnings are some examples which call for a better teaching approach. Flipped classroom (FC), though not novel, is a promising avenue promoting flexible, personalized, and student-centered learning environment. The fundamental issue driving the motivation of research lies on educators' awareness about the FC and their readiness for such approach. This paper purports to examine the awareness and readiness of FC among the educators in Malaysia. Questionnaires were distributed and data were analyzed using Statistical Package for Social Science (SPSS). The statistical findings revealed that majority of educators are aware and recognize the benefits of FC approach in the teaching paradigm. However, most of them have low readiness to adopt FC approach. Time constraints, lack of technical support and infrastructure as well as the resistance to change between learners and educators are the main challenges hinder the effectiveness in adoption of FC in higher education. In conclusion, educator must evolve, aware, accept the changes and address the challenges in order to get ready to flip the classroom.

Keywords: Education, Industrial Revolution 4.0, Higher education, Flipped classroom

INTRODUCTION

The Fourth Industrial Revolution (IR 4.0) represented new ways in which technology shapes every aspect of our daily life. It combines technology and human capacities to bring convenience and change the way we live, learn and work. It brings opportunities as well as threats, which caused tomorrow's work force to be significantly different from today. Malaysia Minister of Human Resources reported that 54% of jobs in Malaysia are in high risk of being displaced by the technology in the next decades (Ramasamy, 2019). Additionally, majority of the primary school children (65%) will be ultimately end up working in completely new job types that don't yet exist (World Economic Forum, 2016). A key step to prepare the children for the future workforce is to provide quality education opportunities and integrate active learning activities into the classroom. Hence, the traditional way of learning and teaching in classroom is slowing losing its lustre.

Impact of IR 4.0 in Malaysia Higher Education

IR 4.0 has accentuated the immediate response from higher education to transform the learning and teaching delivery and re-design of education system. Higher education is in the deep

crisis of massive change. New approach of education is vital to ensure Malaysia's preparation in producing future ready graduate who are adaptive and responsive (Peter Druker, 1997 as cited in Shahroom & Hussin, 2018). In Malaysia, Ministry of Education introduced the Malaysia Education Blueprint 2015-2025 and Higher Education Framework (MyHE) to guide the higher education system and transform significantly in order to align with the industrial revolution. Table 1 summarized how the alignment of MyHE 1.0-4.0 with the industrial revolution. To facilitate the revolution of MyHE 4.0, flipped classroom was introduced in higher education which focus on student centered learning.

Table 1: Summary of the Revolution of Industry (IR 1.0–4.0) and Education (ED 1.0–4.0)

Early 18 th Century	Industrial revolution 1 (IR 1.0)	Introduction of mechanical production: water and steam powered machines.	Education 1.0 (receive, respond and regurgitating): Teacher centered
1820 - 1870	Industrial revolution 2 (IR 2.0)	Electrical energy as the main contributors.	Education 2.0 (communicating, connecting and collaborating): Learners as receptacles of knowledge.
Beginning of 1980	Industrial revolution 3 (IR 3.0)	Automation	Education 3.0 (connectors, creators and constructivists): Educators as facilitators.
2000s and upcoming	Industrial revolution 4 (IR 4.0)	Cyber physical system	Education 4.0 (Innovative): Learners as connectors, creators and constructivists.

Source: Ministry of Higher Education Malaysia (2018).

Flipped Classroom (FC)

FC is a technology supported pedagogical innovation, by providing pre-recorded flipped video/pre-class materials in advance to students, then inverting the classroom into more interactive group learning activities (Chan, Lam, & Ng, 2020). It focuses on before and during classroom activities. FC approach adopts active learning strategy to modify the traditional classroom environment in order to spend more time on problem solving, inquiry, and discussion between the learners with the presence of educator. FC provides flexi-learning environment, which advantage the personalization of learning, and encourage active learning to the learners. It aids the higher education system to conform the learners rather than the learner to system (Lundin, Rensfeldt, Hillman, Lantz-Andersson, & Peterson, 2018).

Although the FC is gaining the recognition of worldwide education, the success of adoption of FC is largely depend on the learners and educators (Hadad, 2007; Shraim & Khlaif, 2010). This is supported by Lundin et al. (2018) which stated that the effectiveness and benefit of FC has yet to fully utilize and it needs the readiness and support between the educators and learners. Despite many studies on FC in higher educations, it is mainly focus on the perception of learners (Zainuddin & Attaran, 2015; Tomas, Evans, Doyle, & Skamp, 2019; Chan, Lam, & Ng, 2020). Nevertheless, limited studies assess on the perception of educators in relation with their readiness and acceptance of FC (Osman, Masood, & Mokmin, 2019). It seemed to be ignored the role of educators in collaborating FC in the education ecosystem. There is lack of discussion on the readiness of FC among educators despite they are the creator of pre-class flipped materials, facilitator of activities inside the classroom, and motivator for learners. This is further agreed by Lai, Chundra, and Lee (2019) and Goh and Ong (2019). Higher education's educators are the wheel for the big changes to revise the way of teaching and learning environment by introduce the FC into their course and prepare the learners to be the industry ready graduates. But, are the educators ready to introduce and flipped the classroom? For these reasons, this paper purports to examine the awareness and readiness of FC among the higher educations' educators in Malaysia.

As limited research on readiness of FC among educators, the current research serves as exploratory study to discover the following:

- 1) Are the educators in higher education aware about the FC?
- 2) What are the educators' perceptions in using FC in higher education?

- 3) What are the challenges that may hinder the effectiveness of FC in higher education under the perception of educators?

LITERATURE REVIEW

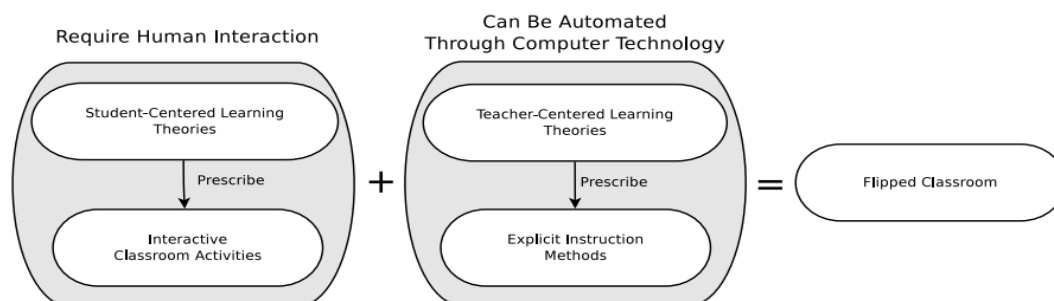
Defining Flipped Classroom (FC)

The term of FC or “Inverted Classroom” is given by Lage, Platt, and Treglia (2000) with definition of “inverting the classroom means that event that has traditionally taken place inside the classroom now take place outside the classroom and vice versa” (p.32). According to Bishop and Verleger (2013), FC approach divided into two main components which are:

- 1) Direct computer based individual instruction outside the classroom, and
- 2) Interactive group learning activities inside the classroom.

Generally, FC relocated the learning activities which traditionally conducted within classroom as such reading lecture notes or teaching material that learners engage with before attending class. According to Sengel (2016), the key practice of FC is educators utilize the internet applications and multimedia properties in order to provide relevant flipped materials and introduce the course content to learners in advanced. Learners can manage their learning by viewing or pausing the flipped video based on their needs (outside classroom). It then applies active learning strategy to create opportunities for higher order thinking during classroom discussion, which enables the learners to think about, and work through problem (Strayer, 2012). FC represents the expansion of curriculum (Bishop & Verleger, 2013). It reforms the teacher-centered learning to student-learning centered and the responsibilities of learning shifted from educators to learners. As such, the educators' role will shift from “delivery of ready-made knowledge to mentor and facilitator” (Driscoll & Petty, 2013; Evseeva & Solozhenko, 2015, Chan, Lam, & Ng, 2020). A summarized of definition of FC is presented in Figure 2.1.

Figure 2.1 Definition of FC



Source: Bishop and Verleger (2013).

The FLIPPED Approach

According to Chen, Wang, Kinshuk, and Chen (2014), to ensure the effectiveness of FC approach in education system, all the seven (7) pillars below must exist:

(F) Flexible environment: FC provides flexible learning environment which combined active learning, peer-assisted, collaborative and cooperative learning, and problem based learning styles. FC environment should be personalized as per what learners want to learn.

(L) Learning culture: To ensure the effectiveness of FC, learner-centered culture is adopted. Active learning opportunity is created for learner to exposure, think about and reflect on what they are doing. FC encourage more time spending in classroom for discussion and problem solving between learners.

(I) Intentional content: Educators need to identify, evaluate, design and personalized the curriculum learning content based on the students' want. It is essential for educator to evaluate what content should be placed outside classroom (self-learning space) and what content should be placed inside classroom for deep discussion.

(P) Professional educator: FC is not designed to replace the educators with flipped videos or computer technology (Sengel, 2016). In fact, educators are playing an even more vital role to facilitate the learning. They need to provide timely feedback to learner's queries, design and customize learning content as per learner's needs and control chaos in the classroom activities.

(P) Progressive networking activities: FC approach promotes the progressive learning, which encourages "learning by doing" and "learning by networking" rather than the traditional instructional learning. It aid to assimilate existing knowledge as well as discover new knowledge with the use of technology and interaction with other learners.

(E) Engaging and effective learning experience: FC emphasizes on engaging and effective learning experience. If the educator neglected the learner's learning experience FC, it will significantly affect the learner's engagement in learning. Hence, educators need to keep track the learner's learning experience by considering the structure, dialogue, transactional distance, and learner autonomy.

(D) Diversified and seamless learning platform: Diverse learning platforms are encouraged in order to fulfill the needs of personalization in the demand of IR 4.0. Learning platform is vital as it requires supporting the self-learning activities outside the classroom in order to provide seamless learning experience.

Advantages of FC

With an increasingly technology driven society and the demand of IR 4.0, learning innovatively is significant important. According to Cornu (2011), gen Z and millennial learners are the technology savvy users, 90% of them play video games, 20% are addicted to internet and the traditional classroom teaching approach is no longer fulfill their demands. By implementing the FLIPPED approach, it motivates the technology savvy users. The past studies found that the learners involved actively in the learning process nowadays. Learners can enjoy learning anytime and anywhere (Chen, Wang, Kinshuk, & Chen, 2014). They can view, pause or stop the flipped videos or materials based on their conveniences. Educators dedicated more time for discussion, which improve the interaction between educators and learners. FC provides opportunities to interact with others (learner with educator or learner with learner) and give each learner have an equal opportunity to access to their educators (Zainuddin & Attaran, 2015). It aid educators to create personalized learning space and encourage autonomous learning (Chan, Lam, & Ng, 2020) in order to produce the future ready graduates.

The Role of Educators in FC

According to Goh and Ong (2019), the role of educators in FC was totally revamped as compared by the conventional teaching pedagogy. Educators are the mastermind in FC, they are no longer applying "talk and chalk" pedagogy but swift to facilitator role to guide and direct the learners in order to stimulate higher order thinking. In order to enhance the effectiveness of FC, the creativity and interactive technology skills of educators are important. It determines the delivery of learning content, shapes the pedagogical model and motivates the learners for pre-requisite learning. Prior to the implementation of FC, educators should be aware of their role and be fully prepared (Jones, 2016). Hence, this study aims to explore the awareness, readiness and perception of educators in the implementation of FC in higher education of Malaysia.

RESEARCH METHODOLOGY

This exploratory research aims to find out the awareness and readiness of FC among the educators in higher education institutions in Malaysia. The target respondents of this research are educators from both public and private universities in Malaysia. For public university, University of Malaya (UM) is chosen while Universiti Tunku Abdul Rahman (UTAR) is chosen for private university. Both universities are the top one Malaysia public and private university respectively in the Times Higher Education (THE) World University Rankings 2020 (THE, 2020). Being at the top, it is vital that both universities highly sensitive to environmental changes particularly in technology environment which has dramatic changes by nature. This is important for both universities to adapt their curriculum

design to fit not only into current trend but also prepare for future trend as both universities serve as the role model for other public and private universities in Malaysia. Online survey via Google form questionnaires were distributed to both educators from UM and UTAR. As this is qualitative study using exploratory research, a total of 100 sample size (50 each from UM and UTAR) is appropriate for the research. According to Hair, Bush, and Ortinau (2009), the sample size in a qualitative study typically range from 10 to 60. Collected data were analyzed using Statistical Package for Social Science (SPSS). The questionnaire consists of cover page for basis instruction and general information, demographic profiles of respondents and awareness, readiness of educators, benefit of FC and lastly the challenges which may hinder the effectiveness of FC under the perception of educators.

Three (3) items designed to understand the awareness of FC among the educators. It then follows by eleven (11) items designed to extract the information regarding the benefit of FC from the perception of educators. To capture the readiness of educator for adopting FC, it was measured with nine (9) items in the questionnaire. The benefit of FC and readiness of educators were measured by 5-point Likert scale ranging from 1–Strongly disagree; 2–Disagree; 3–Neither agree nor disagree; 4–Agree; and 5–Strongly agree. Lastly, open ended question format was used to capture the challenges which may hinder the effectiveness of FC in the opinions of educators in higher education of Malaysia.

ANALYSIS AND FINDINGS

Table 3.1 revealed that all of the educators (100%) in higher education institutions are aware of the FC. Most of the educators know the FC approach from friends or colleagues (37%), follow by the management of higher education (33%), social media (27%) and workshop or conference (3%). Interestingly, only 30% of them get exposures of FC in their course or teaching and majority of the educators (70%) have no experience of FC in teaching. It shows that the FC approach in the higher education is still in the early phase which is consistent with the findings from Jones (2016).

Table 3.1 Awareness of FC

	YES	NO
Have you heard about FC?	100%	-
You have heard about FC from:	(%)	
Friends/ Colleagues	37	
Management of the institutions	33	
Social media	27	
Workshop/conference	3	
Exposure to FC:	(%)	
Never	70	
Experienced	30	

Table 3.2 shows the descriptive analysis finding on the benefit of FC and readiness of FC under the perception of educators in higher education. The findings in benefit and readiness of FC were then divided into three (3) levels as Table 3.3 based on the mean score.

Table 3.2 Benefit of FC

	SD	D	N	A	SA	Mean	Level
FC is useful in learning.	0	0	35	40	25	3.90	High
FC provides flexible learning.	0	0	20	70	10	3.86	High
FC motivates learning.	0	5	60	15	20	3.50	Moderate
FC improves the interaction among students.	0	0	65	10	25	3.60	Moderate
FC improves the activeness of learning.	0	2	25	53	20	3.95	High
FC enhances learning effectiveness.	0	0	30	60	10	3.8	High
FC enhances academic performance.	0	0	60	35	5	3.45	Moderate
FC enhances the confidence of students.	0	5	35	55	5	3.68	Moderate
FC is more helpful than a conventional lecture.	0	0	15	37	48	4.33	High
FC benefits learners than a conventional lecture.	0	0	14	65	21	4.07	High
FC is more engage than conventional lecture.	0	2	34	45	19	3.85	High
Overall						3.82	High

Table 3.3 Interpretation of Mean Score

Mean Score	Level
3.80 – 5.00	High
2.40 – 3.79	Moderate
1.00 – 2.39	Low

Based on the findings in Table 3.2, the mean values of all items are within 3.45 and 4.33. The outcomes are consistent with the past studies of Zainnuddin and Attaran (2015) and Osman, Masood, and Mokmin (2019), where the educators believed that FC approach are more favorable as compared to the conventional classroom. With the adoption of FC, it provides flexi-learning environment, promotes active learning, improve interaction and learning effectiveness. FC adapts the emerging technology, to merge with human connectivity, to build the digital resilience in higher education in order to produce future ready graduates. The overall mean scores in perception of implementation of FC are 3.8. It shows a relatively high and positive perception on implementation of FC among the higher education educators in Malaysia.

Table 3.4 depicted the readiness level of FC among the educators in higher education of Malaysia. Despite the positive perception on the implementation of FC and recognition of benefits in FC, the readiness of educators is still at a moderate level with overall 3.18 mean scores. From the findings, the mean values of all items are located within 2.25 and 3.79. The result of analysis shows that FC are very burdensome under the perception of educators (mean score 2.25) and they are not ready in adopting the FC (mean score 2.38). In short, the educators have moderate level of readiness towards FC adoption. Similar findings found in the past studies of Osman, Masood, and Mokmin (2019) and Chan, Lam and Ng (2020). Educators feel that the FC implementation require greater effort and time in development the materials and they are not ready in adopting the FC in their teaching although they recognized the benefit of FC adoption.

Table 3.4 Readiness Level of FC

	SD	D	N	A	SA	Mean	Level
I think I am ready to adopt FC for my class.	15	45	25	15	0	2.38	Low
I am interested in applying FC in my teaching process.	0	23	47	10	20	3.67	Moderate
I feel comfortable in teaching by integrating FC into my course.	0	40	35	17	8	2.93	Moderate
I think with the use of FC will be more effective in my teaching process.	0	30	30	25	15	3.25	Moderate
I am interested to create the assessment for students based on FC approach.	5	25	30	20	20	3.23	Moderate
I am interested in enhancing my knowledge in FC.	0	10	30	46	14	3.64	Moderate
I feel the implementation of FC in my course does not burden me.	15	50	30	5	0	2.25	Low
I want to know more about FC.	0	10	49	16	25	3.56	Moderate
I am interested in participating in activities (workshops/conferences/seminars) related to FC.	0	15	20	36	29	3.79	Moderate
Overall						3.19	Moderate

Table 3.5. The Challenges Faced in FC Adoption

In your view, what are the challenges of adopting FC :	Mean (%)
Time	58.0
Limited understanding of FC	5.0
Lack of technical support/assistance from higher education institutions	45.0
Infrastructure	40.0
Resistance to change: learners	38.5
Resistance to change: educators	30.0

Apart from determining the readiness level, Table 3.5 presented the findings on the challenges which may hinder the adoption of FC under the educators' perception. Based on the results, the major challenges are time constraints. Even though the FC is benefit to learners, but educators required greater effort, time, and skill in developing of the pre-class flipped material, planning and coordinating class activities (58%). It is then followed by the lack of technical support (45%) and conducive infrastructure (40%) which may affect the adoption of FC. Besides, the educator perceived that the attitude of educators (38.5%) and learners (30%) can be one of the essential factors hinder the effectiveness of FC. Chan, Lam and Ng (2018) found that learners have long been educated in "spoon-feed" traditional educational approach. They are reluctant to get out their comfort zone and learners are not ready to take up the responsibility of their learning (Goh & Ong, 2019). Furthermore, educators find it difficult to introduce new teaching approach in their teaching process. The educators who are baby-boomers and Gen Xers are not technology savvy users (Goh & Norwaliza, 2020). Educators have no idea on how to change/adopt the FC in their teaching process. Lack of confidence, low curiosity and lack of understanding of FC might cause the educators not to accept the reform of the education system.

DISCUSSION

With the demand from IR 4.0, the higher educations are under pressure to innovate the learning and teaching approach in order to produce future ready graduate. Hence, FC was introduced a decade ago which aims to promote flexi-learning environment by providing personalized learning space and encourage learners in autonomous learning. Pre-class flipped materials are given in advance for learners to view at anytime and anywhere, while focus on more meaningful discussion in the class. Although the FC is worthwhile and gaining recognition in worldwide higher education system, the adoption of this approach has faced resistance in Malaysia (Goh & Ong, 2019). As a result, this study aims to explore the awareness and readiness of educators in adopting FC in their teaching process and identify the challenges which may hinder the adoption of FC under the perception of educators.

Overall, the findings showed that all the educators are aware about the FC approach but interestingly only thirty percent (30%) of the educators in this survey have exposed the FC approach. Besides, it is shows that educators have positive perception on implementation of the FC with overall mean value of 3.82 (Table 3.3). They agreed and recognized the benefits of FC. Educators believe that FC approach is performing better than the conventional lecture in term of enhancing the active learning, interaction and learning effectiveness. Despite of the recognition of benefit in FC approach, the findings revealed that the educators are not ready for FC adoption. From Table 3.4 outcomes, the educators were not fully ready to embed FC approach into teaching process with moderate level of 3.19 mean values. However, this phenomenon is not surprising as stated by Lai, Chundra and Lee (2019). When innovative teaching approach is created, educators need time to accept, practice and implement the new teaching paradigm. This is further explained by the challenges found in the finding showed in Table 3.5. The main reason hinders educators not fully comfortable in adopting FC into their teaching process is due to time constraints. This is consistent with the findings found in past studies of Bakar, Abidin, Ali, Isa, and Sahar (2018) and Osman, Masood, and Mokmin (2019). There were too much work for preparing the pre-class material such as creating videos, quiz and real-time assessment. All these FC materials required greater effort and time which will increase the burden and workload for the educators. According to Wanner and Palmer (2015), preparation in FC approach can reach up to six times as compared to the conventional lecture.

Besides, the findings also aligned with the past study in Mokhtar and Noordin (2019) that insufficient infrastructure and lack of support are one of the main challenges faced by the higher education institution. It limits the creating of enabling environment for students and educators to expose for innovation, collaboration with multi-disciplinary experts. Lack of conducive infrastructure and supportive technical assistance may cause the educators think that the adoption of FC is difficult and thus lead to negative perception in adopting FC in their teaching paradigm.

Lastly, the attitude of learners and educators are one of the main challenges faced in adopting FC. Meaningful learning can foster shared responsibility between learners and educators for academic excellence (McLaughlin et al., 2014). Learners are not ready to take up the autonomous learning. They are resistance to change in study habit which causes them to have difficulty to participate in the classroom activities. Moreover, educators refuse to change or have no idea how to change the curriculum design to response with the FC approach. To ensure the successful FC adoption, a mental shift is needed on learners as well as educators. The role of the administration of the higher education is equally vital as they need to support the educators and encourage them to expose to FC approach in order to prepare themselves with multi-disciplinary knowledge.

CONCLUSION

Higher education is not only the supplier of talent to meet the future workforce demand but also the forerunner for the new era. Also, educator should be the key driver. Based on the key findings on this research, educators in higher education institutions are aware of FC approach and understand the significant benefits of FC in the learning and teaching though many of them are still unprepared for FC adoption. Of course, transformation is not an easy task. Hence, this study can serve as benchmark to identify and overcome the challenges in order to ensure the effectiveness of FC approach. Continuous committed efforts between Malaysia Ministry of Higher Education, educators, and higher education institutions is needed to encourage the FC adoption in the teaching paradigm to ensure the graduates are well equipped with 21st century competencies and cognitive

flexibility to deal with not only human, but also machines. Now is the time for educators in higher education institutions to address the challenge and get ready to flip the classroom.

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BAFE064:
**PELAKSANAAN STRATEGI BERASASKAN INOVASI KE ARAH
TRANSFORMASI ORGANISASI DAN MASYARAKAT: KAJIAN KES
MAJLIS AMANAH RAKYAT**

**(IMPLEMENTATION OF INNOVATION-BASED STRATEGY FOR
ORGANISATIONAL AND SOCIETAL TRANSFORMATION: A CASE
STUDY OF MAJLIS AMANAH RAKYAT)**

Khairul Akmaliah Adham^a, Mohd Fuaad Said^b, Nur Sa'adah Muhamad^c, Mahadir Ibrahim^d,
Shahrizin Abdul Sarhadat^e

^aFaculty of Economics and Muamalat, Universiti Sains Islam Malaysia, Malaysia,
Email: ka@usim.edu.my

^bSchool of Business and Economics, Universiti Putra Malaysia, Malaysia,
Email: fuaad@upm.edu.my

^cFaculty of Economics and Management, Universiti Kebangsaan Malaysia, Malaysia,
Email: ka@usim.edu.my

^dRural Capital Berhad, Malaysia,
Email: mahadir@ruralcapital.com.my

^eMajlis Amanah Rakyat, Malaysia,
Email: shahrizin@mara.gov.my

Abstract

Para sarjana dalam bidang ekonomi dan pengurusan telah sekian lama mengiktiraf kepentingan inovasi terhadap pembangunan organisasi dan peningkatan kekayaan dalam masyarakat. Namun, kajian mereka banyak tertumpu kepada hasil inovasi dalam bentuk produk atau perkhidmatan, manakala perbincangan tentang strategi berasaskan inovasi yang didukung sepenuhnya oleh sesebuah organisasi kurang diberi perhatian. Walhal, pendudukan ini penting kerana organisasi yang berhasrat untuk mencapai tahap prestasi yang tinggi perlu melalui proses penerapan nilai berinovasi dalam keseluruhan aktiviti. Justeru, jurang kajian ini perlu diatasi bagi memperkaya ilmu pengetahuan tentang pelaksanaan inovasi sebagai suatu strategi organisasi yang mampan dan cemerlang. Pengetahuan ini amat diperlukan lebih-lebih lagi dalam konteks Malaysia bagi memastikan organisasi dan masyarakat berupaya mencapai kemajuan yang seimbang dari aspek pembangunan ekonomi dan sosial. Justeru, kajian ini bertujuan untuk memahami konsep strategi berasaskan inovasi serta pelaksanaannya dalam sesebuah organisasi melalui kajian kes kualitatif di Majlis Amanah Rakyat (MARA) yang menerapkan strategi berasaskan inovasi melalui Kerangka Transformasi Strategik MARA 2011-2020. Pelaksanaan strategi ini menjadi asas bagi MARA sebagai sebuah organisasi sosial untuk meneruskan misi utamanya untuk menerajui bidang keusahawanan dan pendidikan Bumiputera di Malaysia hingga ke peringkat antarabangsa. Kajian ini mencadangkan suatu kerangka pelaksanaan strategi berasaskan inovasi, yang bukan sahaja memperkayakan ilmu bidang pengurusan inovasi strategik, malah boleh menjadi asas pemikiran kepada praktis dalam mentransformasi organisasi serta masyarakat untuk kesejahteraan bersama.

(Scholars in the fields of economics and business management have long recognized the importance of innovation for organizational development and wealth creation in the society. However, these studies focused on innovations that are translated into products or services, whereas studies on innovation-based strategy that is embraced by an entire organization is given less attention, despite the need for organizations to embed the values of innovating in support of their overall activity in order to achieve a high level of performance. This gap needs to be addressed in order to enhance the understanding of innovation as a strategy adopted by high performing and sustainable organizations. This knowledge is important, particularly within Malaysian context in order to ensure that both organizations and the society contribute toward a balanced development, economically and socially. The objective of this study is to understand the concept of innovation-based strategy and its implementation within organizations through a qualitative case study of Majlis Amanah Rakyat)

(MARA). Under its Strategic Transformation Plan 2011-2020, MARA had embraced an innovation-based strategy in support of its mission as a social organization for the development of the indigenous people in entrepreneurship and education. The proposed framework of the implementation of innovation-based strategy by organizations extends the knowledge of strategic innovation management as well as serves as a guide to support the practice of organizations capable of effecting a transformative impact on the society for societal well-being)

Keywords: Strategi, inovasi, transformasi, nilai, MARA, Majlis Amanah Rakyat, Malaysia

BAFE002: DID GST REDUCE TAX PLANNING? EVIDENCE FROM MALAYSIA?

Tan, Min-Khen^a, Wong, Tai-Seng^b, Cheah, Chee-Keong^c, Wong, Kok-Yaw^b, Kong, Yin-Mei^e

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,

Email: tanmk@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia, Malaysia,

Email: wongts@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,

Email: cckeong@utar.edu.my

^dTunku Abdul Rahman University College, Malaysia

Email: kokyaw@tarc.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,

Email: kongym@utar.edu.my

Abstract

This study looks at the implications of the pre- and post-good and service tax (GST) policy implementation of Malaysia industrial firm's tax planning activities. The tax aspects are important for infrastructure in the country as well as social and economic development. Consequently, the government of Malaysia introduced the GST replacing the sales and services tax (SST) to increase tax revenue in April 2015, but the SST was reintroduced in September 2018 to replace the unpleasant goods and services tax (GST) due to political concerns. Existing literature acknowledges that due to stringent law enforcement and system enhancement of corporate tax reporting system, there is a high level of voluntary tax reporting compliance. Meanwhile, the activities of corporate tax planning will reduce revenue collection and impact the capacity of the social and fiscal goals of government. Since the evidence for this relationship is inconclusive, this paper conducts an empirical study using Difference-in-Difference (DID) technique, one of the most widely applicable methods of analyzing the impact of a policy change, by comparing the changes in tax planning outcomes over time between the pre- and post-GST implementation phase in Malaysia.

Keywords: GST, Tax planning, DID, Malaysia industrial sector

INTRODUCTION

Tax revenue is deemed to be an all-time nation priority as it funds infrastructure and facilities besides fueling its social and economic development (Gupta, 2007). It ultimately improves the social welfare of all residents in the country through income redistribution (Martorano, 2018), especially for developing countries like Malaysia. Generally, in Malaysia, taxes are divided into two categories, namely direct (corporate tax, withholding tax, real property gain tax, etc.) and indirect taxation (sales and service tax). Direct tax is the key source of revenue for the Malaysia government. According to the Malaysia Federal Government Budget 2019, Direct tax collection constitutes the largest (40.3%) source revenue for the Malaysia government in the year 2019 (Ministry of Finance Malaysia, 2020). Inland Revenue Board of Malaysia (IRBM) is the government agency responsible for collecting direct tax. According to IRBM, among all the taxpayers, listed and non-listed corporate taxpayers contributed more than 50% of the total direct tax revenue (LHDN, 2017).

For the indirect tax, Malaysia has implemented the Goods and Services Tax (GST) effective April 1 2015 with mandating the tax rate of 6%, aims to enhance the tax revenue and a mechanism to mitigate transfer pricing manipulation. Royal Malaysian Custom Department (RMCD) to manage the GST tax system to reduce the tax collection leakage that has happened yearly (Sanusi, Omar, & Sanusi, 2015). However, Malaysia Pakatan Harapan (PH) government has abolished GST in September 2018 and reinstated Sales and Services Tax (SST) due to political concern (Othman, Nordin, & Sadiq, 2020). The GST implementation was ideally able to promote the government tax system and firm accounting reporting transparency level while they are mandatory to maintain

accurate and complete record-keeping. The non-compliance penalty is strict and heavy, even a jail sentence for those firm unable to meet the reporting obligations (Chen & Taib, 2017; Santhariah, Tran-Nam, Boccabella, & Rametse, 2018).

In recent years, major revamp had been undertaken on the Malaysia tax administration system. Formal System had been shifted to Self-Assessment System (SAS). Under the Formal System, the taxpayers will receive their tax return from IRBM, and it was tax payer's duty to declare all the necessary particular of their income and expenses and submit the completed return to the IRBM. IRBM will be responsible for determining the actual tax liability of the taxpayer. Thus, the onus was on the IRBM official to interpret and apply the income tax act correctly. As for SAS, taxpayers are required by law to ascertain their taxable income, calculate tax liability and submit the tax return according to current tax law (Teo, 2019; Wahab, 2015). Thus, SAS would involve a substantial shift of responsibility onto the taxpayers in term of compliance obligation. The onus would be on taxpayers to understand the tax law and apply it to his situation. The tax return submitted by the taxpayers would not subject to detailed technical scrutiny by the IRBM as under the Formal System (Loo, Evans, & McKerchar, 2012).

Corporate tax planning or tax planning behaviour of large corporate taxpayers has increased over the last decade (Thomsen & Watrin, 2018). Dyreng, Hanlon, and Maydew (2008) define tax planning as all transactions that reduce companies' tax obligation. Tax planning activity conducted by corporate taxpayers ranging from legal tax planning activities to tax evasion (Wang, Xu, Sun, & Cullinan, 2019). Tax expense is the cost of doing business for corporate taxpayers. Thus, corporate taxpayers are motivated to undertaking tax planning activities which enable it retaining cash resources within the company that would otherwise go to IRBM and subsequently utilized such support for enhancing the company value. In Malaysia, an aggressive tax planning that without commercial substance to reduce tax liability is disallowed under S140 anti-tax avoidance provision (Teo, 2019).

Corporate tax planning has always been the concern to tax authorities because the tax planning level may affect revenue collection and the ability of the government to achieve social and fiscal goals. Hence, the objective of this paper is attempted to investigate tax planning behaviour of major large corporates, more specifically for listed firm taxpayers in the in pre and post-GST implemented stage. Our findings could enrich the local and international accounting literature and provides insights into the regulator on the role of firm behaviour while dealing with tax planning activities while operating in multiple tax regimes.

LITERATURE REVIEW

This paper obtains empirical evidence analysis and hypotheses development based on the previous empirical study conducted by the local and international researcher. The hypotheses framework are created base on the research question, what are the determinants of tax planning activities in Malaysia industrial sector?

Corporate tax planning

We use book-tax differences (BTD) is a tax planning proxy that used to measure the variations of firms' income based on accounting income reported in financial reporting and estimated taxable income (Desai & Dharmapala, 2006). Firms could be accused of engaging tax shelter and tax planning activities while the high amount of book-tax conformity (McGuire, Omer, & Wilde, 2014; Wilson, 2009). Besides, Blaylock, Shevlin, and Wilson (2012) and Kovermann and Wendt (2019) stated BTD must generate a positive while the book income value is greater than the taxable income value for justification of corporate tax planning activities. Moreover, in a business environment that favours the investment, the firm can make discretion on tax position and conduct potential tax planning activities from their tax position within the authority tax law requirements (McGuire et al., 2014).

GST Pre and Post Period

The goods and services tax (GST) implemented in Malaysia on April 1, 2015, was part of the Malaysian government's taxation reforms aimed at improving the collection of revenue and reducing

the country's budget deficit (Santhariah et al., 2018). Stable and strong revenue of a nation can reduce unemployment and lead the prosperous growth and competitiveness of the economy. The GST system consists of two rates, which is 6% of normal good and services and 0% of the selected exempted items, such as basic food products and exported goods. Nevertheless, despite advantages highlighted, The newly formed government (Pakatan Harapan) won the elections in Malaysia on May 9 2018, later decided to replace the GST with the sales and services tax (SST) effective September 2018. Their concern is the GST have raised a lot of implementations issues and uncertainties that bring negative impact to the small business and the public (Sidik, Mohaidin, Supar, & Ibrahim, 2020).

Profitability

According to De Andrés, Landajo, and Lorca (2009), the Return on Assets (ROA) is commonly and widely used by both practitioners and academics in the financial field to measure the companies' financial performance. ROA measures the companies' earnings before extraordinary items and divided by the average of total assets. Based on Gaaya, Lakhal, and Lakhal (2017) finding, it stated that with a higher return on investments, the tax planning engagement could be less. The conclusion provides further justification and similar to the result from Richardson, Taylor, and Lanis (2013), the aggressiveness in tax planning engagement appeared while the growth opportunities are high.

Firm Size

The firm-level of characteristics toward tax planning behaviour is usually determined by the firms' size, strategy and multinational operations (Wang et al., 2019). The research found that the firms' size could evaluate the level of probability of engaging tax planning activities by the firms (Irianto, Sudibyo, & Wafirli, 2017). Based on the finding, large firms with higher profits and sophisticated transactions will tend to have the possibility to perform tax planning activities (Donohoe, 2015; Goh, Lee, Lim, & Shevlin, 2016; Taylor & Richardson, 2012; Thomsen & Watrin, 2018). The firm size determined by using the natural logarithm of total assets, and profitability as EBITDA scaled by total assets (Kovermann & Wendt, 2019).

Sales

Sales growth and sales over the total asset is the key determinant of the potential growth development of the firm. The capabilities of sale improvement of the firms could bring specific influence related to tax planning. The increase in sales will lead to company optimistic on profit level; thus, companies will be affected by current practice towards tax planning (Hanlon, 2005). Therefore, a support research study showed that firm with higher sale growth is more likely intend to go toward less paying tax as they could utilize the fund for company's growth opportunities (Goh et al., 2016). Based on empirical study, the result is variety, and the majority is negatively correlated with book-tax different (Gaaya et al., 2017; Goh et al., 2016; Lisowsky, 2010; Wilson, 2009) however Desmiranti (2019) demonstrated that the sales are positive significant with the tax planning activities.

Tangible asset

The fixed assets, normally represent by net property and plant (Net PPE), are owned by the firm for utilizing in the production of income. Then, the fixed assets could also use in generating revenue through investment activities. According to Desmiranti (2019), the intensity of fixed asset ownership could eventually bring a certain impact on the firm's tax payment. Therefore, several empirical findings indicated that the intensity of fixed assets shows a significant positive relationship towards tax planning (Donohoe, 2015; Goh et al., 2016; Taylor & Richardson, 2012; Thomsen & Watrin, 2018).

Operating Cash Flow

According to H. H. Huang, Lobo, Wang, and Xie (2016), firms' tax planning will be most likely active in tax planning engagement if the company concentrated in customer base to generate and hold more cash. Then, the firm could have several options to increase its earning cash capabilities. For example, share and debt issuance, cutting dividends and reducing discretionary spending (H. H. Huang et al., 2016). They also argued that firms with high customer concentration would tend to lower

the dividend level and share issuance to maintain their cash holding level may not be related to tax planning. Thus, operating cash flows indicated a very important variable for investigation the relationship with tax planning, especially in the quality of earnings context. Furthermore, Armstrong, Blouin, Jagolinzer, & Larcker (2015) argued that firm with more cash would have a low incentive for tax planning and support by H. Huang, Sun, and Zhang (2017) found negative relationship that firms with high cash flow position will lower the level of tax planning.

Leverage

Leverage is measure how company financing the business with debts. The companies are playing an important role in determining the financing debt policy in which such a system could affect the level of tax planning involvement. For instance, companies or firm could minimize tax payments by raising the interest cost (Irianto et al., 2017). Therefore, studies found leverage measurement has a significant positive influence on the level of tax planning activities (Donohoe, 2015; Goh et al., 2016; Thomsen & Watrin, 2018).

DATA AND METHODOLOGY

The data structure of this study use panel data of Top 100 firms listed in BURSA Malaysia that categorized as an industrial sector over the period from 2012 1st quarter to 2018 2nd quarter. The financial industry and the Government-Linked Companies (GLCs) are excluded in the dataset as the different reporting framework and state control sector. The data is sourced from the companies that reported interim quarterly financial reports which considering on matching with the GST implementing and abolished month. The analysis used difference-in-differences (DID) that widely applicable methods of analyzing the impact of a policy change. The reason is while the panel data consist of one or more groups that result from the plausibly exogenous outcome, and both outcomes and control groups are observed pre- and post-treatment, the DID is appropriate for identifying the effect of both period (Clair & Cook, 2015; Donald & Lang, 2007). The model designed with compared changes of the pre-GST sample from the 13 quarters (Jan 2012 to March 2015) treated as the pre-GST time unit to post-GST that corresponding 13-quarter period (April 2015 to June 2018) treated as the post-GST time unit. The model also employed firm fixed effects from the selected samples to control for firms' variations. The baseline estimation regression equation is:

$$BTD_{it} = \alpha + \beta_1 DID + \beta_2 ROE_{it} + \beta_3 SIZE_{it} + \beta_4 SALES_{it} + \beta_5 NETPPE_{it} + \beta_6 CFO_{it} + \beta_7 LEVERAGE_{it} + f_i + \varepsilon_{it}$$

Where,

α =intercept

BTD= Corporate tax planning

DID= Variable equals one for post-GST units and zero otherwise.

ROA=Firm Profitability

SIZE=Firm Size

SALES=Firm sales

NETPPE=Tangible asset

CFO=Operating Cash Flow

LEVERAGE=Leverage

f_i =Country fixed effect,

ε_{it} =error term.

The dependent variable is measured by the tax planning activities proxies, namely, Book-tax differences (BTD) firm *i* in year *t*. For the independent variables, post-GST time units, profitability, size, sales, net property and plant, operating cash flow and leverage are measured following the literature reviews. The DID regression model developed base on works of literature findings. Table 1 below describes the details of selected proxies and their ratio measurement.

Table 1: Proxy of the variables

Proxy	Measurement / Ratio
BTD	$\frac{(\text{Pre-Tax Income} - \text{Taxable Income})}{\text{Total Assets}} \times 100$ <p>Where, Taxable income = Income tax expense / statutory corporate tax rate Income tax expenses = Income tax expense + (Changes in deferred tax assets) - (Changes in deferred tax liabilities)</p>
DID	1 for post-GST units of 13-quarter period from April 2015 to June 2018 0 otherwise.
ROA	$\frac{\text{P/L for period}}{\text{Total Asset}} \times 100$
SIZE	Natural Log Total Asset
SALES	$\frac{\text{Total Sales}}{\text{Total Asset}} \times 100$
NETPPE	$\frac{\text{Net Properly, Plant \& Equipment}}{\text{Total Asset}} \times 100$
CFO	$\frac{\text{Cash Flow}}{\text{Operating Revenue}} \times 100$
LEVERAGE	$\frac{(\text{Total Debt} - \text{Total Asset})}{\text{Total Assets}} \times 100$

CONCLUSION AND POLICY IMPLICATION

In conclusion, the objective of this study is to examine the tax planning behaviour of Malaysia listed firm between the pre-and post-GST period. This paper aims to determine the comparatively effect of each independents variables, namely post-GST period, profitability, size, sales, tangible asset, cash flow and leverage to the dependent variable Book-tax differences. This study employs DID estimator on the regression model in considering two plausibly exogenous outcomes that arise from panel data analysis. The idea is to identify the potential tax planning behaviour across the country with different GST implemented stage as a key reference to policymaker look after all the effect of policy change, especially while concerning of reintroducing GST.

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BAFE007:
ASYMMETRIC FISCAL POLICY AND EMERGING STOCK MARKET

Lee, Chee Loong^a, Koh, Chin Min^b, Ng, Chee Pung^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: lcloong@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: kohcm@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngcp@utar.edu.my

Abstract

This study tests the asymmetric relationship between the emerging stock market (i.e., Malaysia) and macroeconomic news (especially fiscal policy). The non-linear Autoregressive Distributed Lag (NARDL) evidence proved various forms of macroeconomic variables to Kuala Lumpur Composite Index (KLIC) performance. Fiscal policy has no impact on KLIC in the long run; however, fiscal expansion pushed up the market return, and fiscal contraction worsened KLIC performance in the short-run. Fiscal authority and investors can get a great insight from this study to build up smart investment strategy and policy designing in an emerging market.

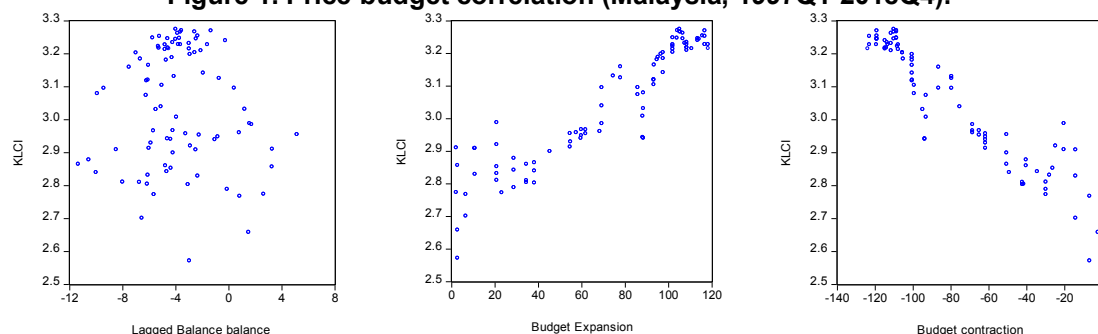
Keywords: Asymmetric, Fiscal policy, Stock Market, NARDL, Emerging Market

INTRODUCTION

Sine Fama, Hansen, and Shiller awarded the Prize in Economic Sciences in 2013, the effectiveness of the financial market to absorb information widely debated among economists. There are several competing views on the Efficient Market Hypothesis (EMH), some of which oppose it, some of which accept it (Gabriela Gan, 2015). On the one hand, the stock market will respond to news to ensure that prices converge to their stable state in the medium or long-term and that no investment group can beat the market through a particular investment strategy (Damodaran, 2012). On the other hand, the irrational and persistent emotional of investors will lead to the market price cannot converge to their stable state (Shiller, 2003). What is not yet clear is the efficiency of stock price follows by EMH or behavior finance. Controversial between EMH and behavioral finance and inconclusive empirical findings inspire this study to test the market price response to the news in the long-term and short-term.

The stock market is a high liquidity secondary market; shares conveniently issued and traded among investors. High liquidity promotes investment and economic growth. However, fiscal news (e.g., government spending and tax change) might cause significant fluctuations in an emerging stock market (i.e., Malaysia). By Keynesian, fiscal expansion stimulates the aggregate demand and lead to stock prices increase, whereas, from the classical perspective, the stock prices could decline as a result of the crowding-out effect (Chatziantoniou, Duffy, & Filis, 2013). A large and growing body of literature has investigated the impact of fiscal policy on financial markets; however, the findings are inconclusive.

Figure 1. Price-budget correlation (Malaysia, 1997Q1-2018Q4).



Note: The panels plotted the simple correlation between stock prices (KLCI) and lagged overall budget balance-to-GDP, lagged ascending budget balance-to-GDP, lagged descending budget balance-to-GDP in the left, central and right panel, respectively. Finally, a regression line display in each panel.

Source: Author compilation.

This paper argues that inconclusive results might come from asymmetry relationship between fiscal new (e.g., budget balance) and stock market returns. Figure 1 provides a snapshot of the asymmetric reaction of the Kuala Lumpur Composite Index (KLCI) to fiscal policy news. The left panel indicates a no clear relationship between KLCI and budget balance. The budget balance split to budget expansion and budget contraction in the central and the right panels, respectively. In the budget expansion, a positive relationship exists between the primary balance and debt, while in budget contraction phase is characterized by a negative relationship between the two variables. Overall, this styled fact suggests that the impact of fiscal news to the stock market is asymmetric.

Most previous studies only focus on testing the symmetry relationship between fiscal news and stock market returns. Inspired by Al-haji et al., 2018, which studies the asymmetric impact of oil price on market returns in Malaysia, this research will utilize Nonlinear ARDL to test the nonlinearities among variables of interest. Testing the asymmetry relationship is vital and relevant because it enables corporates, investors, and policymakers to know the direction of the relationship between fiscal news and the stock market associated with budget expansion and budget contraction. Hence, they can make appropriate reactions and formulate strategies to deal with these changes in fiscal policy.

METHODOLOGY

Our paper's primary focus is to examine the impact of asymmetric fiscal policy on the KLCI. This study measures fiscal policy information by the overall budget balance-to-GDP ratio (BB) and the movement of MSM stock prices by the logarithm of the KLCI. Following suggested models in relevant studies, this study takes into account monetary policy, proxy by the 3-month interest rate on the money market (IR), inflation, measured by logarithm of the Consumer Price Index (CPI), the impact of general economic conditions, proxies by the logarithm of the real Gross Domestic Product (RGDP), the impact from external, proxy by the real effective exchange rate (REER), and the influence of input costs, measured by logarithm of oil prices (OIL). Table 1 describes the data in detail. All data series are quarterly and cover the period between 1997: Q1 and 2018: Q4.

Table 1: A summary of data

Variable name	Variable description	Source
Stock market prices (KLCI)	The logarithm of KLCI index	Bloomberg Terminal
Budget balance (BB)	The overall budget balance-to-GDP ratio (%GDP). Seasonally adjusted by Census X-13.	The central bank of Malaysia
Interest rate (IR)	3-month money market interest rate (%)	The central bank of Malaysia

Inflation (CPI)	The logarithm of Consumer Price Index	International Monetary Fund
National production (RGDP)	The logarithm if real Gross Domestic Product. Seasonally adjusted by Census X-13.	International Monetary Fund
Oil price (OIL)	The logarithm of West Texas intermediate oil price	Federal Reserve Bank St. Loius
Exchange rate (REER)	The logarithm of real effective exchange rate.	International Monetary Fund

The main model of this study is presented below:

$$KLCI_t = C + \alpha_1 BB_t^+ + \alpha_2 BB_t^- + \alpha_3 IR_t^+ + \alpha_4 IR_t^- + \alpha_5 CPI_t^+ + \alpha_6 CPI_t^- + \alpha_7 RGDP_t^+ + \alpha_8 RGDP_t^- + \alpha_9 REER_t^+ + \alpha_{10} REER_t^- + \alpha_{11} OIL_t^+ + \alpha_{12} OIL_t^- + \varepsilon_t \quad (1)$$

$$y_t = \alpha^+ z_t^+ + \alpha^- z_t^- + \varepsilon_t \quad (2)$$

α^+ and α^- represent the long run parameter and z_t is the vector regressor which is explained as:

$$y_t = \alpha^+ z_t^+ + \alpha^- z_t^- + \varepsilon_t \quad (3)$$

z_t^+ and z_t^- represent the positive and negative partial sums which is change as below:

$$z_t^+ = \sum_{i=1}^t \Delta z_i^+ = \sum_{i=1}^t \max(\Delta z_i, 0) \quad (4)$$

$$z_t^- = \sum_{i=1}^t \Delta z_i^- = \sum_{i=1}^t \min(\Delta z_i, 0) \quad (5)$$

Asymmetric error correction model (AECM) is estimated as follow:

$$\Delta KLCI_t = \rho KLCI_{t-1} + \theta^+ z_{t-1}^+ + \theta^- z_{t-1}^- + \sum_{i=1}^{j-1} \phi \Delta KLCI_{t-i} + \sum_{i=0}^p (\pi_i^+ \Delta z_{t-i}^+ + \pi_i^- \Delta z_{t-i}^-) + \varepsilon_t \quad (6)$$

$$\text{Where; } \theta^+ = \frac{\alpha^+}{\rho y_{t-1}} \text{ and } \theta^- = \frac{\alpha^-}{\rho y_{t-1}}$$

The NARDL approach comprises the following four steps. First, this study conducts conventional unit root tests to ascertain that no variable is I (2). The result of the F-test would be spurious in the presence of I (2) variables. However, the presence of one or more breaks in the time-series data affects the reliability of conventional unit root tests (Sun, Zhang, & Xu, 2017). Therefore, this study adopts the break-point unit root test to verify stationarity and determine the structural break's presence. Second, this study estimates Eq. (5) using the Akaike Information Criterion (AIC) with a maximum lag of four to achieve the final specification.

Third, based on the estimated NARDL model, this study performs a test of co-integration among the variables using the bounds testing approach of Pesaran, Shin, and Smith (2001) and Shin and Greenwood-Nimmon (2014). The bound test in the nonlinear ARDL framework has very similar procedures to the linear ARDL. A case in point, the estimation of Eq. (5) the null hypothesis $\rho = \theta^+ = \theta^- = 0$. Finally, in nonlinear ARDL, the Wald test is employed to find the long-run coefficient by $\theta^+ = \theta^-$ and the short-run coefficient is $\pi^+ = \pi^-$.

RESULT

The result of the unit root test shows in Table 2, most variables are I(0), and few of the variables are I(0), thus confirming that none of the series is I(2). Table 3 reports the necessary tests and estimated results. The bound test result proves that F-statistic 3.29 is significant in 5%, suggesting a co-integration between these variables. In contrast to Al-haji et al. (2018) that focus on long-run results, this study ran asymmetric tests, both long-run and short-run, and found the following impressive results. First, OIL and REER had an asymmetric impact on both the short-run and long-

run. In long-run, only RGDP and CPI had a nonlinear relationship with KLCI. Fiscal policy had an asymmetric effect on Malaysia's market return only in the short-run, while the impact of monetary policy on KLCI is symmetric.

Table 2: Breakpoint unit root test

Variable	Level			First different				
	T-Statistic	P-Value	Break	T-Statistic	P-Value	Break		
<i>KLCI</i>	-4.9434	*	0.0882	2014Q4	-12.8052	***	< 0.01	1998Q3
<i>BB</i> ⁺	-6.3548	***	< 0.01	2007Q3	-10.7652	***	< 0.01	1999Q4
<i>BB</i> [−]	-6.6147	***	< 0.01	2007Q4	-12.2614	***	< 0.01	2004Q1
<i>IR</i> ⁺	-6.0507	***	< 0.01	2010Q2	-11.4503	***	< 0.01	1999Q2
<i>IR</i> [−]	-12.3182	***	< 0.01	1998Q2	-11.7728	***	< 0.01	1999Q2
<i>RGDP</i> ⁺	-3.8940		0.5921	1998Q4	-9.1089	***	< 0.01	2000Q1
<i>RGDP</i> [−]	-5.2581	**	0.0402	2006Q3	-12.5820	***	< 0.01	1999Q1
<i>CPI</i> ⁺	-3.8976		0.5901	2007Q3	-8.0126	***	< 0.01	2008Q2
<i>CPI</i> [−]	-4.5936		0.1958	2008Q3	-8.7573	***	< 0.01	2008Q4
<i>OIL</i> ⁺	-4.1836		0.405	2009Q1	-10.4459	***	< 0.01	1999Q3
<i>OIL</i> [−]	-4.7204		0.1509	2008Q2	-11.7920	***	< 0.01	2008Q4
<i>REER</i> ⁺	-4.6792		0.1641	2003Q2	-9.9178	***	< 0.01	2010Q2
<i>REER</i> [−]	-9.7969	***	< 0.01	2015Q2	-12.1273	***	< 0.01	1998Q4

The asterisk ***, **, * represent the rejection of the null hypothesis of unit root at 1, 5, and 10% significant levels, respectively.

The estimated model passes the standard diagnostic tests (normality, stability, serial correlation, and heteroscedasticity), which indicated the estimated model free of standard regression problems. In the long-run, only RGDP and REER have a significant impact on KLCI. Booming lead to a bull market, and recession create a bear market. Besides, appreciation ringgit Malaysia worsen the performance of KLCI while the depreciation of local currency pushes up Malaysia's stock market return. Fiscal policy has no impact on Malaysia's stock market return. In short-run, fiscal expansion had a positive effect on KLCI, and fiscal contraction reduced Malaysia's market return. This finding supports the asymmetric trend of fiscal policy on KLCI that shows in Figure 1. Besides, monetary expansion harmed KLCI with one-quarter lag.

Moreover, ascending oil prices had no impact on KLCI, while descending oil prices raised Malaysia's stock market return. In contrast to the long-run, RGDP had no impact on KLCI, and REER had a reverse impact on Malaysia's stock market performance. These findings proved the stock market Malaysia holds EMH in the long-term, whereas it follows the behavioral finance hypothesis in the short-term.

Table 3: The NARDL Bounds Testing model estimates.

Long-run coefficients				Short-run coefficients			
Variable	Coefficient	Std. Error	t-Statistic	Variable	Coefficient	Std. Error	t-Statistic
BB^+	-0.0108	0.0116	-0.9342	$\Delta KLCI_{t-1}$	-0.2004	0.077	-2.6026
BB^-	-0.0070	0.0102	-0.6843	ΔBB^+	0.0077	0.0019	4.0642
IR^+	0.0407	0.0865	0.4709	ΔBB^-	-0.0100	0.0019	-5.2831
IR^-	-0.0407	0.0411	-0.9884	ΔBB_{t-1}^-	-0.0030	0.0016	-1.8346
$RGDP^+$	5.3243	2.6737	1.9914	ΔIR^+	-0.0172	0.0179	-0.9624
$RGDP^-$	-3.3776	1.8645	-1.8115	ΔIR^-	-0.0560	0.0174	-3.2173
CPI^+	1.7767	1.8267	0.9726	ΔCPI^-	-0.8440	1.1143	-0.7574
CPI^-	7.7914	5.3205	1.4644	ΔOIL^+	-0.0248	0.1096	-0.2262
OIL^+	-0.3084	0.5260	-0.5863	ΔOIL_{t-1}^+	-0.2234	0.1072	-2.0829
OIL^-	-1.0322	0.6922	-1.4913	ΔOIL^-	0.1813	0.1008	1.7996
$REER^+$	-13.1374	5.4953	-2.3907	ΔOIL_{t-1}^-	0.1808	0.0903	2.0034
$REER^-$	5.6655	2.6535	2.1351	$\Delta REER^+$	-1.1498	1.0048	-1.1443
				$\Delta REER_{t-1}^+$	3.0297	0.8363	3.6226
				$\Delta REER^-$	-0.8299	0.4841	-1.7144

Lag length				ECT (-1)			
(2, 1, 2, 2, 0, 0, 0, 1)				Bound test			
				3.2938 ^{**}			
				0.8645 ^{***}			
				-0.3205 ^{***}			
CUSUM				Normality			
Stable				0.279274			
CUSUMSQ				LM (1)			
Stable				0.882			
F-statistic				LM (2)			
				0.4765			
WLR				ARCH (1)			
				0.9908			
F-statistic				ARCH (2)			
				0.8354			
WLR				F-statistic			
				15.7041			
				-			
				-			
				-			
				4.9733			
				2.8002			

Bound test testing the null hypothesis no co-integration in long run. Critical values from Pesaran et al. (2001). WLR and WSR denote the Wald test for long-run symmetry and short-run symmetry, respectively. The asterisk ^{***}, ^{**}, ^{*} represent significant at 1%, 5% and 10% levels, respectively.

CONCLUSION AND DISCUSSION

What has lessons drawn from these findings? First, RGDP and REER is vital information for long-term investment strategy in KLIC. Moreover, Malaysia's government can create a bull market though a strong economy grows and depreciation of Ringgit Malaysia. Second, investors no need to consider economic growth and inflation in a short-term investment decision. However, they cannot ignore fiscal policy, monetary policy, oil price, and the exchange rate when they make a short-term investment in KLCI. Furthermore, fiscal authorities in Malaysia did not worry that fiscal policy has a lasting effect on the stock market; however, short-term effects are unavoidable.

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BAFE014: WOMEN DIRECTORSHIP QUALITY INDEX: AN EXPLORATORY MEASURE

Nurul Afidah Mohamad Yusof^a, Zuriawati Zakaria^b, Chia Mei Si^c, Muhammad Ashraf Anuar^d

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: afidahj@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: zuriawatiz@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chiams@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ashrafa@utar.edu.my

Abstract

The implementation of the 30% quota policy by the Malaysian government in 2011 and 2017 which aims to increase women representation in the decision-making positions and corporate boards, respectively, have proved to be showing positive results. While it is important to have more women representation in these positions, it is also equally important to ensure that the appointments are made based on merits rather than doing it as merely a 'box-ticking' process. In view of this concern, the objective of this paper is to develop an index (Women Directorship Quality Index, WDQI) with scores to gauge the aggregate quality of the women directors on corporate boards from the perspective of academic qualification, industry experience, business education background, commitment and diligence, multiple directorships, stock ownership, leadership, and independence. By using the developed index, this paper examines the women representation in the companies listed on FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLCI) for the year 2018. The preliminary findings indicate that twenty-three out of thirty companies have achieved an index scores of more than 50%, giving a sign that the practice in Malaysia is on the right track with rooms for improvement. The developed WDQI is expected to help companies in their evaluation of the women board of director candidates, and to support that the appointed women directors are well-deserving of their board positions.

Keywords: Corporate Governance, Gender Diversity, Quality Index, Quota, Women Directors

INTRODUCTION

Globally, gender equality has a fundamental bearing to a thriving economy and society. In its effort to measure the extent of gender-based gaps, the World Economic Forum (2020) has published a Global Gender Gap Report 2020 which has benchmarked 153 countries worldwide. The measure was made based on four key aspects, i.e. factor of economic participation and opportunity, education attainment, health and survival, and political empowerment. It is reported that Iceland (87.7%) is the most gender-equal country in the world, followed by Norway (84.2%), Finland (83.2%), Sweden (82.0%), and Nicaragua (80.4%) in the top-5 list.

As suggested by Laufer (2009), diversity is indeed the new framework to achieve equality. In this paper, the discussion centers around the issue of the gender diversity in corporate boardrooms. According to World Economic Forum (2020), there are 22 countries which have more than 20 percent women directors sitting on the corporate boards in year 2020. The top-5 countries are France (43.4%), Iceland (43%), Norway (42.1%), Sweden (36.3%), and Italy (34%).

In the Malaysian context, a government policy has been announced in 2017 which pushed the agenda to have at least 30% representation of women directors in the public listed company, and this is expected to be achieved by year 2020. It is further reinforced by Securities Commission Malaysia through its latest issuance of Malaysian Code on Corporate Governance 2017 (MCCG2017) which requires "Large Companies" to appoint at least 30% women directors into their boards. With such a

quota being imposed, it becomes a concern whether women directors are appointed based on their talent, or merely to fulfil the quota policy. It is concerned that the appointment of women directors could be made in haste and without comprehensive consideration when the companies are being pushed in pressure for the gender diversity agenda. However, on the upside, this quota policy has proven to be showing positive results in terms of the women representation in the corporate boards. As at 3Q2019, the percentage of women directors in the FTSE Bursa Malaysia Top 100 Index (FBM100) companies has increased to 26.9%, showing a positive progress toward achieving the government's target of 30% by year 2020.

While it is important to have more women representation in these positions, it is also equally important to ensure that the appointments are made based on merits rather than doing it as merely a 'box-ticking' process. In view of this concern, this paper explores to develop an index (Women Directorship Quality Index, WDQI) with scores to gauge the aggregate quality of the women directors on corporate boards from the perspective of academic qualification, industry experience, business education background, commitment and diligence, multiple directorships, stock ownership, leadership, and independence. By using the developed index, this paper examines the women representation in the companies listed on FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLIC) for the year 2018. The developed WDQI is expected to help companies in their evaluation of the women board of director candidates, and to support that the appointed women directors are well-deserving of their board positions.

LITERATURE REVIEW

A number of studies have given considerable attention to the role of board of directors in view of company's performance (Erhardt et al., 2003; Rose, 2007; Dezsö & Ross, 2012; Kouloukoui et. al., 2020; Unite et al., 2019). It is suggested that firms with more gender-diverse boards have stronger governance (Adams & Ferreira, 2009) and hence an uptrend in profitability. Burton and Ryall (1995) stated that the probability of company failures is decreased with a well-balanced board since women give value added to company. The "groupthink" problem may also be reduced by having a heterogenous board rather than a homogeneous board.

In achieving gender diversity, it is revealed that there is no one-size-fits-all strategy. For instance, out of six countries which have achieved more than 30% women on boards, three of them have implemented gender quota legislation, while the other three managed to achieve the threshold without gender quotas (Deloitte, 2019). As highlighted by Adams and Ferreira (2008), quota-based policy initiatives could ultimately decrease shareholder value for companies that are already well-governed. Whitler and Henretta (2018) suggests that instead of just showing the number of women directors on board, companies should also increase transparency by reporting the number of women in leadership roles. Women should be appointed based on the right background instead of being tapped on the board for illustrious careers. Finding qualified women requires abandoning traditional methods of identifying board members and acknowledging that achieving a truly diverse board is a legitimate goal (Konrad, Kramer, & Erkut, 2008).

In Norway, 36% of female board members have a university education compared to male board members with only 22 percent (Storvik & Teigen, 2010). It is argued that women are more educated than men directors but they only hold deputy chair positions while chairs of the boards are still dominated by male directors. It seems like women need to obtain advanced degree as assurance to meet higher standard of ability set by company to maximize the board's portfolio skills (Hillman, Cannella, & Harris, 2002).

Woman directors, especially those acting as independent directors, contribute an autonomous view to the boards (Fondas, 2000), enabling them to influence company strategic direction (Selby, 2000) by reducing the CEO dominance towards "power sharing" style (Bradshaw, Murray, & Wolpin, 1992). Hence, the appointment of women on board enhances company competitive benefits (Ntim, 2015). However, in contrast, it is suggested that women directors in executive positions have stronger effect on firm performance compared to female independent directors (Liu, Wei, & Xie, 2014). This is because women directors are more pronounced as executive directors due to their proximity to operating activities. Therefore, they have more opportunities to observe and influence firm decisions beyond the boardroom. Liu et al. (2014) also revealed that boards with three or more female directors have a much stronger impact on firm performance than boards with two or fewer. In addition, the

active role of female directors in committee membership brings economically benefit to company (Green & Homroy, 2018).

RESEARCH METHODOLOGY

Sampling Design

The sample data used in this study is the listed companies in FBMKLCI as at 31 December 2018. FBMKLCI is a capitalisation-weighted index, which comprises the 30 largest companies by market capitalisation on the Bursa Malaysia's Main Market. The data on the women directors is mainly extracted from the companies' annual reports for the year 2018, while some of the information is retrieved from the official website of the respective companies. Basically, this study is exploratory in nature. The objective of this study is twofold, which starts with the development of an index that could gauge the aggregate quality of the women directors, and followed by the application of this index on the FBMKLCI companies in year 2018 in order to get the picture of the women representation in the Malaysian corporate boards.

Research Procedure

The development of an index starts with the identification of the basic observable indicators to quantify phenomena that is often discernible in its manifestation, but rather intangible in its nature. By aggregating multiple indicators into a single quantitative measure, the value produced by an index can generally be used to encapsulate multidimensional phenomena. While critics highlighted that the aggregation of individual meaningful measures into a single value may result in misleading and reductive conclusion, index has nevertheless been commonly used in the literature (Karanovic & Karanovic, 2015). In the context of corporate governance, Gompers and Metrick (2001) and Hanlon et al. (2003) had developed a "g-score" to measure the aggregate effect of the corporate governance by combining multiple corporate governance factors into an index. In the same vein, Farook et al. (2011) developed an Islamic governance score (IG-Score) which measures the quality of the Shariah Supervisory Board (SSB) by aggregating a set of variables to proxy for the characteristics of the SSB members. In view of the use of index in the corporate governance literature, this study intends to develop an index to measure the quality of women directorship in Malaysia. Undoubtedly, it is a challenge to get a completely objective way to measure the intangible qualities of an exceptional board member. Therefore, with this caveat, the development of this index refers to previous literature and the best practices requirements by the relevant authorities (e.g. Securities Commission Malaysia, Bursa Malaysia). Table 1 presents the operationalisation of the variables.

Table 1: Operationalisation of the variables

Variables	Operationalisation	References
Academic Qualification	1 - Below Bachelor degree 2 - Bachelor degree 3 - Master's degree / Professional qualification 4 - Ph.D	Harvard Business Review (1998)
Industry Experience (relevant to the company's respective industry)	0 - No relevant industry experience 1 - Has relevant industry experience	Harvard Business Review (1998)
Business education background	0 - No formal education in business 1 - Has formal education in business	Wan Mohamad et. al (2017)
Commitment and Diligence	0 - Less than 50% board meeting attendance 1 - More than 50% board meeting attendance 2 - 100% board meeting attendance	<u>Bursa Malaysia MMLR</u> Bursa Malaysia requires minimum attendance of at least 50% of the board meetings held during the financial year

Multiple directorships	0 for ($x = 1$; or $x > 5$) 1 for ($1 < x \leq 5$) (x = no. of directorships)	Bursa Malaysia MMLR • limits maximum 5 directorships with listed companies.
Stock ownership	0 - No 1 - Yes	Kesner (1987)
Leadership	0 - Not CEO or Board Chairman 1 - CEO or Board Chairman	MCCG 2017
Independence	0 - Non-Independent Director 1 - Independent Director	MCCG 2017

By using the average points calculated from the variables in Table 1, a min-max procedure is then used to convert the indicators into indices. In this procedure, the minimum value is subtracted from the indicator value, and divided by the difference between the maximum and minimum value for the indicator (European Statistical System, 2012).

The basic formula to calculate the index score (I):

$$I = 100 \times \frac{(V - \text{min value})}{(\text{max value} - \text{min value})}$$

where

V is the indicator value;

Max value is the maximum admissible value (upper bound);

Min value is the minimum admissible value (lower bound).

DATA ANALYSIS

As this study is an initial attempt to quantify the quality of the women directorship in Malaysia, the data is examined for only one year, i.e. 2018. In addition, it also coincides with the requirement of MCCG 2017 which stipulates that for "Large Companies", the board must comprise at least 30% women directors. "Large Companies" is defined by Bursa Malaysia as the companies on the FTSE Bursa Malaysia Top 100 Index, or companies with market capitalisation of RM2 billion and above, at the start of the company's financial year.

Based on the average points calculated from the variables in Table 1, the respective descriptive statistics is presented in Table 2. There is one company with an average point that is less than 50%, which may give the impression of "token female appointment". Next, there are nine companies with the average point of 50% to 60%. The majority of the companies, i.e. thirteen companies fall under the range of 60% to 70%. Meanwhile, the highest range of average point obtained by the companies is the 70% to 80%, which comprises seven companies.

Table 2: Average points for the variables

Average Points	No. of Companies
$0 \leq x < 10\%$	0
$10 \leq x < 20\%$	0
$20 \leq x < 30\%$	0
$30 \leq x < 40\%$	0
$40 \leq x < 50\%$	1
$50 \leq x < 60\%$	9
$60 \leq x < 70\%$	13
$70 \leq x < 80\%$	7
$80 \leq x < 90\%$	0
$90 \leq x \leq 100\%$	0

Subsequently, the index scores are calculated for these companies by using the min-max procedure. The use of the min-max procedure indicates the position of these companies on the same frontier. It means, the score of one company is made in comparison to the score of other companies in the sample. Based on the gathered data of the listed companies in FBMKLCI as at 31 December 2018, Table 3 presents the statistics for the index scores calculated for the thirty companies.

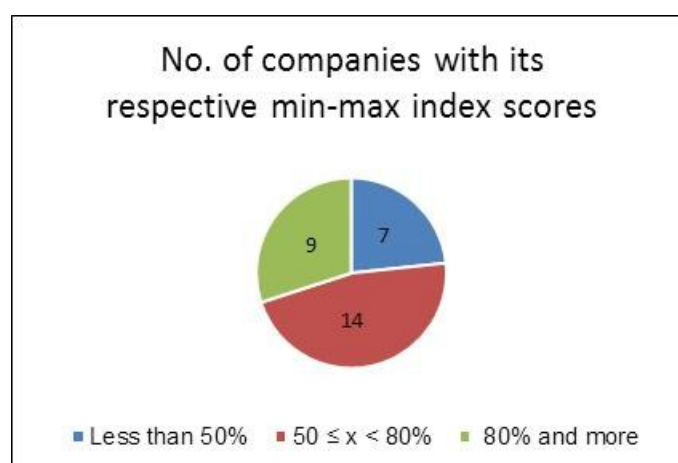
Table 3: Index scores of women directorship quality

Range of Min-Max Index Scores	No. of Companies
$0 \leq x < 10\%$	1
$10 \leq x < 20\%$	0
$20 \leq x < 30\%$	4
$30 \leq x < 40\%$	2
$40 \leq x < 50\%$	0
$50 \leq x < 60\%$	6
$60 \leq x < 70\%$	2
$70 \leq x < 80\%$	6
$80 \leq x < 90\%$	5
$90 \leq x \leq 100\%$	4

Generally, a company with low index score indicates that, in comparison to other companies in the study sample, the selection of the women directors in that company may not be optimum in terms of the eight perspectives examined in the index. Meanwhile, a company with high index score indicates that there was a better selection of the women directors in that company relative to other companies in the study sample.

Figure 1 illustrates the number of companies with its respective min-max index scores range. It shows that there are seven companies with index scores that is less than 50%. Comparatively, the index score indicates that these seven companies are lagging behind their other twenty-three counterparts in the FBMKLCI. Meanwhile, majority of the sample in this study gets a score of between 50 and 80 percent. Interestingly, there are nine companies with index scores of more than 80 percent. This comprises 30% of the sample.

Figure 1: No. of companies with its respective min-max index scores range



Overall, from both the average points and the index scores, only a handful companies have obtained high points and scores. The remaining companies are mostly in the middle range. Therefore, it suggests a few plausible explanations. First, there is a possible tokenism with regards to the appointment of these women directors. Second, there could be a relatively smaller pool of women

candidates to be considered for the board positions. So, despite the possibility of not being the most suitable candidate, they are however the best women candidate available to sit in that position. Whatever reason it could be, the important way forward is to have aggressive coaching and mentoring for the potential women managers in order to make sure that these talents are in the pipeline, ready to take up the board position as the time comes.

CONCLUSION

In the early section of this paper, it is highlighted that while it is important to have more women representation in these positions, it is also equally important to ensure that the appointments are made based on merits rather than doing it as merely a 'box-ticking' process. A descriptive analysis has been employed in this paper to get a preliminary findings on the quality of women directorship in Malaysia. Given the simple analysis, the scores from this index may not be conclusive. Therefore, unfortunately, the question of whether the appointed women directors are well deserving of their board positions remains a vexing question with elusive answer. However, it provides an initial evidence on the subject matter. With twenty-three out of thirty companies achieving index scores of more than 50%, it indicates that the practice in Malaysia is on the right track, and hopefully will improve in the future. In addition, the developed index also can serve as the base guidelines in the nomination and appointment decision of the women directors, as well as to be used as an initial parameter by the companies in gauging the quality of women directorship in their respective boards.

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BAFE016:
**THE INFLUENCE OF DEMOGRAPHIC FACTORS ON TAX
COMPLIANCE BEHAVIOUR OF INDIVIDUAL TAXPAYERS IN
MALAYSIA**

Swee Kiow Tan^a, Ah Suat Lee^b, Tai Seng Wong^c, Min Khen Tan^d, Yen Hong Ng^e

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: sktan@utar.edu.my

^bFaculty of Business, and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: leeas@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: wongts@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: tanmk@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngyh@utar.edu.my

Abstract

Income tax is a major source of revenue for countries. An increase in tax compliance among individual taxpayers would help to reduce the budget deficit. Although most of the individual taxpayers pay their taxes voluntarily, there are taxpayers who have not made full and timely payment. Hence taxpayers' tax compliance behaviour is a main concern to government and tax authorities. The purpose of this study is to evaluate the influence of demographic factors i.e. gender, age, ethnicity, marital status, occupation, education and income level on tax compliance behaviour of individual taxpayers in Malaysia. The findings suggested that gender, age, ethnicity, marital status, occupation, education and income level, i.e. all the demographic factors have produced mixed results. A possible reason for the inconsistent findings is due to individual taxpayers are in a different culture and ethic environment. Therefore, this may suggesting more future research needed on demographic factors towards tax compliance behaviour. Malaysia has different ethnic and culture, so future researchers can consider to examine the demographic factors as moderator on the relationship between individual factors and tax compliance behaviour.

Keywords: demographic factors, tax compliance behaviour, individual taxpayers

INTRODUCTION

The low levels of tax compliance severely pose many challenges to policymakers and tax administrations in developing countries. Self-assessment (SA) was introduced in Malaysia for individual taxpayers in 2004 with the expectation that SA would improve taxpayer compliance rates, speed up the processing of assessments, reduce compliance costs and facilitate revenue collection. However, the success of SA relies on high levels of voluntary compliance by taxpayers. Thus, the understanding of tax system, tax knowledge and awareness of compliance obligations by individual taxpayers has important implications for their compliance behaviour.

In SA, a taxpayer is required to assess and accurately calculate his tax liability using a tax return and then filed with tax authority together with a payment for the tax liabilities computed on the said return. But in a developing country like Malaysia, the mission of SAS set by the government is to collect taxes for the country at a lowest cost, and to institute effective enforcement (Kasipillai, 2001; Loo, 2006). Loo (2006) also claims that, the reasons for implementing SAS are to simplify the tax collection system and increase voluntary compliance.

Tax non-compliance has been on the rise because most of the taxpayers do not understand of what tax laws means and the structure of tax system and tax administration (Braithwaite, 2007). The reduction in tax collection will resulting a decrease of government revenue, which affects both the

compliant taxpayers and the public service received by the citizen. It is important to reduce tax non-compliance among individual taxpayers as it would help to reduce the budget deficit without raising taxes. Hence this is the main reason why it is important to examine the factors of tax compliance behaviour. Individuals are influenced by many factors to be a compliant taxpayers, including demographic factors that going to discuss in this study.

Demographic factors

The term demographics refer to particular characteristics of a population. Examples of demographic characteristics include age, gender, ethnicity, religion, education, occupation and marital status. It is posited that gender socialization (Betz et al., 1989) causes the ethical behaviour of men and women to differ (Ameen, Guffey & McMillan, 1996).

Gender

Gender defined by Anselmi and Law (1998) as a "social category of shared meaning about characteristics and behaviour of male and female, attitudes and feelings related to someone's identity, cultural influence, how we view ourselves and how others treat us based on the social category". Gender differences exist as there are differences in the male and female opinions about the importance of compliance (Jimenez, 2016).

In Malaysia, some researchers have found that gender is significantly related to the attitude of taxpayers towards compliance (Mottiakavandar, Haron, & Kasipillai, 2004; Al-mamun, Entebang & Mansor, 2014). Recently, the empirical research conducted by Fredrick and Peter (2019) in Uganda also concluded that gender has a significant influence on taxpayer compliance. The result highlighted that female taxpayers are more compliant than male counterparts. This is due to the fact that women tend to be more concerned on tax issue than men. In addition, male taxpayers are greater risk takers than the female taxpayers. The result is consistent with the previous empirical results conducted by (Vogel, 1974; Mason & Calvin, 1978; Jackson & Milliron, 1986; Ahmed & Kedir, 2015).

On the other hand, it has also been found that no significant differences exist between males and females regarding their attitudes towards tax evasion and non-compliance (Kasipillai & Abdul-Jabbar, 2006; Perumal, 2008), or on their level of compliance (Ahmad, Mohd-Hanefah & Mohd-Noor, 2007).-The recent research showed that the relationship between tax knowledge and tax compliance does not influence by gender. This may due to both males and females absorb the same amount of knowledge as they learn it from the same media. Hence it leads to the differences between male and female compliance levels is not significant (Natasha & Yustina, 2020). The result supported Fallan's (1999) research. Fallan (1999) identified that there is no predictive power from gender. The result also consistent with previous researchers (Amina & Sniy, 2015) and (Niway, 2016) with different opinion that gender has no significant impact on compliance attitude of taxpayers.

Findings by past researchers have produced varied results but they do appear to be greater support for the conclusion that females are more compliant than their male counterparts (Andreoni, Erard & Feinstein, 1998; Alm, 1999; Cyan, Koumpias & Martinez-Vazquez, 2016; Hofmann, Voracek, Bock & Kirchler, 2017). However, for the research carried out by McGee & Ross (2014) in six countries (Brazil, Russia, India, China, the USA and Germany), the results are mixed on the issue of gender and its relationship to attitude toward tax evasion.

Age

This study finds that there is a positive relationship between age and tax compliance (Ahmed & Kedir 2015), supported finding of Dubin and Wilde, (1988). The major finding by Oh and Lim (2011) on sole-proprietors in Malaysia also showed that age has a positive influence behavioural on tax-non-compliance intention. According to past researcher (Jackson & Milliron, 1986) taxpayer's age is one of the main factors affecting tax compliance. The research conducted by Dubin and Wilde (1988) reveal that the older tax payers are more compliant than younger tax payers. Hofmann et al. (2017) also indicate older taxpayers are more compliant than younger ones.

Experimental studies find that younger and single people tend to have less compliance (Alm, 1999; Andreoni, et al., 1998). In contrast Warneryd and Walerud (1982) highlighted that older people are less compliant than their young counterparts, which is negative relationship. Whereas, some other

researchers find no relationship between age and tax compliance (Spicer & Lundstedt, 1976; Spicer & Becker 1980; Porcano, 1988; Mohd, 2010). This is further supported by the recent empirical study conducted by Fredrick and Peter (2019) in Uganda, age do not have a significant influence on taxpayer compliance.

Malaysian taxpayers produce inconclusive results. For example, Perumal (2008) finds older taxpayers to be more compliant than younger taxpayers; whereas survey on university academics by John-Abdullah and Ahmad (2004) find that age is not a significant factor. On the other hand, researchers (Cyan et al., 2016) show that elderly males have higher tax morale than elderly females.

Ethnicity

There has limited study carry out with respect to tax compliance and ethnicity. Earlier study by Kasipillai et al. (2003) find that tax evasion in general has more impact on the Indian respondents compared to the Malays and Chinese. On the other hand, Al-mamun et al. (2014) suggest that Malays are more compliant than Chinese and Indians in respect of cash income only. In contrast, a later study by Kasipillai and Abdul-Jabbar (2006) based on a survey in north peninsular Malaysia does not find any significant differences in attitudes towards non-compliance based on ethnicity.

A literature review by researchers (Roth, Scholz & Witte, 1989) find whites to be more compliant than non-whites. On the other hand, a recent study by Belmonte, Dell'Anno and Teobaldelli (2018) indicate that a negative attitude toward ethnic diversity reduces tax morale in centralized political systems, whereas it does not have a statistical significant influence in decentralized ones. Another result highlights the negative effect of individuals' ethnic aversion on tax morale is inferior in homogenous countries than in ethnically fragmented states.

Marital status

Most studies find that married taxpayers are more willing to comply with tax laws than single taxpayers (Torgler & Schneider, 2007; Martinez-Vazquez & Torgler, 2009; Torgler, 2012). On the other hand, there are some studies indicate that no significant relationship between marriage and tax compliance attitudes (Ross & McGee, 2011; Randlane, 2012; Ho et al., 2013; Hennighausen & Heinemann, 2015). The interactions between marital status and the tax system or other determinants are a possible reason for the mixed results (Ma, 2017). In addition, recent study by Rashid (2020) finds that married individual taxpayers are more influenced by the factors of tax evasion than unmarried individual taxpayers.

Furthermore, according to Antwi, Inusah and Hamza (2015), married entrepreneurs are more compliant than unmarried entrepreneurs. The result supports Richardson and Sawyer (2001) finding, i.e., individual married taxpayers are found to be more compliant than unmarried taxpayers. Similarly, Asante and Seidu (2011) also indicate that, married self-employed taxpayers are very much compliant to tax laws than unmarried taxpayers.

Occupation

Studies in developed and developing countries find that self-employed or part-time taxpayers have lower levels of tax morale than full-time taxpayers (Torgler & Schneider, 2007; Martinez-Vazquez & Torgler, 2009; Marriott, 2017). However, some studies find no effect of self-employment on tax compliance attitudes (Torgler & Murphy, 2004; Sa, Martins & Gomes, 2014; Cyan et al., 2016). Various surveys show inconsistent results, for example, John-Abdullah and Ahmad (2004) conclude that occupation is not related to compliance while carrying out survey on university staff.

In contrast, Abdul-Manaf, Hasseldine & Hodges (2005) find that individuals' taxpaying behaviour and attitudes are influenced by their occupational group's taxpaying culture when related to land tax. In addition, recent study by Rashid (2020) indicates that self-employed individual taxpayers are more influenced by the factors of tax evasion. This could imply that taxpayers' attitudes towards paying tax may vary according to the tax itself (Loo et al., 2012). Another possible factor is the interaction between other determinants. Occupational status may just act as a mediator for income source or opportunities for non-compliance (Devos, 2008; Ma, 2017).

Education

Education normally relates to a taxpayer's ability to comprehend and comply with tax laws. General knowledge on taxation is positively related to tax compliance. According to researchers (Mohamad, Ahmad & Deris, 2010), knowledgeable taxpayers are normally submitted their tax return within the required time, compared to less knowledgeable tax payers. Experimental research by Chan et. al. (2000) find that there is a positive relation between educational level and tax compliance. Kirchler, Hoelzl and Wahl (2008) identified that higher knowledge about tax leads to greater compliance and poor knowledge about tax leads to greater noncompliance. Hence, it can be concluded that general tax knowledge can assist taxpayer to understand tax law and regulations better and be more compliant.

An empirical research conducted by Witte and Woodbury (1985) find a positive relationship between education level and voluntary compliance in USA. They proposed that an educated taxpayer will have a certain fiscal knowledge that will help him put to account the benefit of paying taxes. They suggested that education may affect an individual in his or her decision towards tax compliance. This is due to taxpayer can understand tax laws better with high level of education, therefore, become more compliant as they understand their obligations and duties towards the government and country.

Past researcher (Mohani, 2001) highlighted that taxpayers can have knowledge about taxation through education. This is the fundamental ways to increase public awareness on taxation especially in Self-Assessment System. Taxpayers understanding of tax requirements, especially regarding registration and filling is related to their level of education. According to Richardson (2008), general education level is significantly related to tax compliance. High awareness by the taxpayers would encourage them to fulfil their obligations to register as taxpayers, reporting and paying taxes properly as forms of natural and civic responsibility.

Cham et.al (2000) also suggested that better education is directly associated to a likelihood of compliance. They argue that educated taxpayers have better understanding of the tax system and their higher level of moral development will promote a more favourable taxpayer attitude and as a result greater compliance, even though they may be aware of non-compliance opportunities. They also recommended that those with a higher level of education are more likely to have a higher level of moral development and good attitudes towards compliance and hence will have a tendency to comply more. Ritsema,

Some other findings on the level of education and its influence on taxpayers' compliance, such as Beck and Davis (1991) find a positive association between education and non-compliance, which is consistent with the finding of Write and Woodbury, (2011). Thomas and Ferrier (2003) also discovered that education is very important in increasing tax compliance in any country. Due to that, level of education will give the taxpayer the confidence and capacity to exercise their tax responsibility without any enforcement. The researcher (Niway, 2016) also suggested that education level has direct relationship with tax compliance behaviour. Educated taxpayers are more compliant than uneducated taxpayers.

Lubian and Zarri (2011) argued that education is a powerful tool for increasing taxpayers' compliance by strengthening the feelings of identity, reciprocity, fairness and procedural justice. This is due to schooling play a major role i.e. as the main network through which ethical principles can be disseminated in the community and the magnitude of this effect increases with the level attained. In such situations, the potential for an increased level of tax compliance consequential from access to accurate and timely information may be enhanced.

Nzotta (2007) highlighted that lack of tax knowledge through tax education has led to tax non-compliance. He suggested that the level of education received by taxpayers is a key factor that contributes to the understanding of tax processes and requirements particularly related to registration and filing of returns. Lubian and Zarri (2011) find that ethical principles can be disseminated through education. Hence education is an important element of tax compliances. The survey result concluded that education is positively associated with tax compliance.

Education relates to the taxpayers' capability to understand and comply with the tax laws (Jackson & Milliron, 1986). Researchers such as Song and Yarbrough (1978); Eriksen and Fallan

(1996) have included education as a background variable in their research and the results indicate that those with more fiscal knowledge have more positive tax ethics scores than those with lower fiscal knowledge. Besides, researchers Chan et al. (2000); Houston and Tran (2001); Richardson (2006) also report that general education level is significantly linked to tax evasion.

Nevertheless, Porcano (1988) find no significant difference in his study to prove that the level of education affect tax compliance behaviour. The result is supported by recent research, Fredrick and Peter (2019) in Uganda highlighted that education level do not have a significant influence on taxpayer compliance. In contrast, another survey indicates that individuals with lower education tend to be more tax compliant than highly educated taxpayers (Hofmann et al., 2017).

Income level

Loo (2006) conducted a study to determine the level of compliance among the income earners in Malaysia. The empirical result indicated that, higher income earners are less complaint. This study evidenced that income level has a significant impact on taxpayers' voluntary compliance. But the subsequent research conducted by Palil (2010) mentions that those higher income earners in Malaysia are more significantly correlated with tax compliance. This finding has similar result with previous research conducted by past researchers (Wearing & Heady, 1997; Torgler, 2007).

Several past researches find a negative relationship between income level and tax compliance (Slemrod, 1985; Ali, Cecil & Knoblett, 2001). Some other studies also find that lower income earners are more willing to pay taxes than higher income earners (Ross & McGee, 2012; Torgler, 2012; Sa et al., 2014). McGee (2012) indicates that middle income earners have higher tax morale than higher income level taxpayers. In contrast, some findings indicate that taxpayers on higher income have higher tax morale than those on a lower income (Ristovska, Mojsoska-Blaževski & Nikolov, 2013; Al-mamun et al., 2014; Ibrahim, Musah & Abdul-Hanan, 2015).

According to Chan, Trountman and O'Bryan (2000), income level is not related to compliance among US and Hong Kong taxpayers. Roth, School, and Witte (1989) also recommend that the direct relationship between income level and tax compliance remain uncertain. In spite of the positive and negative relationship of income levels with tax compliance, we should take note on the study that find insignificant results. For instance, Park and Hyn (2003) in their research in South Korea find that income levels has no significant effect on tax compliance.

Jackson and Milliron (1986) indicated that middle income taxpayers are normally compliant with tax laws, but low and high income level taxpayers are relatively non-compliant with tax laws. The researchers find that income level have a mixed and unclear impact on compliance, and this finding is supported by Christian and Gupta (1993) and Hite (1997). On the other hand, Wallschutzky (1984) in his study in Australia finds that high income earners are less complaint. This study have showed that income level have significant influence on compliance. One possible justification for this is that high income groups trying to evade tax rather than lower income group because their taxable income are high (pay tax based on progressive tax rates), thus making the tax liabilities much higher than those in the lower income group. Another researcher Mohani (2001) also indicated that higher income group tend to evade more if they feel the tax system is not treating them fairly.

Tax compliance behaviour

Roth & Scholz (1989) defines compliance as "the taxpayer files all required tax returns at the proper time and that the returns accurately report tax liability following the Internal Revenue Code, regulations, and court decisions applicable at the time the return is filed." Previous study conducted by researchers (Dubin & Wilde, 1988) disclose that older taxpayers are generally more compliant then younger tax payers. In contrast Warneryd and Walerud (1982) find a negative relationship, i.e. older people are less compliant then their young counterpart. Furthermore, the study conducted by researchers (Harun, Abu Bakar & Tahir, 2011) in a local university in Malaysia find that there is no significant difference in terms of gender on tax evasion. This finding is supported by the research conducted by McGee and Susana (2007), where they indicate that there is no significant differences between male and female in United States (USA).

Overall, the tax morale level and the compliance decision of an individual are significantly influenced by gender, age, educational level and occupational status (Alasfour et al., 2016). In contrast, the results obtained by Wan Mohamad Noor and Abd Razak (2019) showed that there are no significant differences on gender, accounting and non-accounting students and education level for ethics on tax evasion. The researchers Kasipillai and Abdul-Jabbar (2006) also find that there is no difference in tax compliance behaviour between female and male.

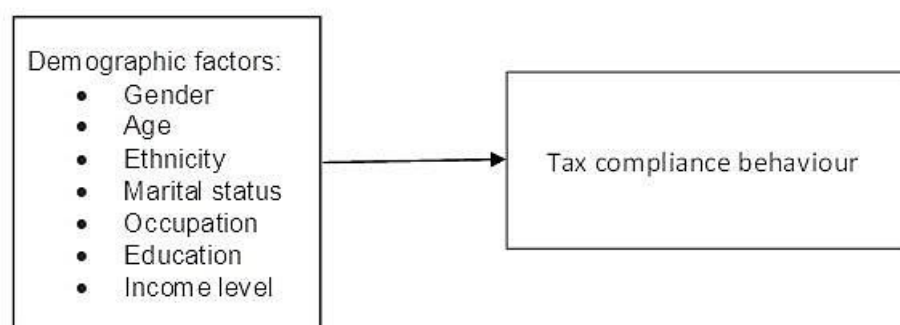
In a research conducted in the US and Hong Kong, Chan, Troutman and O'Bryan (2000) highlighted that US respondents' decisions to comply with tax laws are influenced by age and education. However, another research carried out by McGee and Gelman in 2009 reported that upper level students are less tempted to evade tax while those in the lower level have more tendency to oppose to tax. This may due to graduate students generally are elder and more mature than undergraduate students, and since older citizens are more aware of the consequences if they were intentionally avoiding their taxes liability, it would be reasonable to anticipate that students with higher education level most likely be more tax compliance as compared to those who were still in lower education level. McGee and Yuhua (2007) also observe and find that the education level has significant positive relationship with the ethics on tax evasion for students in Korea, Japan and the Mainland of China.

The recent finding from researchers (Umoffong, Etim & Bassey, 2020) is that the higher the income levels of the taxpayer, the lower the level of voluntary compliance in Self-Assessment System. This finding is consistent with Loo (2006) study. The researchers also further highlight that the higher the level of education, the higher the level of voluntary compliance in Self-Assessment System. This is due to higher education possibly increase compliance as educated taxpayers may be more informed and aware of their responsibility, as well as sanctions to be imposed if they are not compliant with the tax laws. This finding is conflicting to the findings of Richardson (2008) who find that a negative association between education level and tax compliance.

A possible reason for the inconsistent findings is due to the interaction between income level and other factors i.e. tax schedule and gender (Ma, 2017). Several researchers have highlighted that those higher income taxpayers are more likely to have a negative tax compliance attitudes if a country implements progressive income tax schedule (Hite, 1997; Torgler & Valev, 2010). Surprisingly, another survey reveals that income to be negatively related to tax compliance (Hofmann et al., 2017).

CONCEPTUAL FRAMEWORK

Figure 1: Proposed Conceptual Framework



CONCLUSION

The literature indicates that demographic factors play an important role in the compliance behaviour of taxpayers. The research highlights an inconsistent findings for gender, age, ethnicity, marital status, occupation, education and income level towards tax compliance behaviour of individual taxpayers. This may due to individual taxpayers are in a different culture and ethic environment. These conflicting results require further empirical investigation, especially Malaysia has different ethnic and culture. The future research can consider to examine the demographic factors as moderator on the relationship between individual factors and tax compliance behaviour in Malaysia.

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BAFE022:
**REASONS FOR COMPANIES DELISTED IN MALAYSIA, THEIR
FINANCIAL CONDITIONS AND AUDITOR'S GOING CONCERN
OPINION PRIOR TO DELISTING**

Loh, Chun T'ing^a, Chin, Yoon Mei^b, Foo, Pik Yin^c, M.Krishna Moorthy^d

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ctloh@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ymchin@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: foopy@utar.edu.my

^dSchool of Economics and Management, Xiamen University, Malaysia,
Email: krishna.manicka@xmu.edu.my

Abstract

The main objectives of this research are to study the reasons for delisting in Malaysia, delisted companies' financial conditions and auditor's going concern opinion (GCO)s received prior to delisting. Financial conditions are measured using financial distress parameters: negative operating cash flows, negative working capital, net operating loss, retained profit deficit and net liability position; and financial ratios: current assets/current liabilities, operating cash flows/total liabilities and total liabilities/total assets. The dataset is companies delisted from the Main Market of the Bursa Malaysia between 2015 and 2019.

Descriptive analyses show that 61% of the companies are delisted voluntarily due to take-overs, capital reduction, privatisation and others, whereas 39% of the companies delisted involuntarily due to unable to regularise the financial condition from the PN17 or cash company status and liquidation. T-test results indicated that companies involuntarily delisted have financial distress indicators of negative working capital, net operating loss, retained earnings deficits, net liability position as and total liabilities/total assets that are significantly worse than the voluntarily delisted companies. Moreover, 97% of voluntarily delisted companies received clean auditor's opinion as compared to only 1% of the involuntarily delisted companies. T-test results show that delisted companies that received GCO have significantly worse financial distress indicators of negative working capital, net operating loss, retained earnings deficit, net liability position and total liabilities/total as compared to delisted companies that received clean auditor's opinion. Thus, it was concluded that the financial distress position for companies delisted involuntarily are much more severe as compared to companies delisted voluntarily.

Keywords: reasons, delisted, going concern opinion, financial distress indicators, Malaysia

BAFE027:
**FACTORS INFLUENCING CASH WAQAF INTENTION AMONG
MALAYSIAN MUSLIMS**

Hatijah binti Mohamed Salleh^a, Norhusnaida binti Che Hussain^b, Khairunnisa binti Ishak^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: hatijah@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: norhusch@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: khairunnisa@utar.edu.my

Abstract

Seeking Allah's blessings in the hereafter together with generating economy for Muslims community would be the main purpose of waqaf. One of the pillars for waqaf is 'al-mauquf'. Al-Mauquf refers to the assets or properties needed for waqaf purposes can be in any state of things including cash waqaf. The practice of cash waqaf involves contribution of certain sum of money by individual to the trustee for the benefit of ummah or community. In Malaysia, waqaf are handled and managed by waqaf institutions which include the State Religious Islamic Council (SRIC) and Yayasan Waqaf Malaysia (YWM). Cash waqaf plays a significant role to improve the social welfare and economic of ummah or community. Therefore, the objective of this study is to determine the factors that influence the intention of Malaysian Muslims to contribute cash waqaf by applying the Extended Theory of Planned Behaviour with the additional variable (trust). A set of questionnaires were distributed through Google forms to Muslims community such as students and employees in public and private sectors in Malaysia. As cash waqaf is currently flourishing in Malaysia, this study is expected to be an encouragement to the waqaf institutions to attract Muslims to contribute towards cash waqaf in the future.

Keywords: Waqaf, cash waqaf, Malaysian Muslims, Extended Theory of Planned Behaviour.

INTRODUCTION

Waqaf means giving something (Wan Ismail, Embong, Abd Rahman, Romainha & Mohamad Roseli, 2015) for the sake of charitable donation in the name of Allah. The primary goal of waqaf is for the development of social and economy among society. In Islam, waqaf is not a compulsory act however, in the nature of Islamic perspective, it is categories as a voluntary act which is much needed to help the community development. A Muslim is encourage to donate a part of their wealth as charity donation to generate economic and socio-economic impact among community in education development, public facilities, facilities of healthcare to the poor, financial institutions etc.

There are different types of waqaf. The common types of waqaf in Malaysia includes fixed properties waqaf, land waqaf and cash waqaf. Cash waqaf is flourishing (Wan Ismail et. al, 2015) and increasingly gaining popularity among Malaysian Muslims (Pitchay, Meera, & Saleem, 2015). In short, the cash waqaf is define as voluntary contribution of a person in a form of cash or money. Cash waqaf are aforementioned as one of a potential or alternative instrument to develop and improve Muslim economy (Haron, Kamarudin, Muhamad Fauzi, Mhmd Ariff & Zainuddin, 2016), social welfare and lessen the government burden (Wan Ismail et. al, 2015). Thus, the contribution of cash waqaf on the development of economy is undeniable. Compared to other types of waqaf, cash waqaf has a bigger potential of income generation due to its liquidity that can be utilized for many activities (Nasiri, Noori & Salleh, 2019). At the beginning of the development of cash waqaf in Malaysia, it had showed a great progress. For instance, with the emergence of cash waqaf and waqaf revenue, the collection of funds has become the most capital provider to establish the first Islamic Banking and Insurance in Malaysia known as Bank Islam and Takaful Malaysia.

Despite the success story of cash waqaf, they are said to be still at low level in Malaysia (Ibrahim & Md, 2018) and the growth of cash waqaf has become slower in recent time (Wan Ismail et. al, 2015) as compared to other types of waqaf. According to Pitchay, Meera & Saleem (2015), the significant factor of this statement is the size of cash waqaf collection in Malaysia is not encouraging. It is due to the limited knowledge and wrong perception among Muslim that it can be made only through land and fixed properties (Haron et al., 2016; Ibrahim & Md, 2018). Nasiri, Noori and Salleh (2019) also added that, the cash waqaf is still considered as a new form of waqaf among Muslim in Malaysia.

The development of cash waqaf has attracted many researchers to study on the acceptance (Nasiri, Noori & Salleh, 2019), awareness (Ibrahim & Md, 2018), but a limited study on the influencing factors of intention of giving cash waqaf (Osman, Mohammed & Fadzil, 2016). Therefore, the fundamental objective of this study is to determine the significant factors influencing Muslim intention to contribute in cash waqaf in Malaysia as it is important to know the motive of people donating in waqaf (Osman, Htay, Muhamad, 2012). Besides that, Pitchay, Meera and Saleem (2015) added, according to Islamic philosophy every acts or decisions executed in life relies on one's intention. This is in line with the tradition of Rasulullah S.A.W. that: *"Every action of man will be determined by intention"*. For this purpose, Extended Theory of Planned Behaviour (ETPB), as proposed by Ajzen (1985) was employed as a research framework. Besides Attitude, Subjective Norms and Perceived Behaviour Control, Trust was added as additional construct in predicting the influencing factors of intention in giving cash waqaf among Muslim in Malaysia. This is parallel with the study of Osman, Htay and Muhamad (2012) who argued that there is a little attempt to determine the influencing factors of intention to cash waqaf behaviour using TPB. Thus, this study is expected to consequently validate the ETPB in cash waqaf context.

This paper is structured into five sections: the following section summarized the literature of waqaf, cash waqaf, and application of theory as well as the development of hypothesis. Methodology and findings of the study will be explained in the third and fourth section. Finally, the conclusion will be discussed in the last section of this paper.

LITERATURE REVIEW

Waqaf

The word waqaf itself is an Arabic term which literally means 'stop' (Pitchay, Meera & Muhammad Saleem, 2014) while terminologically, it can be defined as an act of holding a property by a nadzir or trustee and its usufruct will be used for philanthropic purposes (Kahf, 1998; Abdul Shukor, Anwar, Abdul Aziz & Sabri, 2017). There are two categories of waqaf namely waqaf khayri (public waqaf) and waqaf al-ahli (specific waqaf) (Ab Fatah, Mansor, Ripain & Endut, 2017).

According to section 2 of Wakaf (State of Selangor) Enactment 2015, "*wakaf*" means (a) to surrender the title of any property from which its benefit and interest may be enjoyed; (b) to surrender the benefit or interest which may be enjoyed from any property; or (c) to contribute the expertise and services from which its benefit or interest may be enjoyed. It is a form of charity where the donor endows his property in the name of Allah for the benefit of *ummah* or community (Ismon, & Hingun, 2020). In the context of economy, Waqaf can be considered as a form of fundraising, which is invested in a multiple productive asset and later on will be used for the benefit of the *ummah*. From this form it is possible that the accumulation of social capital in the society will be increased (Putra & Isfandayani, 2020).

Islam has emphasized the act of giving or donating (*sadaqah*) from about 1400 years ago. It has been mentioned in al-Quran on the encouragement of giving for charitable purposes as in Surah al-Baqarah (2), verse 43 which means charitable behaviour is considered as a religious duty or worship (Osman, Htay & Muhammad, n.d.). Whereas, there is also a tradition from Prophet Muhammad said: *"Guard yourself against hellfire even by giving half of a date, and if you have non to give, speak a kindly word"* (Sahih al-Bukhari).

This giving behaviour can be seen from the practice of waqaf which already started from the period of Prophet Ibrahim (PBUH) where he endowed his properties for charitable purposes including

the built of Kaabah in Mecca (Pitchay, Meera & Saleem, 2014). It also been continuously practiced during the period of Prophet Muhammad (pbuh) where he built Quba mosque in Medina al-Munawwarah as the first waqaf mosque and followed by Nabawi mosque (Zakaria & Muda, 2017). These Waqaf properties that been used for building a sacred place to satisfy the religious need is called religious waqaf (Kahf, 2000). However, the practice is not only limited to religious waqaf, where the property also can be used for philanthropic purposes such as a contribution towards the social services or for the improvement of the community. This philanthropy practice can be seen from the action of Caliph Uthman who voluntarily bought a well and declared it as a waqaf for the community (Zakaria & Muda, 2017). Various educational institutions also have been built through waqaf institution such as the University al-Azhar in Egypt and Cordova University in Spain (Zakaria & Muda, 2017). A study made by Pitchay, Meera and Saleem (2014) showed that the donors of waqaf prioritize the education and health as they are more expensive and lack of supply.

The development of waqaf in Malaysia specifically has started from the 15th century during the period of Malacca Sultanate and it has been continuously practiced until being disrupted during the colonization period. Pitchay, Meera and Saleem (2014) stated that many changes have occurred during this period due to the loss of waqaf documents and deeds which cause the restructuring of waqaf property and there was some that cannot be declared as waqaf property anymore.

In present, with the establishment of waqaf institutions such as Department of Wakaf, Zakat and Hajj (JAWHAR), Yayasan Wakaf Malaysia (YWM) and Majlis Agama Islam Negeri (MAIN) has served as an alternative in managing waqaf property (Khamis & Che Mohd Salleh, 2018;) through the development of economy, social, education and benefit of ummah.

Practicing waqaf is considered as charitable act which is voluntarily done by any individual (Pitchay, Meera & Saleem, 2014) other than zakat, sadaqah and etc. and such act will be rewarded continuously in the hereafter as parallel with the tradition where Abu Hurairah (May Allah be pleased with him) reported Prophet Muhammd (PBUH) said: *"When a man dies his acts come to an end, except three things, recurring charity, or knowledge (by which people benefit), or pious offspring, who pray for him"* (Sahih Muslim).

Cash Waqaf

Practically, there are two categories of waqaf property i.e. moveable and immovable property. Waqaf from immoveable property include land, building and those similar to that, whereas waqaf from moveable property consist of share, money, gold and those similar to that (Wakaf (State of Selangor) Enactment 2015, section 2), hence, including the cash waqaf. Most scholars are of the opinion that moveable property can be endowed as long as the usufruct can be enjoyed and the beneficiaries continues (Ahmad & Muhamed, 2011). Safar mentioned that cash waqaf is an act of giving cash to any waqaf trustee and the cash will be accumulated to purchase a permanent property. Hence, the proceeds of cash waqaf will be used for the welfare and development of ummah (Yayasan Wakaf Malaysia, n.d.). In the waqaf system, cash can be endowed as well as real estate assets (Ozdemir & Ozdemir, 2017). Cash waqaf reflects donating an amount of money to be used for something beneficial to the ummah. Cash waqaf is affordable and can be treated as an alternative resolution for cash flow for abandoned waqaf projects on part of the waqaf institutions. It may also reduce reliance on the government fund (Kassim, Embi, Haron, & Ibrahim, 2019).

Cizkca, 2010 as cited in Nasiri, Noori, and Salleh (2019) stated, based on a narration narrated by Imam Muhammad bin Ismail Al -Bukhari, Iman Al- Zuhri was asked about a man who endowed 1000 dinar to a businessman as a cash capital where the profit was distributed amongst the poor. This illustrate the historical application of cash waqaf during Tabi'in period. Besides, during the Ottoman Empire, there were many instances where cash waqaf was practised mainly in most of the cities such as in Istanbul, Bursa and Selanik. Even though the exact date for its practice was unknown, according to historians, the period of Murat II and his son Mehmet II on the 15th Century, were the starting point of its implementation and practices. The Ottomon Courts also had approved the practice of cash waqaf in the early of 15th Century and it was very popular in Anatolia and Rumeli. Thereafter the practise of cash waqaf in Ottomon Empire increased. The best example of such

practise was the donation of 24,000 of gold dinars to the soldiers to be used for their meal (Ozdemir & Ozdemir, 2017).

Traditionally, waqaf usually been practiced by donating a property such as land or building to be used for the welfare and development of ummah, hence, the lack of property to be given as waqaf has become a hindrance for the public to practice waqaf (Osman, Mohammed & Fadzil, 2016). Thus, through cash waqaf, it provides an alternative for those who did not possess any land or property to donate as waqaf, thus, allowing them to practice waqaf by cash. For the poor or those who have no property to be donated for waqaf purposes, cash waqaf serves as a solution for them because cash waqaf only requires a minimum amount of money to be donated which is affordable. This may encourage and motivate them in doing good deeds or *amal jariah* towards seeking Allah's pleasure and reward (Wan Ismail, Embong, Abd Rahman, Romaiha & Mohamed Roseli, 2015).

Cash waqaf can make waqaf more productive since the cash capital is already available and can be used as a means of production (Putra & Isfandayani, 2020). It can be considered as one of the sources of funds in the Islamic economy which is considered as a financial instrument to benefit the Muslim ummah (Osman, Mohammed & Fadzil, 2016). Cash waqaf is more flexible and easier (Haslindar, Eliza & Jorlah, 2013), as it provides liquidity and option to be used (Osman, Mohammed & Fadzil, 2016). It is also affordable for everyone to donate compared to waqaf on immovable property such as land or building (Azizi, Abdul Shukor & Sabri, 2019). Thus, its flexibility and minimum amount attracted anyone including those who has a lower income to participate in cash waqaf. The fund from this cash waqaf can be used to finance any abandoned waqaf property which cannot be completed due to lack of fund (Zakaria & Muda, 2017) and later on can be used for the benefit of public.

Despite the facts that cash waqaf was initially introduced in Malaysia in 1959, the response towards it was still low due to some debatable arguments particularly on the nature of cash waqaf itself which was quite distinctive from the one which was normally practised. Other than that, different perceptions and lack of knowledge and understanding by Muslims on waqaf cash are also the contributing factors (Fauzi, Yahya, Hanaysya, Haron & Abu Zahrin, 2019). However, the decision of Fatwa Committee of the National Council for the Religious of Islam on 10th – 12th April 2007, has legalised the practice of cash waqaf in Malaysia (Wan Ismail et al., 2015); (Azizi, Shukor & Sabri, 2019) thereby its practise tend to flourish and increase from year to year.

Theory of Planned Behaviour (TPB)

This paper seeks to analyze the behavioral intention of Malaysian Muslim by using the Extended Theory of Planned Behaviour on the factors that may influence their intention to practice the cash waqaf. This theory was proposed by Azjen (1985) as a development from the theory of reason action (TRA). TPB consists of Attitude, Subjective Norms and Behavioral Control with the additional variables of Trust for this study.

There are previous studies conducted to determine the cash waqaf giving behaviour by using TPB. Osman, Mohammed and Fadzil (2016) used extended TPB including trust, religiosity and perceived services quality to determine cash waqaf giving behaviour intention. Whereas, Putra and Isfandayani (2020) conducted a study on a waqaf management institution by using TPB to determine the factors influence people's intentions in carrying out cash waqaf.

Azizi, Abdul Shukor and Sabri (2019) conducted a study on 374 existing endowers on the factors that determine the endowers' intention to re-contribute to cash waqaf by employing TPB. Ninglasari (2018) also has conducted a study on 80 donors of waqaf institution, Sinergi Foundation to determine influence of attitudes, subjective norms and perceived behavioral control on the intention of cash waqaf giving and the influence of perceived behavioral controls and the intention of cash waqaf giving to the cash waqaf giving behavior. Pratama and Sukmana (2020) also used the TPB and Religiosity to determine the factors on willingness to pay waqaf of Muhammadiyah Committee in Surabaya.

In the context of giving behaviour studies, a recent study by Lee (2019) has used TPB together with volunteer-role identity (RI) model to investigate group of undergraduates in the National

University of Singapore on the characteristics these donors possess and what drives them to continue giving. The study found that RI mediates attitudes, subjective norms, and past behaviour to determine charitable giving intentions. Mittelman and Rojas-Méndez (2018) has done a study on potential Canadian charitable donors to test an expanded model of charitable giving and the intention to donate based on the TPB. The strongest influences on the intention to donate were past behaviour, moral norms, and perceived behavioural control. Subjective norms and attitude toward charitable organisation were found to be non-significant predictors. While a study by Grillia and Notaro (2018) used extended theory of planned behaviour to determine the preferences and willingness to pay for participatory natural resources management in the Italian Prealps.

Being considered as a potential instrument to expand and develop the economy, it is necessary therefore to have cash waqaf being practiced in our modern society (Haron, Kamarudin, Muhamad Fauzi, Mhmd Ariff, & Zainuddin, 2016). Currently, cash waqaf does not only flourish in Malaysia, but its practice is well accepted in other countries such as Syria, Turkey, South Africa, Singapore, Pakistan and Egypt (Wan Ismail et al., 2015). Nonetheless still it is considered to be at an infancy level. Due to its importance and proven to be a successful tool to generate society's economy, it is pertinent therefore to encourage Muslims to participate in cash waqaf. Hence this study is conducted to determine the factors that influence Muslims' intentional behaviour towards cash waqaf giving behaviour. This study observed attitude, social norms, perceived behaviour control and trust as the independent variables towards cash waqaf giving intention.

Attitude towards Behaviour

Attitude towards behaviour can be defined as the positive or negative feelings of one person in respect to the targeted behaviour. Ajzen (1991) described attitude as a personal evaluation on a particular behaviour i.e. whether a person is in favourable or unfavourable on it. It refers to a person's feeling either positive or negative in respect of performing the targeted behaviour (Osman & Muhammad, 2017) and represented 50% difference in intention (Ajzen, 1991).

Subjective Norms

Subjective Norms is the perception of an individual on whether the people surrounding him would support the performance of the targeted behaviour or not. It is the social pressure either to perform or not of the behaviour and is determined by the total set of accessible normative beliefs concerning the expectations of important referents (Ajzen, 1991). It relates to the idea on how a person would rate the importance of the surrounding people's approval or disapproval on the given behaviour (Ajzen, 1991). Osman, Mohammed, and Amin (2014) defines subjective norms as one's perception of relevant judgment from others either to perform a behaviour or not.

Perceived Behaviour Control

According to Ajzen (1991) PBC means how far a person possesses the skills, resources and other requirements to perform a given behavior. It is the people perception on the ease or difficulty in doing the targeted behaviour and it does vary across situations and actions. The PCB is most likely the same with Bandura's concept of perceived self-efficacy – "concerned with judgment of how well one can execute courses of action to deal with prospective situations" (Bandura, 1982 as cited in Ajzen, 1991). Ajzen (1991) further mentioned that behavioral performance is strongly influenced by the people higher confidence in ability to perform. PCB together with behavioral intention can be used to predict behavioral achievement directly. So far the PCB is realistic, it can be used to predict the probability of a successful behavioral attempt (Ajzen, 1991).

Attitude, subjective norms and perceived behaviour control are expected to convey a distinctively relative importance depending on the type of behaviour and the situation on which they are tested. The result on the significance importance of these variables on intention may vary between one another and in any circumstances other than the three variables may also make independent contribution (Ajzen, 1991). Therefore, this research expanded the theory to include trust as another variable to predict intentional behavioural of cash waqaf giving.

Trust on the waqaf institutions

The importance of trust is revealed in many of the Quranic verses. For example, in Al-Anfal, verse 27, Allah SWT says:

يٰۤاَيُّهَا الَّذِيْنَ ءَامَنُوْا لَا تَخُوْنُوْا اللّٰهَ وَرَسُوْلَهٗ وَتَخُوْنُوْا اٰمَنَتِكُمْ وَاَنْتُمْ تَعْلَمُوْنَ ﴿٢٧﴾

"O you who believe, do not betray Allah and His Messengers or betray your trusts while you know (the consequence)".

By referring to "Tafsir Pimpinan Ar-Rahman" the above verse portrays betraying trusts as breaching a trust deposited onto oneself on any property or secrecy or anything else (Jabatan Hal Ehwal Agama Islam Negeri Sabah, 2020, "Amanah itu Berat Tetapi Pahalanya Amatlah Besar", para. 3). Besides, Allah, the Al-Mighty also says in the Holy Quran at verse 58 Surah An-Nisa:

اِنَّ اللّٰهَ يٰۤاْمُرُكُمْ اَنْ تُوْدُوْا اِلَآءَ مَنْتَبِ اِلٰى اَهْلِهَا وَاِذَا حَكَمْتُمْ بَيْنَ النَّاسِ اَنْ تَحْكُمُوْا بِالْعَدْلِ ؕ اِنَّ اللّٰهَ نِعِمَّا يَعِظُكُمْ بِهٖ ؕ اِنَّ اللّٰهَ كَانَ سَمِيْعًا بَصِيْرًا ﴿٥٨﴾

"Indeed, Allah commands you to render trusts to whom they are due and when you judge between people to judge with justice. Excellent is that which Allah instructs you. Indeed, Allah is ever Hearing and Seeing".

From the above verse, it shall be understood that trust should be given to he deserving trustee otherwise it will cause betrayal (Jabatan Hal Ehwal Agama Islam Negeri Sabah, 2020, "Amanah itu Berat Tetapi Pahalanya Amatlah Besar", para. 4).

Trust is emphasized in Islam and its importance could be seen from the tradition of Prophet Muhammad (PBUH). It was narrated by Abu Hurairah RA that the Prophet (PBUH) said: *"If the trust has been betrayed, then wait for the coming of the Day of Judgment (the sign of which is approaching)." Then a friend asked: "How is that the nature of trust is betrayed, O Messenger of Allah?" The Prophet (PBUH) replied: "If a matter is handed over not to its members, then wait for the Day of Judgment."* (Tradition Riwayat al-Bukhari, No. 6496) (Jabatan Kemajuan Islam Malaysia, 2020, "Koleksi Tradition. Apabila Sifat Amanah Diangkat", para. 1).

Trust is defined as "willingness of a trustor to be vulnerable to the actions of a trustee based on the expectation that the trustee will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, Schoorman, 1995, as cited in Hasan & Siraj, 2017).

The study of Kassim, Che Embi, Haron and Ibrahim (2019) portrays trust to the organization, familiarity with the cause of the organization and perceived efficacy of the contribution as the significant influences for the donor's continuous donation. They also opined for any party to be given freedom to ask questions if they were doubtful with the waqaf institutions and addressing these questions is important because the management of cash waqaf i.e. in monetary term is considered too risky. Abdul Kadir, Sapuan and Ramli (2018) found the mean for trust in their study was below 4.0 thus indicating an issue in the management of waqaf in Malaysia. They suggested for prompt actions to be carried out in disclosing information on waqaf management to the public. The need for trust arisen when people are uncertain and became vulnerable to the vital decisions made and the outcome for such decisions (Abdul Shukor, Anwar, Abdul Aziz & Sabri, 2017).

Intention to Contribute Cash Waqaf

In Islamic perspective, intention is the core driver for one's deed as stated in the traditions of Prophet Muhammad (PBUH):

"On the authority of Omar bin Khattab, who said, "I heard the messenger of SAW say. "Actions are according to intentions, and everyone will get what was intended. Whoever

migrates with an intention for Allah and His Messenger, the migration will be for the sake of Allah and his Messenger. And whoever migrates for worldly gain or to marry a woman, then his migration will be for the sake of wherever he migrated for” (Reported by Bukhari and Muslim) (Johari et al., 2015).

In the TPB, intention as the central factor in the theory, indicates how much effort is taken and initiated when people are trying to achieve the targeted behavior. Generally, the possibility of performance of an act would be higher if the intention is much stronger. Nonetheless, behavioral intention can only express the actual behavior whenever the targeted behavior is under volitional control. It depends very much on one's willingness to do or not to do the act (Ajzen, 1991).

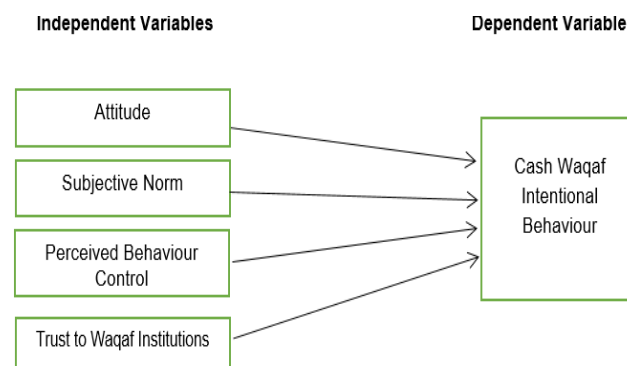
Intention to contribute cash waqaf was found to have a significant relationship with married people, higher level of income and knowledge acquisition (Abdul Shukor et al., 2017). The four factors indicating significant influence of behavioral intention to repeat cash waqaf amongst Malaysian Muslims are religious duty, generosity, familiarity with waqaf institutions and access to waqaf (Johari et al., 2015).

Johari et al. (2015) also declared, measurement of intention depends on the Islamic generosity and compassion among Muslims. Osman and Muhammed (2017) further said, behavior is affected and stimulated by intention. Intention measures one's effort to achieve the behavior, where there must be attempts made to transform it into action otherwise it shall remain as intentional behavior. Therefore, based on the above, this research proposed a theoretical framework as follows:

CONCEPTUAL FRAMEWORK

The researcher's conceptual framework is tabled in Figure 1. The proposed conceptual model explains the relationship between independent variables (attitude, subjective norms, perceived behaviour control and trust) and intentional behaviour of cash waqaf giving.

Figure 1: Conceptual Framework Model



Many psychological theories have been proven to benefit researchers in predicting and understanding marketing behaviour. TPB has been widely acknowledged and used to understand intentions and behaviour (Kashif & De Run, 2015). As proposed by Ajzen, (1991) the three (3) variables; attitude, subjective norms and perceived behaviour control are important predictors towards intentional behaviour which then lead to actual behaviour. Past researchers have employed TPB in their research and have proven the significant relationship between the three variables and intention towards cash waqaf (Musa & Mohd Salleh, 2018); (Osman, Mohammed & Fadzil, 2016); (Osman & Muhammad, 2017); (Azizi, Shukor & Sabri, 2019); Abdul Shukor, Johari, Abd Wahab, Zulkefli, Ahmad, Alias, Abdul Rahman, Mohd Orip, Ibrahim & Abu-Hussin, 2018). Nonetheless, the use of TPB with the extended or additional determinants is still scarce (Kashif & De Run, 2015). Accordingly, trust is an additional and external variable introduced, chosen and added by the researcher into the TPB variables in this research.

Attitude was found to be a significant variable in explaining behavioral intention in cash giving based on the previous findings (Azizi, Shukor & Sabri, 2019; Osman & Muhammad, 2017; Osman & Muhammad, 2017; Osman, Mohammed, & Amin, 2014). Osman and Muhammad (2017) mentioned,

since cash waqaf relied very much on Muslims donors, thus the Muslims positive attitude towards cash waqaf intentional behavior is indeed important. Azizi, Shukor and Sabri (2019) highlighted positive attitude contributed to the high intention to re contribute cash waqaf which were supported by other previous findings. Therefore, based on the above discussion it is hypothesized that:

Hypothesis 1

H1: Attitude towards behaviour positively influences the intention to give cash *waqaf* amongst Muslims in Malaysia.

Azizi, Shukor and Sabri (2019) found significant relationship between subjective norms and intentional behavior to repeat cash waqaf. The surrounding people's perception is dominant in influencing the donor to re contribute cash waqaf as normally they are in a closed relationship and will keep reminding the donor on his action. Osman and Muhammed (2017) also found and concluded subjective norms as a significant antecedent of intention to participate in cash waqaf amongst Muslims in Selangor. This discussion lead to the second hypothesis of this study which is:

Hypothesis 2

H2: Subjective norms positively influences the intention to give cash *waqaf* amongst Muslims in Malaysia.

Further, Kashif and De Run (2015) once conducted a study on intention to donate money to charities in Pakistan by using the extended Theory of Planned Behavior (TPB) and they revealed significant relationship between PBC and money donation. They further suggested that the geographical and demographical of Pakistan people who loved to help each other due to the frequency of social issues and natural disaster thereby promoting and enhancing charitable activities in Pakistan both at micro and macro levels. Thus, they proposed that higher degree of PCB and donation in Pakistan was understood. PBC was found to be the significant determinant for *waqaf*-based entrepreneurial intention amongst university students (Salleh, Mohd Noor & Mat Roni, 2017) and on cash waqaf intentional behavior amongst Muslim workers in both government and private sectors in Selangor (Osman & Muhammad, 2017). Thus, the above discussion lead to the third hypothesis:

Hypothesis 3

H3: Perceived Behaviour Control positively influences the intention to give cash *waqaf* amongst Muslims in Malaysia.

Public trust offers higher moral standard and strengthen the commitment of a charitable organization to the public. In case of failure, it may lead to bad consequences such as image tarnished and donations decreased. The importance of trust has been studied in many fields such as; governance and accountability but is less in *waqaf* (Sargeant & Lee, 2004; Yang et al., 2014; Dhanani & Connolly, 2012; as cited in Hasan, & Siraj, 2017).

Trust on *waqaf* institutions is crucial in determining public confidence in participating in cash *waqaf*. What more in cash *waqaf*, the public will feel insecure as they were not informed on how their monies or contributions are managed or distributed (Abdul Shukor et al., 2017). Since trust is one of the necessary constituents in social acknowledgement, economic competency, and democratic firmness it is therefore suggested for waqaf institutions to have their code of governance and ethics towards better understanding on their roles, controlling supervision and discharging accountability (Fukuyama, 1995 & Alias, 2012, as cited in Hassan and Siraj, 2017). Since the waqif's or the donors' trust depend so much on the integrity and reputation of the awqaf institutions it is necessary therefore for the institutions to maintain good reputation in gaining their trust to attract them to contribute in cash waqaf giving (Abdul Shukor et al., 2018). The studies of Osman, Mohammed, and Fadzil (2016) and Abdul Shukor et al. (2017) proved trust as having significant correlation with intention towards cash *waqaf*. These findings lead the last hypothesis:

Hypothesis 4

H4: Trust to the waqaf institutions positively influences the intention to give cash *waqaf* amongst Muslims in Malaysia.

RESEARCH METHODOLOGY

In order to achieve all the research objectives stated earlier, this study applies the quantitative research method which data collected in a numerical form based on 5-likert-scale (strongly disagree – strongly agree). For the purpose of conducting the research, the questionnaire was distributed randomly to the Malaysian Muslim with various background and criteria in order to obtain different perspectives on their intention in giving cash waqaf. Hence, it is important to investigate the Malaysian Muslim's behaviour towards cash waqaf giving or donation.

The data were distributed to 384 Malaysian Muslim through online platforms (Google form) from 1st August 2020 until 1st September 2020. It required around 5 to 10 minutes to complete the questionnaire. Out of this, 206 were returned and utilized for the final analysis. According to Roscoe (1975) as cited by Sekaran and Bougie (2013), sample size suggested is more than 30 and less than 500 for most researches. It was also supported by Hoyle (1995) that statistical analysis could be conducted between 100 to 200 sample sizes.

RESULT AND DISCUSSION

Statistical Package for the Social Science (SPSS) software is used to run the data with various types of analyses which including correlation and regression analysis. The findings of demographic profile reveal that majority of respondents are female (66.5%), age group less than 20 (51.9%) and they are students (52.9%). The details are as below:

Table 1: Demographic Profile

Demography	Frequency	Percentage (%)
Gender		
Male	69	33.5
Female	137	66.5
Age		
Less than 20	107	51.9
21 - 30	7	3.4
31 - 40	30	14.6
41 - 50	56	27.2
Above 50	6	2.9
Sector		
Student	109	52.9
Public Servant	45	21.8
Private Sector	37	18
Others	15	7.3

Table 2: Result of Pearson Correlation Analysis

		Attitude	Subjective Norm	Perceived Behavioural Control	Trust
Cash Waqaf Intention	Pearson Correlation	0.631	0.603	0.677	0.665
	P-Value	<0.01	<0.01	<0.01	<0.01
	Strength of Association	Strong positive correlation	Strong positive correlation	Strong positive correlation	Strong positive correlation

Based on the above result in Table 2, all the IVs (Attitude, Subjective Norm, Perceived Behavioral Control and Trust) show a strong positive correlation with the DV (Cash Waqaf Intention). The IV with the highest significant value is Perceived Behaviour Control (0.677), followed by Trust (0.665), Attitude (0.631) and Subjective Norm (0.603) respectively. Therefore, the higher value of IVs, for instance, PCB (resources, skills and other requirements) among donors will increase their intention to contribute cash waqaf.

Table 3: Result of Multiple Linear Regression Analysis

	β	t-value	p-value
Attitude	0.241	2.966	0.003
Subjective Norms	.0153	2.384	0.018
Perceived Behaviour Control	0.332	6.398	0.000
Trust	0.339	6.554	0.000
R-square		0.658	
Adjusted R-squared		0.651	

The regression test in Table 3 is used to analyze the five factors affecting behavioral intention towards cash waqaf giving in this research. Noticeably, attitude was significantly influence with cash waqaf giving intention ($t=2.966$, $p\text{-value} < 0.05$). Besides, subjective norms ($t=2.384$; $p\text{-value} < 0.05$) and perceived behaviour control ($t=6.398$; $p\text{-value} < 0.05$) were also proven to be the significant determinants. This finding is in line with the previous studies of Azizi, Shukor and Sabri (2019); Salem Al-Harethi, (2019); and Osman and Muhammed (2017). The result also revealed significant influence between trust on waqaf institutions and cash waqaf intention ($t=6.554$ and $p\text{-value} < 0.05$) which was in line with the study of Abdul Shukor et al., (2018), Osman, Mohammed, and Fadzil (2016) and Abdul Shukor et al., (2017). Hence, all developed hypothesis are supported. The R square-value from Table 3 above is 0.658 which means that independent variable explained about 65.8% of the variation of dependent variable (cash waqaf intention). However, there are $(100\% - 65.8\%) = 34.2\%$ of other variables cannot be interpreted in this study.

CONCLUSION

This study conclude that Attitude, Subject Norm, Perceived Behavior Control and Trust are the important variance in explaining cash waqaf intention, which will then influence the potential donors' actual behaviour. It further confirms the application of Extended TPB in cash waqaf giving intention context. Considering the importance of cash waqaf contribution in the social and economic development of *ummah*, it is pertinent for cash waqaf institutions to boost their efforts in waqaf management to attract more prospective donors. For instance, it is suggested for them to increase awareness and knowledge of cash waqaf among Muslim by a road tour or religious talk and appoint a role model from the public figure to promote and advertise any cash waqaf programs. In addition, they are advised to re-arrange and re-shuffle administration and management of their Waqaf Unit to gain the public trust.

However, there are some constraint in this study despite its contribution to the literature. Firstly, the distribution timeframe and platform of the questionnaire was limited thus it was unable to collect data from various perspective as to affect different view from Muslim population in Malaysia. Besides, the Movement Control Order (MCO) period also restraints the researcher to psychically distribute the questionnaire to the potential respondents. Therefore, to tackle this limitation, future researchers are expected to prolong the timeframe to collect more respondents for the study as well as to apply both distribution channels namely online and offline. Secondly, this study only concentrated on the elements of TPB and trust as additional variance, hence, explained why the R-Square is only 65.8%. Thus, other factors such as religiosity, awareness on cash waqaf, service quality of waqaf institutions and etc. which could affect the intention are likely untouched and need to be further investigated.

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BAFE028:
**ANNUAL REPORTS - MALAYSIAN COMPANIES' APPROACH TO
REPORTING DURING THE PANDEMIC**

Ong, Fong-Yew

School of Social Sciences, Heriot-Watt University Malaysia
Email: fong_yew.ong@hw.ac.uk

Abstract

The on-going COVID-19 pandemic has caused much uncertainties to businesses and investors globally, including Malaysia. The many measures put in place such as travel restrictions, lockdowns and various business restrictions have put a strain on businesses, directly impacting profits and cash flows. Public listed companies with strong financial standings are not spared from the negative impacts of COVID-19 too, with news of pay cuts, retrenchments and dividends freeze evidencing the difficult times these large entities are facing. With shareholders' investments at risky stake, there is greater pressure on public companies to provide the necessary information on the impact of the pandemic on their businesses and how these are being dealt with. This article seeks to explore the reporting style of public listed companies in Malaysia in light of the COVID-19 pandemic. Thirty annual reports of companies listed on Bursa Malaysia with a financial year end after 31 December 2019 were reviewed to assess the extensiveness of COVID-19 reporting in the annual reports. In particular, the narrative reporting and financial reporting sections of the annual report were analysed to determine the style of reporting in areas concerning COVID-19. This study provides us with an understanding of companies' reporting preferences and style in the wake of COVID-19.

Keywords: annual report, COVID-19, financial reporting, narrative reporting

INTRODUCTION

The on-going COVID-19 pandemic has impacted a vast spectrum of Malaysian businesses, including public listed entities. The annual reports, both narrative and financial, serve as a crucial tool to inform investors the financial health of the entity. However, due to various constraints such as potential legal obligations and the unprecedented level of economic uncertainty, entities are inclined to report COVID-19 related impacts and matters at the minimum level. On the other hand, stakeholders, especially investors, have a rightful need to be provided with useful information about an entity's financial well-being and strategies in the context of the pandemic.

The objective of financial reporting, as provided in the International Accounting Standards Board (IASB) Conceptual Framework for Financial Reporting, is to provide useful information to investors. There is still much space for improvement in annual reports of companies as report users criticise its usefulness (ACCA, 2011). The lack of disclosures on key emerging issues suggest that management is unaware of the potential impacts of the issues or is not managing the issues effectively (KPMG, 2020). Under the current pandemic, the extensiveness of COVID-19 reporting among entities vary significantly and many companies fail to present clear details (Financial Reporting Council, 2020). Therefore, this study seeks to assess the level and approach of corporate reporting and disclosures by public listed entities during the COVID-19 pandemic. .

LITERATURE REVIEW

Narrative Reporting

The narrative reports in the annual reports are usually aimed at disseminating information to shareholders primarily (Campbell and Slack, 2008). McInnes et al. (2007) suggested that investors use the narrative reports in the annual report to form an opinion on the management. This shows the importance of having narrative reports that fit the demand of the users of annual reports. The narrative reports offer a mechanism to paint a better corporate image of the business which can lead

to better investor understanding and improved stakeholder relationship. However, global surveys and analysis found that the annual reports are not supplying the information investors need (PricewaterhouseCoopers, 2007).

Financial Reporting

The annual report contains four main financial statements. These include the Statement of Profit and Loss and Other Comprehensive Income, Statement of Financial Position, Statement of Changes in Equity and Statement of Cash Flows. An explanatory notes accompanies the financial statements for the purpose of enhancing understandability and transparency. The preparation of these financial statements follows the provisions of Malaysian Financial Reporting Standards (MFRS).

For the purpose of this study on annual report and COVID-19, four MFRS have been identified as potentially require additional disclosures by companies. These are:

MFRS 113 Fair Value Measurement

The standard defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The standard requires entities to disclose the fair value measurement at the end of the reporting period.

MFRS 136 Impairment of Assets

At the end of each reporting period, entities are required to assess whether there are any indication of impairments of assets. Impairment occurs when the carrying amount is lower than the recoverable amount of the asset. Entities are required to disclose the amount of impairment losses and the circumstances leading to the impairment.

MFRS 137 Provisions, Contingent Liabilities and Contingent Assets

Provision is a liability of uncertain timing and amount. The standard requires provisions to be recognised when there is a present obligation arising from past events. The disclosure requirements include a brief description of the nature of the provision.

MFRS 110 Events After Reporting Period

Events after the reporting period refers to events that occur between the end of the reporting period and the date that the financial statements are authorised for issue. Entities are expected to disclose material events that occur after the end of the reporting period, including the nature of the event and the financial impact of the event. If the financial impact cannot be assessed, then a statement stating so should be disclosed.

METHODOLOGY

This study seeks to understand the reporting style of public listed companies in light of the COVID-19 environment. A total of 30 Malaysian public listed companies' annual report with financial year ending after 31 December 2019 were reviewed. The annual reports were sourced from the respective company's website. The annual reports were reviewed for the following areas of narrative (non-financial) and financial reporting:

- management discussion and analysis
- risks discuss
- significant judgement and estimates
- fair value measurements
- impairment of non-financial assets
- provisions
- events after reporting period

FINDINGS AND ANALYSIS

The 30 sample public listed companies selected are of varying sectors. The breakdown is as follows:

Table 1: Sample selection by sectors

Sector	Number of sample companies
Property	8
Construction	3
Consumer Products and Services	3
Telecommunications and Media	1
Industrial Products and Services	7
Transportation and Logistics	2
Technology	2
Financial Services	2
Plantation	2
Total	30

Of the 30 companies, seven (7) are of 31 January 2020 financial year end, three (3) of 29 February 2020 financial year end while the remaining 20 was of 31 March 2020 financial year end. The annual report for each of the sample company was reviewed and the findings in respect of the following areas are discussed below:

Management Discussion and Analysis (MDA)

The annual report of all 30 sample companies selected included a discussion on COVID-19 in the MDA section of the annual reports. The discussion include, among others, the current situation of COVID-19 in Malaysia and the overall impact the pandemic has on Malaysian businesses as a whole. The narrative was general in nature and does not provide financial analysis of the specific impact of the pandemic on the company. It was also apparent that the use of financial figures were limited in the MDA section, i.e. most of the contents are narrative without being supported by financial figures which can be referenced to the financial statements.

Risk Discussion

The level of discussion of the risk of COVID-19 on the company varies among the samples. Of the 30 sample companies, only 2 companies have a specific write-up dedicated to pandemic risk. The remaining companies discuss the impact of COVID-19 along the discussion of risk management of other areas such as operational risk, political risk and interest rate risk. Despite the discussion on the impact of COVID-19, the nature of discussion remains narrative and are not sufficiently supported by financial figures.

Significant Judgement and Estimates

The unpredictability of the pandemic has resulted in an increase in subjectivity in judgement and estimates made for the purpose of financial reporting. However, based on the review of these sample companies, many were not disclosing or explaining clearly the areas of uncertainty that are affecting judgement and estimates. In particular, most annual reports are still narrating *significant judgement and estimates* section without reference to the impact of the pandemic.

Fair Value Measurements

The pandemic should have some impact on the fair value measurements on the assets of the companies so it would be within expectations for the annual report to include a discussion on this. However, the sample annual reports indicate that there has not been much emphasis placed on the discussion on fair value measurements and COVID-19. This could be attributed to the fact that the pandemic is still at its early stage during the close of the financial year end and hence fair value has not been significantly affected at the time of reporting. Except for 2 companies, the remaining sample

annual reports did not relate the issue of fair value measurement and COVID-19. The following is extracted from the 2020 annual report of AmFirst Real Estate Investment Trust:

“The Trust carries its investment properties at fair value, with changes in fair values being recognised in profit or loss. The Trust had engaged independent professional valuers to determine the fair value. The independent professional valuers have considered the impact of Covid-19 pandemic and concluded that no material impact to the fair value of investment properties.”

AmFirst Real Estate Investment Trust, Annual Report 2020, p.158

Impairment of Non-Financial Assets

Only four (4) companies have attributed the impairment of non-financial assets to COVID-19. These companies gave assurance that the impairment exercise has taken into account the impact of COVID-19. The common assets that were being impaired are inventories, goodwill, property plant and equipment and cash generating units. The following extract from an annual report confirms the consideration of COVID-19 during impairment testing:

“The recoverable amounts of the CGUs in respect of goodwill and trademarks were determined using the value in use approach. Cash flow projections used were based on financial budgets approved by the management covering a 25-year period for baby wear CGU and lingerie wear CGU. It has taken into consideration the impact of COVID-19 pandemic. The constant growth rate used to extrapolate cash flows projections...”

Asia Brands Berhad, Annual Report 2020, p.82

Provisions

Except for one (1) company that made a provision for impairment loss, the other sampled companies did not specifically indicate that provisions were made for COVID-19 related items.

“Non-property expenses were slightly higher by 3.2% YoY due primarily to increase in provision for impairment loss on trade receivables as additional provision have been made considering the potential acceleration of credit risk arising from Covid-19 pandemic.”

AmFirst Real Estate Investment Trust, Annual Report 2020, p.17

Event after the reporting period

A total of 23 companies included a discussion on COVID-19 in disclosing events after the reporting period. Most of the discussion on COVID-19 under this section of the annual report centers around the status of the pandemic, both nationally and globally. There are also discussion on the measures taken by the government and the impact of these measures on businesses.

CONCLUSION AND DISCUSSION

The majority of the sampled companies have only general narrations on the impact of COVID-19. Most of the contents narrate the development of COVID-19 globally and in the country. The review of the annual reports indicates a general lack of initiative to quantify COVID-19 related impact, possibly due to time constraint as the sampled companies have their year end falling in the first quarter of 2020. The annual reports ending in the third and forth quarter of year 2020 should have better COVID-19 disclosures and reporting as companies become more understanding of the impact the pandemic has on their businesses.

The lack of details in the annual report may impair decision making of those who rely on these annual reports. In particular, companies should provide clear and transparent explanation on

significant areas such as basis for estimates, provisions, impairments and fair value. As far as possible, companies should also describe its responses in handling the COVID-19 pandemic.

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BAFE029:
FACTORS AFFECTING DIRECTORS' REMUNERATION
DISCLOSURE LEVEL: EVIDENCE FROM MALAYSIAN COMPANIES

Sonia Johanthan^a, Nurul Afidah Binti Mohamad Jusob @ Mohamad Yusof^b, Zam Zuriyati Binti Mohamad^c, Krishna Moorthy Manicka Nadar^d

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: sonia@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: afidahj@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: zuriyati@utar.edu.my

^dSchool of Economics and Management, Xiamen University Malaysia,
Email: krishna.manicka@xmu.edu.my

Abstract

Although corporate governance reporting practices in Malaysia had been looked into in prior studies, transparency of directors' remuneration has received less attention (Sengupta & Zhang, 2015). Hence, the disclosure of directors' remuneration in a firm's annual report as a mediator between corporate governance mechanism and firm value will be the central theme of this study which also attracts the attention of academicians and practitioners due to it being a strategic solution to the agency problem (Arye et al., 2003). The issue of directors' remuneration was exacerbated in the recent crisis where it is well known that executive pay arrangement might have encouraged excessive risk-taking among the financial firms (Bolton, Mehran, & Shapiro, 2015; Bebchuk, Cohen, & Spamann, 2010). Similarly, the conflict between directors and shareholders for all firms is whether the remuneration is devised to maximize shareholders' value or to benefit the directors that operate the firm on behalf of the shareholders. In countries like Malaysia where the disclosure environment is less rich, agency problems could occur since there is no transparency in the disclosure of remuneration which would result in these director and shareholders conflicts remaining undetectable.

The value relevance is tested in Malaysia, a developing country where the disclosure practices are still far below the best practices (Khalid, 2018). The problem in developing countries is the market characteristics that are lenient when it comes to practicality and enforcement. Despite that these countries have their own mandatory and voluntary disclosure requirements, the lack of enforcement creates the opportunity to choose the extent of mandatory disclosure by firms (Abdullah et al., 2015; Hassan et al., 2009; Ball, Robin & Wu, 2003). Thus, this study will examine if directors' remuneration disclosure has mediating effects between corporate governance mechanism and firm value, particularly amongst the Malaysian public.

Furthermore, it is believed that the disclosure of directors' remuneration provides a window to the overall quality of governance of an organization (Arye et al., 2003). Unlike financial disclosure that forces companies to talk about cash flows to measure profitability, directors' remuneration disclosure signals board transparency to reduce the camouflage and agency problem. While Maizatulkama et al., (2015) and Abdullah et al., (2015) found mixed results of IFRS compliance disclosure and risk disclosure in Malaysia, this study is motivated to understand how disclosure of the most personal information of directors, which is their remuneration could impact firm's value. Impact on firm value are being scrutinized in this present because the firm value is salient information in investment decisions (Robiyanto et al., 2019). Firm value is a picture of a company's performance that can affect an investor's assessment of a company. The good assessment given by investors to the company is anticipated to boost the firm value in the future (Sari & Sedana, 2020). Therefore, it is essential to investigate further the effect of CGM on firm value with directors' remuneration disclosure as the mediating variable.

Keywords: Corporate Governance, director remuneration disclosure, ownership structure, board structure, board diversity.

BAFE030:
**ACCEPTANCE OF ACCOUNTING STUDENTS TOWARDS ONLINE
LEARNING DURING A CORONAVIRUS (COVID-19) PANDEMIC**

Che Siti Lazrina Md Lazim^{a*}, Nur Diyana Ismail^b, Mohd Danial Afiq Khamar Tazilah^c

^a Department of Commerce and Accountancy, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
Email: lazrina@utar.edu.my*

^b Department of Commerce and Accountancy, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
Email: diyana@utar.edu.my

^c Department of Commerce and Accountancy, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
Email: afiqk@utar.edu.my

Abstract

Teaching and learning approach for higher education institution in Malaysia has dramatically changed due to the emergence of Coronavirus (Covid-19) in the early year 2020. The rapid spread of Covid-19 has impacted the education system where all higher institutions need to move for online learning. This sudden situation has affected students to accept changes in the learning method from physical classes to virtual classes. However, there are some challenges in practicing online learning. For instance, technical difficulties such as limited internet access as well as the coverage and speed of internet would disrupt their classes. Besides, students' enthusiasm towards learning is decreased because of inconvenience environment at home. In between that, students might not have an interest in accepting online learning. Therefore, this study aims to examine the factors of students' acceptance for online learning in a higher education institution. Technology Acceptance Model (TAM) has been proven to be a theoretical model to explain students' acceptance of online learning. There are two constructs which are perceived usefulness and perceived ease of use will be applied in this study that mediate to attitude towards online learning. Hence, this study is targeted undergraduate accounting students at Universiti Tunku Abdul Rahman (UTAR), Kampar Campus. The data collection is analyzed through Structural Equation Modeling (SEM) with the use of Partial Least Square approach (PLS). As a conclusion, this study is expected to encourage students to perform online learning consistently and free from any obstacles like internet problems. It is also to encourage university to further improve the online learning process and its platform.

Keywords: online learning, technology acceptance model (TAM), perceived usefulness, perceived ease of use, accounting student.

INTRODUCTION

Due to the recent worldwide Covid-19 pandemic, many countries are facing turbulences in maintaining the stability of its political, economy and social welfares. Most of sectors in a country are being affected due to this pandemic and no exception for sectors in Malaysia in struggling to fight Covid-19. One of the sectors that badly affected in Malaysia is a higher education institution. Because of that, the method of learning is totally changed whereby face-to-face learning activities (physical classes) are no longer practical and replaced to online learning method (virtual classes). Online learning can be described as a distance learning where students and lecturers are in other location but still can be interacted by using the Internet (Bartley & Golek, 2004; Evans & Haase, 2001). The common terms that also used are e-learning, tele-learning, computer-assisted learning, web-based learning and virtual learning (Sing & Thurman, 2019; Moore, Dickson-Deane & Galyen, 2011). It is difficult to develop a definition of online learning because the terms are same concept that refer to distance learning (Perry & Pilati, 2011; Park & Choi, 2009; Ally 2004). However, both e-learning and online learning are using the internet to interact between students and lecturers (Moore et al., 2011). But they can be differentiated with students' freedom where e-learning can be accessed independently compared to online learning where students have to interact face-to-face with the

lecturers to perform online class. Therefore, the term of online learning will be applied in this study to identify the factors that influence students' acceptance towards online learning.

Since Covid-19 pandemic has spread, most of the higher institutions have changed the learning method from physical class to online learning. Therefore, some difficulties faced by both students and lecturers. In particular, technical difficulties such as limited internet access as well as the coverage and speed of internet would disrupt online classes. Landrum (2020) highlighted the technology infrastructure must be well equipped to ease the online learning process. It also can enhance students' ability to perform online classes and satisfy with perceived usefulness of online learning. Park (2009) mentioned another problem of online learning is a web-based education platform. On the other hand, students' enthusiasm towards learning is decreased because of inconvenience environment at home. Hence, students might not have an interest in accepting online learning. Saade (2003) stated many universities faced enormous difficulty in online learning that cannot meet students' expectations and may cause unexpected failure (Kilmurray, 2003). Because of that, students being discontented, dissatisfied and displeased with their online learning experience (Bristow, Shepherd, Humphreys & Ziebell, 2011).

Hence, research assessing students' perceptions and acceptance of this online learning is necessary to further explore especially when the institutions and students are not prepared for such transformation in a short period of time due to the pandemic of Covid-19. Therefore, the objective of this study is to identify the factors influencing the online learning by using the Technology Acceptance Model (TAM) which include two important factors that refer to perceived ease of use and perceived usefulness. This study also aims to examine the relationship between independent variables on mediating variable which is attitude towards acceptance online learning behavior as a dependent variable. Furthermore, this study could encourage students to perform online learning consistently and free from any obstacles like internet problems. It is also to encourage university to further improve the online learning process and its platform.

LITERATURE REVIEW

Perceived ease of use (PEOU)

Perceived ease of use (PEOU) can be an indicator that influence students' attitude to accept online learning as a new platform for their studies. PEOU is referred to if student thinks the platform can be used easily then the platform will be useful and beneficial for them. It is consistent with Davis (1989) definition of PEOU as 'one's belief that using the system will be free of effort'. To give an idea, Taat and Francis (2020) conducted a study to examine the level of students' acceptance of e-learning and identify factors that could influence it at a teacher education institute in Malaysia. This indicates that PEOU as a convenience factor is significantly influence the students' acceptance where the e-learning can provide them with a good, detail, timely and accurate information. In addition, Johari, Mustaffha, Ripain, Zulkifli, Ahmad (2015) expected that e-learning which provide course materials will be a self-learning time for the students after the face to face learning online. By doing this, students can access the sharing course materials easily and subsequently accept the online learning. They found out that PEOU has a significant influence on attitude of students towards online learning. On the other hand, Farahat (2012) identified the determinants of students' acceptance towards online learning and examine how these determinants can lead to students' intention to use it. As the result, it showed that students were not perceived the easiness of learning online. It was found out that students have a negative perception that online learning is not something that is easy to use.

Perceived usefulness (PU)

Perceived usefulness (PU) also can influence students' desire to use a new platform and subsequently influence the acceptance of online learning. Davis (1989) mentioned that usefulness is concern on 'how well a person believes that using a particular system will improve their performance'. As proof, Taat and Francis (2020) stated that e-learning improves learning performance and by taking an online course it also can be increased their productivity. They showed a positive impact on the acceptance of e-learning that could enhance understanding and effectiveness of learning online. Meanwhile, Johari et al. (2015) found out that PU has significantly influence students' intention to use online learning and also influence students' attitudes to accept the online learning. Besides that, PEOU is considerable to influence PU of technology. Then as well, Farahat (2012) showed a

contradict result on his study. He mentioned that students will perceive that online learning can aid them to improve their learning performance and there is a hope that they can accept to use the online learning. But the result showed that students were not be conceived as perceiving the usefulness of online learning.

Attitude towards online learning

Attitude is the degree of interest related to the person's actual behavior (Farahat, 2012). Better attitude could increase the willingness person to accept new technology. It is highlighted in TAM that perceived ease of use and perceived usefulness would be the factors that influence the attitude to the person in adoption of the technology (Ramayah & Ignatius, 2005). For instance, Reis (2010) examined the attitude towards online learning of undergraduate business administration and found that students were considered to have positive attitudes towards the interaction in technology-based learning environment. More experience in online learning had a better attitude towards technology-based learning. It is consistent with the study from Prior, Mazanov, Meacheam, Heaslip and Hanson, (2016) examined the attitude is an important indicator for online learning. The result reveals the positive attitude will generate a positive outcome when the students are willing to try a new method for online learning. Likewise, Ku and Lohr, (2003) explored the culture and attitude among Chinese Students' for online learning. The study reveals the attitude towards online learning positively preferable for both Asian country and US. Conversely, Ullah, Khan and Khan (2014) conducted a study on the attitude towards online learning of undergraduate students in University of Peshawar. He found that no positive attitude due to the high difficulty level in understanding and using online learning programme without having appropriate guidance. In addition, Abdulla, (2017) studied the attitude towards online learning of college program. The result reveals insignificant relationship between attitude towards online learning and acceptance online learning behavior because students feel difficult for a calculation course.

Acceptance of online learning behavior

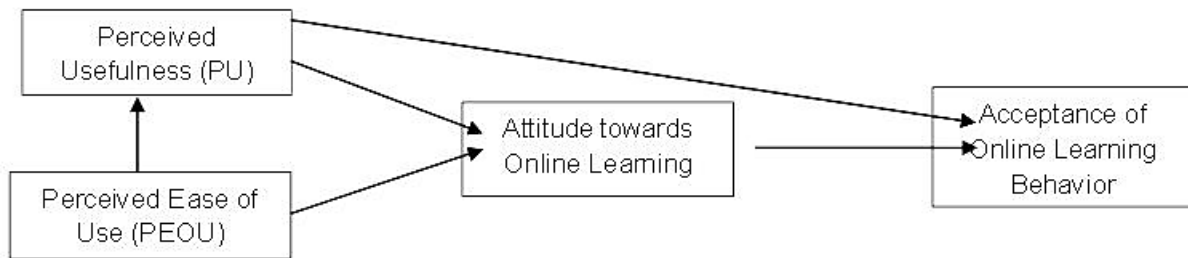
Many previous studies on technology adoption have showed attitude as an important factor for the acceptance behavior (Hussien, 2017; Alharbi & Drew; 2014; Liu, Liao, & Peng, 2005). Bhattacharjee and Sanford (2009) demonstrate that attitude will lead to a good intention for accepting a new environment. Acceptance behavior is posited to be affected by attitude (Edison & Geissler, 2003). As such another study by Au and Enderwick, (2000) conducted a review of attitude toward technology adoption showed that there is no significant relationship with the actual use in technology.

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was founded to be used in many studies to explain the users' perceived acceptance of technology. Hence, TAM as the fundamental model with some constructs were well chosen in this study to investigate the factors that influence students' acceptance for online learning in higher education institution. By origin, TAM was proposed by Davis (1986) as an adaption of Theory Reasoned Action (TRA) that has been proven to be a theoretical model in helping to explain and predict user behavior of information technology. A key purpose of TAM is to provide a basis for tracing the impact of these factors which are PEOU; PU; attitudes; intentions; and behaviors. According to TAM, PEOU and PU were the most important determinants of actual system use. Davis (1989) explained on how PEOU and PU have been influenced by external variables. The attitude was concerned with the user's evaluation of the desirability of employing a particular information system application. Also, behavioral intention was the measure of the likelihood of a person employing the application. Therefore, TAM is more appropriate to be applied in online contexts because of TAM is specific on information system usage for applying the concepts of ease of use and usefulness.

CONCEPTUAL FRAMEWORK AND HYPOTHESE DEVELOPMENT

Figure 1.1: Conceptual Framework



There are two independent variables that consist of PEOU and PU; and one mediating variable that is attitude towards online learning. To examine whether there is relationship between these two independent variables and one mediating variable towards acceptance of online learning behavior, the following hypotheses are developed:

- H1: PEOU has a significant relationship on PU.
- H2: PEOU has a significant relationship on attitude towards online learning.
- H3: PU has a significant relationship on attitude towards online learning.
- H4: PU has a significant relationship on acceptance of online learning behavior.
- H5: Attitude towards online learning has a significant relationship on acceptance of online learning behavior.

RESEARCH METHODOLOGY

This current study was conducted by using survey questionnaire on undergraduate accounting students in UTAR, Kampar Campus through Google form. The survey questionnaire was developed to examine the factors that influence the acceptance of online learning that consists of two sections (Section A and Section B). Section A was demographic data such as gender, location and total hours spend on the Internet per day. While, Section B was psychometric data that consists of two independent variables which are perceived ease of use and perceived usefulness, one mediating variable which is attitude towards online learning and one dependent variable which is acceptance of online learning behavior. The response of the statements is in the form of 5-point Likert-type scale of between strongly disagree (1) to strongly agree (5).

The overall total of 356 set of questionnaires were successful collected by online survey from undergraduate accounting students under Faculty of Business and Finance, UTAR, Kampar. This study focused on undergraduate accounting students because approximate number of accounting students is the highest among other courses. However, only 333 set of questionnaires were useable to conduct this study. Hence, to test the conceptual framework and developed hypotheses, Structural Equation Modeling (SEM) with the use of Partial Least Square approach (PLS) has been employed in this study.

DATA ANALYSIS

There are three sample demographic profile of respondents with respect to gender, location and total hours spend on the Internet per day. The survey showed that urban location was 57.7% and rural location was 42.3%. Majority of the respondents was female (76.9%) and male (23.1%) due to number of female students are higher in the accounting course. Meanwhile, total hours spend on the Internet per day showed that majority of the respondents were spending more than 8 hours (49.2%) on the Internet per day and there was 24.6% for 6 hours to 8 hours, 20.1% those spending 4 hours to 6 hours on the Internet per day, 5.1% those spending 2 hours to 4 hours on the Internet per day and 0.9% less than 2 hours on the Internet per day. Table 1 showed the frequencies of respondents' demographic profiles.

Table 1: Descriptive demographic profiles (n = 333)

	Frequency	Percentage %
Gender		
Male	77	23.1
Female	256	76.9
Location		
Rural	141	42.3
Urban	192	57.7
Total hours spend on the Internet per day		
Less than 2 hours	3	0.9
2 hours to 4 hours	17	5.1
4 hours to 6 hours	67	20.1
6 hours to 8 hours	82	24.6
More than 8 hours	164	49.2

Cronbach's alpha value for each construct was generated. From this test, the alpha level that more than 0.9 is considered as excellent reliability, from 0.8 until 0.9 is very good reliability, from 0.7 until 0.8 is considered as good reliability, from 0.6 until 0.7 is considered as moderate reliability, less than 0.6 will be consider as poor reliability (George & Mallery, 2003). Table 2 below highlights the reliability analysis results which stated that perceived ease of use has a value of 87.7% followed by perceived usefulness is 89.3% then attitude towards online learning 83.7% and acceptance of online learning behavior 89.2%.

Table 2: Reliability Analysis Result

	Cronbach's Alpha
Perceived ease of use	0.877
Perceived usefulness	0.893
Attitude towards online learning	0.837
Acceptance of online learning behavior	0.892

In Table 3, it shows the results of relationship between two independent variables on mediating variable. The perceived ease of use has a significant on perceived usefulness ($p < 0.05$). Meanwhile, the perceived ease of use and perceived usefulness ($p < 0.05$) has a significant relationship on attitude towards online learning. Besides, perceived usefulness towards acceptance online learning behavior also has a significant relationship ($p < 0.05$). Therefore, H1, H2, H3, H4 and H5 are supported in this study. These results were consistent with the past studies (Taati & Francis, 2020; Johari et al., 2015) for PEOU and PU and (Reis, 2010; Prior et al., 2016) for attitude towards online learning. It showed that attitude towards online learning mediates both the relationship between PEOU ($p < 0.05$) and PU ($p < 0.05$) towards acceptance online learning behavior. Therefore, H5 is supported in this study.

Table 3: Result of the Structural Model

	Sample Mean (M)	Standard Deviation	T Statistics	P Values	Hypotheses
Perceived ease of use on perceived usefulness	0.867	0.016	53.907	0	H ₁ accepted
Perceived usefulness on attitude towards online learning	0.573	0.071	8.152	0	H ₂ accepted
Perceived ease of use on attitude towards online learning	0.82	0.023	35.216	0	H ₃ accepted
Perceived usefulness towards acceptance online learning behaviour	0.487	0.061	7.964	0	H ₄ accepted
Attitude towards online learning to acceptance online learning behaviour	0.849	0.025	34.071	0	H ₅ accepted

CONCLUSION

This study represents result in examining the useful of TAM model to explain the factors that influence acceptance online learning behavior. The result is similar to previous studies (Taat & Francis, 2020; Hussien, 2017; Johari et al., 2015; Mazanov et al., 2016). One of the important findings of this study is to encourage individual intention to accept technology as a new learning platform. Students' acceptance behavior towards online learning has been influenced by mediating of attitude between perceived ease of use and perceived usefulness. This relationship validates the original TAM model where perceived ease of use and perceived usefulness are hypothesized directly to affect the attitude. In between, perceived usefulness can be directly hypothesized to online learning behavior. This is because online learning become compulsory at UTAR and considered as a convenient platform to continue study during Covid-19 outbreak.

In the context of implementation, the current online learning practices will impact the future education. The drawbacks of sudden implementation of online learning could lead Government, regulators and other practitioners to improve the online education as well as enhance the learning process. Obviously, valuable feedback from students and lecturers should be considered for future development of online education since the learning methods in higher education institutions have drastically changed due to the Covid-19 outbreak worldwide. The feedbacks could motivate the university to enhance the quality of online learning platform for the future.

This current study has focused on private university (UTAR) and undergraduate accounting students solely where results can only be obtained and generalized from them. Therefore, for future study the researchers should consider to extend the TAM model for external factors like Internet accessibility, environmental structuring and system characteristics. Besides, the researchers can expand the geographical area to other states and select several public and private universities. It is important for researchers to consider larger populations to have a better perception and view towards online learning.

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BAFE046:
**INTRODUCTION OF SUGAR-SWEETENED BEVERAGE TAX IN
MALAYSIA: AN ANALYSIS OF THE REACTION**

Shangkari, V. Anusakumar^a, Foo, Wei Yee^b, Goh, Jolene Ju Ying^c

^aCenter for Australian Degree Programs, INTI International College Penang, Malaysia,
Email: shangkar@uow.edu

^bCenter for Australian Degree Programs, INTI International College Penang, Malaysia,
Email: wyf719@uowmail.edu.au

^cCenter for Australian Degree Programs, INTI International College Penang, Malaysia,
Email: jjyg903@uowmail.edu.au

Abstract

On 1 July 2019, the Royal Malaysian Customs Department implemented a duty on sugar-sweetened beverages (SSBs) in Malaysia. The SSB tax is officially known as the Sweetened Beverages Excise Duty and imposes an excise duty of RM0.40 per litre on ready to drink sweetened beverages. We study the market reaction to the introduction of SSB tax in Malaysia. Using FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBM KLCI) and sectoral indices, we conduct an event study analysis using multiple event windows. The FBM KLCI index displayed positive, insignificant, cumulative abnormal returns. For the Consumer products and services sector, we find sporadic instances of significant negative abnormal return. In general, the returns for the event windows are negative, albeit insignificant. For the individual stock level, only one of the eight companies had significant negative cumulative abnormal return. The lack of significantly negative reaction could reflect the anticipated nature of the SSB implementation. The observation could also be due to the preliminary reports of successful SSB tax implementation in other countries, and perceived reduction in sugar-sweetened beverages consumption and associated health benefits (reduction in obesity and non-communicable diseases).

Keywords: Sugar-sweetened beverages, Obesity, Public policy, Sugar tax, SSB tax, sugar-sweetened beverages, Malaysia

INTRODUCTION

Obesity is a growing concern for countries around the world. Leading to a variety of non-communicable diseases including diabetes mellitus, hypertension, cardiovascular diseases and related complications, obesity poses a health threat affecting mortality, morbidity and also has long lasting economic consequences. One of the factors associated with obesity in adults and children is the consumption of sugar-sweetened beverages. In an effort to curtail exponential rise in obesity, various measures have been implemented. Among these measures is the Sugar-Sweetened Beverage taxation (SSB tax) or colloquially known as the sugar tax. In an effort to dissuade consumer from purchasing and consuming sweetened beverages, excise duty is imposed on ready to drink beverages with high sugar content. The benefits of SSB tax have been purported to be reduction in the prevalence of obesity as well as generation of public revenue (Jou & Techakehakij, 2012).

Countries around the world have imposed SSB tax including Portugal, Brunei, Estonia, Mexico, Mauritius, Philippines and Thailand. Malaysia has also recently imposed SSB tax, requiring manufacturers to pay excise duty of RM0.40 per litre on ready to drink sweetened beverages (Shyam et al., 2019). On 2nd November 2018, the implementation of SSB tax was announced during the 2019 Budget speech (Shyam et al., 2019). However, the tax implemented on 1st July 2019 after a delay of 3 months. The tax covers ready to drink beverages including herbal beverages, coffee drinks, flavoured carbonated drinks, flavoured drink noncarbonated, fruit drinks, isotonic drinks, malted chocolate ready to drink beverages, tea drinks, 100% fruit juice without added sugar. The tax is imposed based on the sugar content and affects beverages with more than 5g of sugar per 100ml and fruit juices which contains sugar exceeding 12g per 100ml. Whether the manufacturers pass on the increased cost to consumers is another matter entirely. Thus, there may be no increase in the retail price of the

sweetened beverages. For instance, Fraser & Neave Holdings Bhd (F&N) had initially suggested an increase of prices for 90% of its beverages but choose to instead reformulate the beverages to reduce the sugar content. Moreover, F&N has also focused on the development of healthy alternatives. Other countries such as Barbados have reported an increase in the price of SSBs (Alvarado et al., 2017).

The use of taxation to induce a wider impact on health and the environment is not a new concept. Carbon tax and tobacco tax have been implemented with varying degrees of success. For the case of tobacco tax, higher cigarette prices, as a result of increasing taxes, was found to be effective in reducing cigarette use and increase tax revenue (Hu, et al., 2010; Guindon, et al., 2015; Chaloupka, et al., 2010). The long-term impact of the SSB tax in Malaysia is yet to be seen. It may be premature to examine the effectiveness of SSB in Malaysia at this point in time.

In terms of market reaction, the response has been negative for carbon tax with a reduction in market capitalization of the associated firms (Chapple, et al., 2013). Similarly, recent evidence indicates soft drinks manufacturers experienced a negative abnormal stock returns when the Soft Drinks Industry Levy (SDIL) was announced in the UK (Law et al., 2019). Global evidence indicates the

In a similar vein, we examine the market reaction to the imposition of SBB tax in Malaysia using an event-study based approach. The aim of this analysis is to indicate if the market was significantly affected by the introduction of SSB tax in Malaysia. We find that the implementation of SSB tax in Malaysia did not significantly affect the markets. The results indicated that implementation did not elicit a negative reaction.

LITERATURE REVIEW

Sugar-Sweetened Beverage Tax

The investigation of relationship between sugar-sweetened beverage tax and market reaction is fairly limited. Du, et al., (2018) explore the response and tactics used by the industry to oppose the sugary beverage tax. The industry react by casting doubt on the established scientific evidence on sugary beverage, divert the focus from the sugar content in its product to physical inactivity as the main reason for obesity and organising anti-tax campaigns against sugary tax proposals. On the other hand, Law, et al., (2020) examined the effect of Soft Drinks Industry Levy (SDIL) on four stocks listed on the UK stock exchange. The authors documented that three out of the four firms experienced a negative abnormal stock returns on the day of announcement of SDIL and shows limited evidence of negative stock market reaction on the day of release of draft legislation and the confirmation of tax rates. The domestic turnover of the UK soft drinks manufacturers has a short-term negative impact of the SDIL announcement but it did not continue post-implementation and the manufacturers will be able to mitigate the effect of SDIL (Law, et al., 2020).

Globally speaking, recent studies generally documented a drop in sales or consumption and a rise in price on sugary drinks following the implementation of sugar sweetened beverage tax (Castelló & Casasnovas, 2020; Colchero, et al., 2016; Kao, et al., 2020; Teng, et al., 2019; Royo-Bordonada, et al., 2019; Cawley, et al., 2019; Chaloupka, et al., 2019; Falbe, et al., 2016; Alsukait, et al., 2020; Allen & Allen, 2020). Part of the reason of reduction is due to substitution effect in zero/light drinks, increasingly engaging in cross-border shopping, price sensitivity and increased health awareness. However, Powell & Leider (2020) found no significant evidence of cross border shopping even though there is a rise in price and drop in consumption in Seattle. A review aimed to assess the global evidence for macroeconomic impact of diet-related fiscal policies by Mounsey, et al., (2020) concluded that taxes does reduce sales volume and revenue in sugar/beverage industry. The review that includes eleven studies has concluded one of the studies found potential employment increases due to tax; two found no significant changes and eight found reduce in employment. Studies investigating employment changes and SSB tax shows no significant changes in employment in the related manufacturing industries after the implementation of tax in Mexico (Guerrero-López, et al., 2017). Powell, et al., (2014) found a decrease in employment within related beverage manufacturing industry but it was offset by a shift of employment in non-beverage industry and government sectors.

Carbon tax

For carbon tax in Australia, Chapple, et al., (2013) showed that there is a decrease in market value of 7% to 10% of market capitalization for the most carbon intensive sample firms. Luo & Tang, (2014). found that information, that increase the probability of passing the carbon tax legislation, will adversely affect the financial returns of a firm and minimise shareholders wealth measured by abnormal returns, especially in materials, industrial and financial sectors. Implementation of carbon tax would cut down carbon emission effectively at the same time will cause a mild economic contraction while the tax burden is distributed unequally among different household groups with low-income households carry more burden (Meng, et al., 2013). In the context of UK carbon tax, studies find no evidence of adverse impact on employment, revenue or plant exit even though there are reduction in energy intensity and electricity use (Martin, et al., 2014). Simulation results from a CGE model by Li, et al., (2020) shows that carbon tax is useful in reducing unemployment in coal resource-based areas in China.

Brown, et al., (2020) showed that carbon tax reduces carbon emissions and increase jobs in the US which varies across regions. Gao and Chen (2002) concluded that carbon tax in China would cause GDP loss, but an optimal tax rate would reduce carbon effectively without a huge impact on GDP. A more recent research conducted by Guo, et al., (2014) has consistent conclusion. The results found that moderate carbon tax would significantly reduce carbon emissions consumption and slightly reduce the economic growth and a large carbon tax would have a negative impact on the economy and social welfare. Dong, et al., (2017) shows similar results whereby China's industrial carbon emission will be reduced, and implementation of carbon tax will impede economic development for all provinces. Zhang, et al., (2016) also indicate carbon tax is efficient to reduce carbon emissions but accompanied with a negative impact on provincial economy based on the empirical results from CGE model stimulation. The impact of carbon tax on economic growth varies across regions; the tax could stimulate economic growth of most eastern regions, meanwhile it can hinder some provinces' in middle and western areas (Zhang & Li, 2011). Based on simulation results of CGE model, in sectors of coal, heavy industries, thermal power, light industries and more, the increase of carbon emission reductions lead to the decrease of demand for coal, petroleum, natural gas and thermal power (Guo & Liu, 2016). Lin and Zhijie (2018) stated that the negative impact of carbon tax on GDP is acceptable and suggest China should adopt carbon tax policy that imposes a high tax rate on energy companies and energy intensive enterprises so it will maximize emissions reduction and small impact on GDP.

Tobacco tax

Chaloupka, et al., (2012) reaches the same conclusion that tobacco taxes could generate revenues for the government especially in China due to its relatively high smoking prevalence provides a large tax base and Chaloupka, et al., (2012) further conclude the oppositional arguments that higher taxes will have harmful economic effects are false or overstated. Instead, raising unit price of tobacco products through taxes can generate additional gains from improved productivity in the workplace (Contreary, et al., 2015). In the case of tobacco tax cuts in Canada, reductions in cigarette prices will lead to increase smoking initiation among young adults because they are price sensitive (Zhang, et al., 2006). Therefore, Wakefield, et al., (2014) concluded that increased tobacco tax, comprehensive smoke-free laws would reduce smoking prevalence among Australian adults. Brazil previously reduced excise tax share on consumer prices in fear of smuggling has make a change in direction to increase tax rates significantly in the presence of high proportion of illegal and cheap cigarettes contributing to total consumption, the increased in cigarette excise taxes can increase government revenues and reduce smoking consumption despite widespread smuggling of tobacco products (Iglesias, 2016).

Since an implementation of tax would generally cause detriment to a company or an industry, systematic review shows that tobacco industry has a history of trying to keep tobacco taxes low using tactics and misleading information (Smith, et al., 2013; Balwicki, et al., 2016; Ross, et al., 2017). These includes arguments on tobacco taxes are socially regressive, direct lobbying and publicity campaign, efforts to influence tax structures, exerting pressure, overstating its contribution to the economy and government revenues, misrepresenting the illicit cigarette problem and misusing scientific evidence. For the case of Spanish tobacco tax reforms, the loopholes in previous policies has allowed tobacco industry to market cheaper alternative, offering smokers the possibility to down trade (López-Nicolás, et al., 2013). Meanwhile in China, the excise tax increase on cigarettes has not

translated into higher retail prices due to interference from Chinese STMA used its policy authority has reduced the effectiveness of policy instruments for tobacco control (Gao, et al., 2012). For sin taxes, there was some decrease in stock prices was detected when agreement of The Omnibus Budget Reconciliation Act of 1990 was reached but the decrease was not significant (McClenny & Brown, 1993).

RESEARCH METHODOLOGY

Sample selection

For the market and industry analysis, we selected market wide and industry indices for the analysis. FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBM KLCI), consumer products and healthcare sectoral indices were selected. The FBM KLCI is a major stock market index is free-float capitalization-weighted stock index which comprises of 30 of the largest companies listed on Bursa Malaysia. We are also interested in the reaction of the industries. For the sectoral indices, consumer products and healthcare were selected as these industries are related to the SSB tax.

For the individual stock analysis, we selected stocks most likely to be affected by the introduction of SSB tax. These includes companies manufacturing sweetened beverages such as milk-based products and isotonic drinks. Companies not listed and trading on Bursa Malaysia are excluded from the analysis. Table 1 presents the companies that manufacture SSBs. Carlsberg Brewery Malaysia Bhd and Heineken Malaysia Bhd are excluded from the analysis are the companies are primary business is alcoholic beverages which is not subjected to SSB. Owing to lack of data availability, Rex Industry was excluded. The final sample comprises of 8 companies. The index values and stock price data for these companies are collected from investing.com. The sample period covers 1 January 2013 to 30 December 2017.

Table 1: SSB related stocks listed on Bursa Malaysia

Company	Stock	Symbol
Nestle (Malaysia) Bhd	NESTLE	4707
Fraser & Neave Holdings Bhd	F&N	3689
Power Root Bhd	PWROOT	7237
Cocoland Holdings Bhd	COCOLAND	7205
Dutch Lady Milk Industries Bhd	DLADY	3026
Rex Industry Bhd	REX	9946
Johortin Bhd	JOHORTIN	7167
Berjaya Food Bhd	BJFOOD	5196
Spritzer Bhd	SPRITZER	7103
Carlsberg Brewery Malaysia Bhd	CARLSBG	2836
Heineken Malaysia Bhd	HEIM	3255

Event study

We use an event study approach to ascertain the reaction to the introduction of SSB tax. Two events related to the SSB tax were of interest: the initial announcement and subsequent implementation. On 2nd November 2018, Finance Minister Lim Guan Eng announced the plan to introduce SSB tax at RM0.40 per litre for two categories of sweetened beverages (Shyam et al., 2019). The announcement was made during the 2019 budget speech for the tax to be imposed in April 2019. However, there was a delay of 3 month which was claimed to allow SSB manufacturers time to prepare. The actual implementation was on 1st July 2019 after the delay of about 3 months. We examine the implementation of SSB on 1st July 2019.

Using typical event study nomenclature, we use Day 0 to denote the event day. As per common practice in event study, the days prior to the event in also included to capture any market anticipation of the event. Days after the event is typically included in order to account for the delays in market reaction. Though it is tempting to select a long event window, caution must be practiced to

avoid confounding the results with the effects of other events. A short event window may not capture the event in its entirety. Thus, we opt for multiple event windows: (-10,+10), (-15,+15), (-30,+30) and (0,+60).

The estimation window is 85 days before event window. Literature does not provide any concrete advice on the appropriate number of days for the estimation window. However, is it prudent to avoid a long estimation window from overlapping with other events. Thus, we do not adopt an overtly long period such as 250 days for estimation window. We also avoid very short estimation window such as 1 week to 60 days (Osuala et al., 2020). As such, we choose an estimation window of 85 days.

Daily log returns of the indices and stocks is calculated. We used the data in the estimation period to calculate the mean return for the stock or index over the estimation period as follows:

$$\bar{R}_{it} = \frac{1}{85} \sum_{t=-10}^{-240} R_{it}$$

where R_{it} is the return for stock or index i at time t and \bar{R}_{it} is the mean return for stock/index i in the estimation window.

The mean adjusted method is applied to obtain the abnormal return. Mean-adjusted-return model is a commonly used estimation method. It was found the method yields similar results as market-adjusted-model. As per previous event studies (e.g. Broun & Derwal, 2010), we use mean adjusted method as follows:

$$AR_{it} = R_{it} - \bar{R}_{it}$$

where AR_{it} is the abnormal return for stock or index i at time t , R_{it} is the return for stock or index i at time t , and \bar{R}_{it} is the mean return for stock/index i in the estimation window. The cumulative abnormal return (CAR) is computed over the event window.

$$CAR_{it} = \sum_{t=1}^N AR_{it}$$

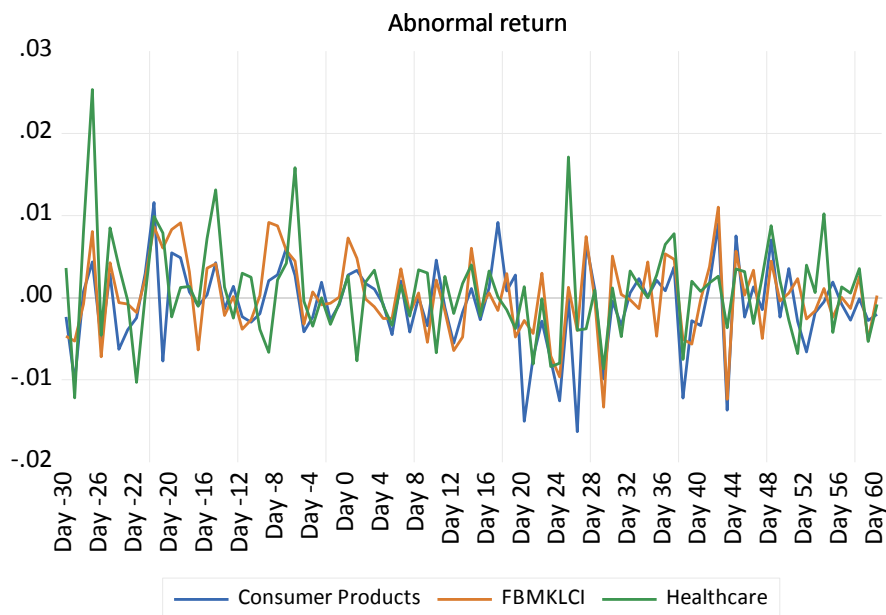
where CAR_{it} is the cumulative abnormal return for stock or index i at time t , R_{it} is the return for stock or index i at time t , and \bar{R}_{it} is the mean return for stock/index i in the estimation window and N is the number of days in the event window. The associated t-statistics for AR and CAR is calculated and significance of the AR and CAR at 10%, 5% and 1% the level of significance is determined.

DATA ANALYSIS

Market and sectoral analysis

We analyze the reaction of the overall market using FBMKLCI and also specific sector by examining consumer products and healthcare sectoral indices. Abnormal returns are calculated for day -30 to +60. Figure 1 illustrates the abnormal return of the indices surrounding the event. Day 0 denotes the event date. Though the abnormal returns (AR) on the event day is positive, the returns are not statistically significant. Sporadic instances of significantly negative abnormal returns can be observed prior to the event day especially for the consumer products sector. Nevertheless, the returns are largely insignificant. Moreover, returns are predominantly negative prior to the event and there are sporadic instances of significance for consumer products.

Figure 1: Abnormal return over the sample period



Cumulative abnormal returns are calculated over 4 different event windows. Table 2 presents the results of the analysis for the market and respective industry. For FBMKLCI, the returns are positive for three of the four event windows. The (0,+60) produced a negative returns albeit insignificant. As expected, the CAR for Consumer Products are predominantly negative compared to FBMKLCI and Healthcare. This is especially evident for the (0,+60) event window. Overall, returns are positive for the Healthcare sector, possibly due to the perceived benefits for the imposition of SSB. Nevertheless, the returns are not statistically significant. Notably, CAR are largely negative for the (0,+60) event window with consumer products having the largest decline in returns (marginally significant).

The findings corroborate findings by Law et al. (2020) where limited negative stock market reaction was reported for subsequent announcements in the UK. The authors suggested this is due to a lack of any major concern regarding the beverage industry. In Malaysia, there has been prior announcements regarding the possible implementation of SSB (e.g. Shyam et al., 2019). The substantial time gap could have allowed sufficient time for investors to assess the situation and arrive at the conclusion that there is no major impact of SSB tax on the beverage industry in Malaysia as well.

Table 2: CAR Analysis

Event Window	FBMKLCI		Consumer Products		Healthcare	
	CAR	T-test	CAR	T-test	CAR	T-test
(-10,+10)	0.026	1.419	0.006	0.420	-0.001	-0.063
(-15,+15)	0.016	0.713	-0.005	-0.313	0.020	0.725
(-30,+30)	0.025	0.637	-0.061	-1.490	0.044	0.858
(0,+60)	-0.029	-0.813	-0.078	-1.858	0.007	0.172

Individual company analysis

We further analyze the cumulative abnormal returns (CAR) for individual companies using a sample of eight companies listed on Bursa Malaysia: Nestle (Malaysia) Bhd, Fraser & Neave Holdings Bhd, Power Root Bhd, Cocoland Holdings Bhd, Dutch Lady Milk Industries Bhd, Johortin Bhd, Berjaya Food Bhd and Spritzer Bhd. Cumulative abnormal returns are calculated over a 16-day event

window from Day 0 to +15. Table 3 presents the results of the analysis for each individual company and the associated t-test statistics.

Table 3: CAR Analysis by individual company.

Companies	CAR	T-test
Nestle (Malaysia) Bhd	-0.003	-0.796
Fraser & Neave Holdings Bhd	0.002	0.137
Power Root Bhd	0.068	1.428
Cocoaland Holdings Bhd	0.015	0.470
Dutch Lady Milk Industries Bhd	-0.003	-0.375
Johortin Bhd	0.017	0.663
Berjaya Food Bhd	-0.033	-2.591
Spritizer Bhd	-0.003	-0.107

Overall, returns are negative for four companies whereas the rest are positive. Nevertheless, the positive returns are not statistically significant. Notable, Berjaya Food Bhd produced a negative CAR [0,+15] which is significant at the 1% level. This suggest most of the companies did not react to the implementation of SSB. This could be due to extra time provided to the companies to prepare for the implementation (e.g. Shyam et al., 2019), for instance, through reformulation of the beverages. The findings are similar to McClenny & Brown, (1993) where a decline in stock return was reported, but the decrease was not statistically significant.

CONCLUSION AND DISCUSSION

In this study, we examine the effect of SSB implementation on the market in Malaysia. In particular, we investigate the market as a whole using the FBMKLCI and also industries by examining sectoral indices. Overall, the evidence indicates a lack of significant reaction to the SSB implementation. Although the Consumer Products index produced largely negative returns, the returns were largely insignificant. For the individual companies, similar patterns of sporadic significant returns could be observed (unreported results). However, only Berjaya Foods had a significantly negative CAR. Several possible explanations could contribute to the observations.

Firstly, there may be no pricing disincentives for the consumer as the increased cost was likely absorbed by the manufacturers. The perceived leniency of the tax could be another factor. The SSB tax rate of RM0.40/litre rate is 60% lower than benchmarks and guidelines based on scientific evidence.

Moreover, the SSB tax has been proposed time and again before the official implementation in 2019. Furthermore, the implementation was delayed by 3 month to the 1st July 2020. The lack of significantly negative reaction could reflect the anticipated nature of the implementation. In addition, there has been preliminary research documenting successful SSB tax implementation in other countries. As such. There could be a public perception that the tax will reduce sugar-sweetened beverages consumption and result in health benefits due to reduction in obesity (e.g. decline in non-communicable diseases).

Further research could be done on the effectiveness of tax in curbing consumption of SSB in Malaysia and any consequential decline in obesity rates. The primary aim of SSB tax should be to reduce the obesity rates. Thus, ultimately, this is the measure to gauge the effectiveness of the SSB tax implementation. It is also of interest to determine the extent of increase in pricing of SSBs (if any) and the extent to which the cost was absorbed by the manufacturers. Tactics may have been used by the sugar sweetened beverage manufactures which could have undermined the effectiveness of the SSB tax.

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BAFE047:
**A REVIEW OF PAST LITERATURES ON MINORITY
SHAREHOLDERS AND SHAREHOLDER ACTIVISM IN MALAYSIA**

Thiam-Yong, Kuek^a, I-Chi, Chen^b, Yuen-Onn, Choong^c, Saw-Chin, Khor^d, Mei-Peng, Low^e,
Timothy Tzen-Vun, Yap^f

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: kuekty@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chenich@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: choongyo@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: sckhor@utar.edu.my

^eFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: lowmp@utar.edu.my

^fFaculty of Computing and Informatics, Multimedia University, Malaysia,
Email: timothy@mmu.edu.my

Abstract

Corporate governance continuously plays a dominant role in many Malaysian companies owing to its' vitality in ensuring the stability, transparency and well-governed of companies. This will create a good prospect and an investor friendly environment for both local and foreign to consider investing in Malaysia. Additionally, it adds color to the current dull Malaysia capital market due to economy uncertainty, political instability as well as the Covid-19 pandemic effects. This article intends to explore two important elements of corporate governance in Malaysia, which are minority shareholders and shareholders activism. Minority shareholders are important participant in companies, especially in Malaysia public listed companies. However, a common minority shareholders consensus in other countries is that they tend to be exploited by the directors, managers and major or controlling shareholders for their own personal agendas. Hence, shareholders activism plays an important function as through this activism, shareholders particularly minority shareholders are supposed to be made aware of their rights and duties as owner of the company. However, the effectiveness of shareholders activism in Malaysia has yet to reach a definite conclusion. Five articles each from year 2010 to year 2020 on minority shareholders and shareholders activism that are relevant to Malaysia context were retrieved from Google Scholar and reviewed to determine the extent of their development from Malaysia corporate governance perspective.

Keywords: Corporate Governance, Minority Shareholder, Shareholder Activism and Malaysia

INTRODUCTION

Regional financial crisis incurred by nations, the shocking collapses of well-established companies like Dick Smith (Australia) and Wirecard AG (Germany) as well as recent financial scandals, e.g. Malaysia 1MDB scandal that implicated the reputable Goldman Sachs were some of the news that has been making waves in the corporate governance research area in recent years. According to Claessens and Yurtoglu (2012), such crises not only has caused corporate governance become a mainstream phrase, but academics, business and policymakers from all over the world are aware of the possible macroeconomic, distributive and long-term effects of weak corporate governance systems. On the other hand, analysis of literature by L'Huilier (2014) about the definition of corporate governance pointed to the benefit of agency theorists. It is therefore fair to claim that the prevailing connotative sense of corporate governance is the principle of regulation conveyed by police procedures used to minimize the loss of agencies. In a nutshell, corporate governance remains an important pillar in strengthening the structural aspect of the companies where it will not fall apart easily through unethical, bad faith or illegal conducts by the agents in the company such as directors or even the major or controlling shareholders. Moreover, through agency theory that the issue of

expropriation of minority shareholders remains an ongoing debatable topic. La Porta, Lopez-de-Silanes and Shleifer (1999) highlighted that this is a common issue in a lot of nations beside United States and this was concurred by De Cesari (2012). For example, Hamid, Ting and Kweh (2016) expressed their concern that tunnelling and propping are being used by the agents at the expenses of the minority shareholders in Malaysia. Concurrently, there is a concern that shareholder activism might not be as effective as it had intended to be in educating the minority shareholders on their rights as well as nurturing the institutional shareholders to play their roles as a 'big brother' to them (Hamdani & Yafeh, 2013). Hence, we would like to conduct a review by retrieving five articles each from year 2010 to year 2020 on minority shareholders and shareholders activism that are relevant within Malaysia context from Google Scholar in order to determine the extent of their development from Malaysia corporate governance perspective. Content analysis approach was adopted to study the salient details pertaining to the minority shareholders and shareholders activism information. This paper is organized in two core sections; with literature review covering the Malaysia Minority Shareholders and Malaysia Shareholder Activism retrieved and identified from year 2010 to 2020 before the conclusion and discussion.

LITERATURE REVIEW

Articles Review on Malaysia Minority Shareholders (2010 – 2020)

Ramli (2010) looked at the relationship between large shareholders, and Malaysian listed companies' dividend policy, believing that the dividend policy of companies could be used to expropriate wealth of minority shareholders. The study includes Bursa Malaysia (Malaysian Stock Exchange), a non-financial public listed company (PLCs) that was consistently listed for the years 2002-2006. Malaysia offers an excellent environment for investigating the relationship as the business ownership structure is characterised as being concentrated in nature. This study gives evidence from the East Asian country, where serious conflicts between controlling shareholders and minority shareholders are described in the region. The study shows that large shareholders have an effect on dividend policy in Malaysia. However, the study showed no evidence that the dividend policy expropriated minority shareholders. The ongoing CG reform in Malaysia can lead to the use of dividends policy as a tool for CGs, particularly in a context where traditional instruments of governance were unsuccessful in terms of their monitoring function (Tam & Tan, 2007).

Research conducted by Mustafa, Latif and Taliyang (2011) began with the thought that companies should engage in related parties because they provide their business with a wide variety of returns. Related party transactions are often seen as prejudicial to external shareholders. The topic of expropriation of the rights of minority shareholders is still discussed in the mass media, and so its' aim is to empirically define the extent of expropriation and to recognise the consequences of expropriation of the minority shareholders' rights in Malaysia. The study showed that related parties' transactions might affect the expropriation of minority shareholders' rights. The results suggest that if companies engage in actual expropriation, for instance through certain types of related party transactions such as the acquisition of assets, asset sales, equity sales, business relationship transactions and any transactions involving payment of cash to the controller owners the profit quality of a company would be worse. The Securities Commissions, active institutional investors and the Minority Shareholder Watch Group (MSWG) possibly will have a role to track such transactions to protect minority shareholders' interest.

Liew, Alfian and Devi (2015) noted that current corporate governance literature focuses on the typical shareholder - manager who is a major agency problem type I (De Cesari, 2012), predominant in widely owned companies (Jensen & Meckling, 1976). They analysed whether managing shareholders' concentration regulates the relationship between related party transactions (RPTs), which can lead to expropriation and firm value. Returns of the normal pooled Ordinary Least Square (OLS) and Fixed Effect Models (FEM) showed that RTPs that lead to expropriation decrease the firm value (Tobin's Q and Market to Book Value (MBV)) substantially by 1 % and 5%. For non-family companies, the results of regression in the normal pooled Ordinary Least Square (OLS) and the Fixed Effect Model (FEM) indicate that RTPs likely to result in expropriation are not closely linked to firm value. It shows that minority shareholder expropriation by RTPs occurs among Malaysian firms, and that reputational effects play a role in reducing the expropriation of minority shareholders within the family companies in Malaysia. Mitigation efforts in respect of expropriation of minority shareholders by the Securities Commission in Malaysia (SCM) through RTPs should concentrate on family rather than

non-family companies and that SCM should review Section 8, para. 8.1-8.3 to ensure fair security of minority shareholder 's interests under the 2012 Malaysian Code of Corporate Governance (MCCG).

In most nations, owners of businesses have a poor governance such as using the business money for personal purpose. In Malaysia, the rights of minority shareholders are primarily expropriated in companies with concentrated ownership. Umrani, Johl and Ibrahim (2015) research focuses on the degree to which minority rights are expropriated, with an emphasis on the new ethics code. In Malaysia, SMEs contribute significantly to the GDPs of the country and play a strong role in the jobs sector. Public listed firms are subject to the Malaysian Code on Corporate Governance (MCCG). They perform better than small and medium-sized companies. Malaysian small and medium-sized enterprises have family influence and centralised ownership. It enables majority shareholders to expropriate the rights of minority shareholders. They nominate their relatives and close associates to the board of directors and managers. This helps them to expropriate the rights of shareholders. It is concluded that the Government of Malaysia should take appropriate steps in Malaysian SMEs to tackle these problems. Publicly listed undertakings are subject to MCCG. It was concluded that, in Malaysian SMEs, the Malaysian government should take the steps required to deal with these problems.

According to Ya'acob et al. (2018), since decades ago expropriation of interest on minority shareholders has been a global problem. They examined the significant link between the structures of corporate governance, namely board independence and independence of the audit committee with the manipulation of minority shareholder interest in connexion with the related party activity in the listed companies of ACE Market. An independent audit committee will make a accurate and fair opinion decision as it is independent and not closely connected to the company. Although profitable means that increased profitability results in higher expropriation of the interest of minority shareholders. Profitability indicates the company's ability to increase profit over the year, however it also illustrates that that profit can contribute to higher expropriations throughout a business. However, past studies suggest that profitability is negatively connected to the rights of minority shareholders being expropriated (Berkman, Cole & Fu, 2009; Nurul Huda, Rohaida & Siti Mariana, 2011). They quickly point out, however, that because more value can be expropriated in profitable businesses, a positive relationship between profitability and expropriation can be expected.

Article Reviews on Malaysia Shareholder Activism (2010 – 2020)

Management interventions may be controlled and regulated in different ways to match management priorities with shareholders, but the success of such processes depends on a number of factors. The study by Azizan and Ameer (2012) shows no significant positive abnormal returns on the event day itself but notes that the post-event windows display significant positive cumulative abnormal returns (CARs), which shows that shareholder activism has a lagged impact on shareholder capital. It was noted that in his letters on corporate governance concerns the independence of the board of directors was addressed by the Minority Shareholders' Watch Group (MSWG). This means that minority shareholders are highly worried about the integrity of the board as the board is controlled by the family members who are the majority shareholders. The targeted family-controlled businesses have related party transactions (RPTs). In the first part of their study, they analysed whether the size of relevant sales and purchasing RPTs, i.e. shifts from year-to-year as well as the intersector sales, has changed substantially with a pairing example of the t-test method. The members of the audit committee attend the targeted firms substantially higher than non-targeted firms even though the activities associated with such activism are lower in Malaysia than those seen in the established firms. The results show that the involvement of MSWG shareholders has an impact on the family-controlled companies' share returns. These findings suggest that family-controlled companies agree with MSWG on issues which improve the basic outcomes.

According to Musa (2012), shareholder activism is intended to fix concerns occurring because of business agency problems. Institutional shareholders are usually private or public pension funds, insurance companies, banks, government agencies and other collective investment vehicles such as the organisation of charities. Regulated and organised bodies responsible for ensuring projected returns from their diverse investments, institutional shareholders allocate a certain amount of capital to manage and track their investment portfolios. This commitment and interference should be limited. Shareholder activism is one of the best practises in the Malaysian Code on Corporate Governance. Shareholder activism places its' focus in the private sector on institutional shareholders and

government incentives to shareholder activism. Government entities and family-owned businesses are the largest shareholders in the Malaysian stock market. Since the concentration of shareholders in Malaysia is high and owners are managers, a mechanism that can mitigate agency costs and problems does not seem to be necessary. Research conducted among 434 companies listed at the Bursa Malaysia between 1999-2002 indicates an important and positive relationship to corporate governance between institutional shareholders. In Malaysia the institutional shareholders who use shareholder activism are usually government entities and Malaysia's publicly traded companies as a whole have a stronger performance in those government-owned enterprises. The Employee Provident Fund (EPF) is committed to promoting best practises in corporate governance among its investment companies through constructive dialogue and collaboration with the board and management of investment companies as well as ongoing attendance of shareholders' meetings. The Pemodalan Nasional Berhad (PNB) and Lembaga Angkatan Tentera Malaysia (LTAT) manage and supervise their investor firms by board representation; they behave frequently as insiders, playing an important role in the monitoring of performance and even in corporate governance. This advocacy will play an important role in minimising equity agency costs by closely tracking corporate management activities by offering voting rights, the right to file suit and the sales of the assets of managers and shareholders to ensure corporate survival and longevity. This engagement of shareholders influences the management of companies in various ways.

The paper written by Othman and Borges (2015) shows the degree of their engagement and activism in Malaysia context. Strong shareholders' engagement and responsible behaviour are important for successful market regulation and for maintaining a culture of corporate governance. The idea of shareholder activism emphasised on good corporate governance, and in the corporate world there is still debate in this field. Shareholders at any stage, ranging from institutional investors to single minorities and hedge funds, can be observed by shareholder activism in their strategic attempts to influence companies (e.g., Fahmi & Omar, 2005; Gantchev, 2013; Sikavica & Tuschke, 2010). Shareholder advocacy, for example, in the U.S. has grown dramatically since the adoption of a regulation by the Securities and Exchange Commission (SEC), enabling shareholders to request resolutions that could be considered for corporate votes in 1942 (Gillan & Starks, 2007). Researchers have recently begun to consider the importance of minority shareholder positions in activism and corporate governance as a whole in the light of scholarly work in the Malaysia context (Abdul Wahab, How & Verhoeven, 2007; Musa, 2012). The Securities Committee Malaysia and the Minority Shareholder Watch Group introduced a Malaysia Code, Malaysian Code for Institutional Investors in 2014 after advocacy by Malaysian institutional shareholders with a list of best practises, jointly established by Malaysia's biggest institutional investors. Many of Malaysia's leading firms, such as the government, institutional shareholders and families, have little to no impact on management policy (Ameer & Abdul Rahman, 2009). Guan (2005) reported that minority individual shareholders are the largest group of shareholders and may be the most influential members.

Meanwhile, Akmal Musa and Ismail (2016) added that shareholders are far more aware of their obligations for their investments than in previous years. The participation and dedication indicated by the best practises will enable companies to gain strength and boost competitive advantage in Malaysia. Institutional shareholders in Malaysia are predominantly comprised of Malaysian government entities and family businesses (Claessens, Djankov, Joseph & Larry, 1999). Research conducted between 434 companies listed on the Bursa Malaysia from 1999-2002 found that corporate governance relationships between institutional shareholder interests are positive and relevant (Abdul Wahab, How & Verhoeven, 2008). The strong positive relationship is explained by the centralised shareholder influence over the corporations will discourage fraudulent conduct and corporate scandal. Daily assessment of the board 's effectiveness, accountability, openness and disclosure, auditing and financial reporting, internal control and risk management must be done to ensure that governance is consistent in best practises. Hedge funds are said to be better positioned to operate as intelligent monitors than other institutional investors, according to the Latest Shareholder Activist, and their actions have been well regarded by the market (Thomas, 2008; Clifford, 2008). Research conducted among 434 companies listed on the Bursa Malaysia between 1999-2002 shows that institutional shareholder ownership has a strong, good relationship with corporate governance (Abdul Wahab, How & Verhoeven, 2008). The intervention of EPF to stop Golden Hope Bhd's selling of the subsidiary to Island & Peninsular Bhd. and the success of the Fund in driving up the prices of Malaysian Oxygen Bhd's privatisation. EPF is committed to promoting the best practises of corporate management among its investor companies through constructive engagement with and management of investee companies as well as continuous participation in

corporate shareholder meetings. In Malaysia, in general government agencies and Malaysia's publicly-listed companies as a whole, the institutional shareholders who rely on shareholder activism show that in those government-owned companies better performing (Sulong & Mat Nor, 2008), a well-managed, transparent business allows shareholder participation more possible (Li, Moshirian, Pham & Zein, 2004). It is strongly important to note that initiatives should not be intrusive to the point of micromanagement of investors' daily operations.

Despite the nature of the shareholder rights regulatory system, arguments about shareholder activism remain contentious in several respects (Goranova & Ryan 2014). Othman, Ho and Latiff (2019) renowned that the individual minority shareholder approaches and agitation of the exit-loyalty-neglect model are related to the unhappiness of the shareholders, pointed to the significance and inadequacy of the management behaviour of the shareholders. Their study deals with the role of individual minority shareholders and attempts to supplement current studies in shareholder activism dominated by studies into institutional investors. It aims to add to the shareholder activism literature by offering a rich overview of the spectrum of activism responses available from the various minority shareholders. The researchers tried to deepen their understanding of the various advocacy approaches taken by individual minority shareholders in Malaysia 's listed public companies. Where the size of the shareholding involved was small as was the case for individual minority shareholders, the exit mechanism seemed less successful. Both shareholders must exercise their power as heads of the company and must accordingly behave and exercise their rights. Unfortunately, many minority shareholders tend to fail to understand that they can control and alter the actions of the organisations, in which they participate, simply through a suitable activist approach.

CONCLUSION AND DISCUSSION

From the review, it can be seen in general there have been positive development in the minority shareholders interest and shareholders activism over the years in Malaysia. Minority shareholders tend to be in conflict with the managers or directors, which is known as agency problem type I and with the major or controlling shareholders, which is known as agency problem type II (Loderer & Waelchli, 2010). However, the type I problem tend to be reduced, particularly in the Malaysia listed companies while type II problem remains a constant thorn to the minority shareholders. One of the rational reasons is probably due to the requirement imposed by Bursa Malaysia whereby listed companies in Malaysia need to use latest Malaysian Code of Corporate Governance (MCCG) which consists of practices that restricts the conduct of the agents in the company. However, MCCG is not compulsory for unlisted companies. Moreover, the practices in it has little consideration to restrict the behavior of major or controlling shareholders, such as when controlling shareholders who manage the company set his/her own remuneration that lead to the expropriation of minority shareholders in there (Lim & Yen, 2017). This is particularly evident in the family-controlled firm. Hence, it is suggested for the authority to consider making MCCG compulsory for all companies in Malaysia with a prescriptive approach as compared to the current hybrid approach. And authority should consider more practices that can protect and prevent expropriation of the minority shareholders as well as limiting the power of major or controlling shareholders in the future MCCG.

In respect to shareholder activism, Minority Shareholders Watch Group (MSWG) has been doing a good job in educating the shareholders, especially the minority shareholders on their rights and how they can contribute to the betterment of the company's corporate governance by acting as their oversight mechanisms. However, institutional shareholders on the hand need to play a more active role in this activism as from the review, it seems that they are not doing enough yet. While it is understandable that institutional tend to act in dual roles, as shareholders and investors (Afza & Nazir, 2015), there must be a proper balance in between the two roles for the benefit of its members as well as the investee companies' shareholders, particularly the minority. Afterall, shareholder activism and minority shareholders are closely related. Institutional shareholders tend to be quite influential in the company as they tend to own a lot of voting shares in it. Hence, they can act as a sound corporate governance in their investee companies when minority shareholders collectivism fails to rise to the occasion in there. There is also the need for Malaysia Institutional Investors Council to update its Malaysian Code for Institutional Investors (MCII) as it has been six years since it was launched with no revised edition. Changes in the corporate governance environment is dynamic. Henceforth, there is a constant and continuous need for its practices to reflect the right roles that institutional shareholders should play in its activism.

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BAFE053:
**THE MIRROR OF MALAYSIA REAL ESTATE INVESTMENT TRUST
STOCK RETURN IN THE SHORT-RUN DYNAMICS**

Choo, William Keng-Soon^a, Mohd Yahya Mohd Hussin^b, Fidlizan Muhammad^c

^aPhD Candidate, Faculty of Management and Economics, Universiti Pendidikan Sultan Idris,
Malaysia.

Email: william97337@hotmail.com

^bFaculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia

Email: yahya@fpe.upsi.edu.my

^cFaculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia

Email: fidlizan@fpe.upsi.edu.my

Abstract

The formation of Islamic capital market under the subcomponent of Islamic financial system scratch a milestones development of Islamic finance in Malaysia. The Islamic capital market operates in mirror with convention capital market in expending, deepening and broadening Malaysia financial system. Malaysia is one of the REIT markets that value both the Islamic and conventional practices, such flexibility makes the attract not only to the local investor but also Islamic investors and foreign investor. The major source that generates income for REIT is the rental of the commercial real estate invested and hold as portfolio by the REIT management company. Furthermore, Malaysia REIT is known to be defensive stocks which consist of cyclic income producing assets that has some potential of asset appreciation. On the other hand, it witnessed by the moderation of Malaysia government bond yields created a lower pressure on the REIT stock price and analyst's report highlighted the uncertainties on global crude oil prices and inflation is main concerned to REIT investors. In addition, the revision of 2019 tax system in Malaysia furnished a long run affected the dividend payout and volatility of REIT stock price. Therefore, this impact on the REIT stock liquidity and trading volume experiencing an illiquid trading. Therefore, the impact of external forces towards the mirror of two type of Malaysia REITs is significant to the investors, policy makers and government to outline the short-run relationship and facilitate future growth. The Vector autoregression model, granger causality and variance decomposition employed in this study to analyze the mirror of two types Malaysia REIT stock return. The empirical finding shows that the variability of dividend yield is vital explanatory variables to explain the both type of REIT stock return in Malaysia followed by interest rate for Islamic REIT stock return. The mirror of conventional REIT further implicated that trading volume and global crude oil price are useful to forecasting the changes in the stock return. Nutshell, this study provides a discussion of Malaysia REIT stock return behavior and it should be given necessary attention by researchers in ensuring the newly develop Islamic REIT are competitive and stability as the conventional REIT.

Keywords: Malaysia REIT, Stock Return, Vector Autoregression

INTRODUCTION

The Real Estate Investment Trusts (REIT) is significant in economy as investment vehicle and support the nations properties markets development, although the financial crisis has occurred in the past decades, the REIT market has been expanding despite such financial crisis challenges (Sun, Titman and Twite, 2015). Real estate investors are one of the few unique sectors that enhanced in every economy also run stock market and bond market. The challenges on market crisis in the 1980s helped most investors regardless in stock market, bond market or REIT market gained a lesson and to plan for the proper future investment. According to Lane and Milesi-Ferretti (2018) and Sun, Titman and Twite (2015), the 2007 to 2008 financial global financial crisis, most of the market was affected but the REIT market was not that much affected as of owning physical properties and making a great investment towards the publicly listed property stocks. The continual expansion of the real estate market in the world is making great financial motivation that expands the investment spectrum

especially the REIT market between debt and equity type funds, which balanced optimal level between risks and return

In comparison to stocks on securities exchange markets, a REIT is mechanism same as the ordinary stock traded and makes direct investment in real estates through mortgages or properties (Feng, Price & Sirmans, 2011). REITs consists a pool of funds from the selling of unit of share to the investors and raised capital invested in diversified property that generated an income stream for the REIT management company, it has similar characteristics as mutual fund. Investors can invest into various types of properties that is diversified portfolio (Kim, Rengarajan & Ying, 2013). Feng, Price and Sirmans (2011) noted that a REIT is characterized by high yields, is a highly liquid approach in real estate investment and is given special tax consideration by taxation authorities. An investor invests in a REIT in two main methods: direct share purchasing in an open exchange or making investments in real estate mutual funds. The REITs underlying portfolio are diversified investment into varies type of property, as the rental collection is depending on the properties performance in the portfolio and translated into returns to investors as a form of dividend and appreciation of capital. The rental income is main source of periodic income generated by REIT management company, therefore is it important to gauge the rental collection from the underlying as profit and dividend yield. Periodic rental income leads REIT faced a lesser risk given the stable income flow, a fixed assets of real estate as underlying portfolio that rendered it attractiveness to investors (Jain, Sunderman, Janean & Gibson, 2017). Furthermore, REITs have low level of asymmetric information that lead to the the market more perfect and attractive (Braun, 2016).

REIT in Asia introduced a little late compared to United State REITs sectors. The growth of REIT in Asia is rapid and significant over the two decades (Tsai & Lee, 2012). The expansion of REIT started in Asia in 2000s. The largest REITs in Asia are represented by Singapore, Hong Kong and Japan that applied externally managed structure (Park, 2017). The creation and introduction of REITs in Malaysia contribute to economic stability in addition to stimulating further economic growth especially in the real estate. According to Chiang, Tsai and Sing (2013), this effect was experienced in the Asian context during both the 1997 Asian Economic Crisis and the 2007 Global Financial Crisis, the majority of the REIT in Asian countries were developed during these two economic periods. Malaysia launched its first Islamic REIT, the Aqar Healthcare REIT in the market back in the year 2005. Currently, Malaysia ranked fifth among Asia countries in the REIT industry (Chuweni, Eves, Hoang, Isik & Hassan, 2017). According to Bursa Malaysia statistic the REIT market capitalization had increase from RM5.25 billion to RM37.48 billion during 2007 to 2019 respectively. In Malaysia REIT industry, the regulation required all REIT management company to be listed on Bursa Malaysia stock exchanged and to distribute not less than 90 percent of their taxable income as dividend to enjoyed the tax corporate exempted (Chong, Ting & Cheng, 2016).

In June 2006, Islamic REITs were introduced in Malaysia as a new instrument alternative to the conventional REIT, in addition to the Islamic capital market and the world REIT market. Enhance and innovative development is needed for the various investment products and opportunities to identify the benefits of enhanced property portfolio diversification and compliance to regulation necessary for holding of the Islamic securities. Furthermore, with the awareness of global property investors increasing, the need to develop more innovative performance analyses, particularly for the Islamic market players (O'Neal, 2009). Moreover, Islamic REIT is a mirror to the conventional REIT and served as the alternative bond market in the capital market structured. The growth and the demand of Malaysia REIT has been experiencing a significant growth and demand in portfolio property value and market capitalization. In 2006, the Bloomberg terminal statistic shown that Malaysian REIT market capitalization was RM3.7 billion and in December 2019 it had risen to RM46 billion to become one of the important asset classes for high dividend payouts to investors, which has significantly increased the capitalization of the market over time.

According to Kok (2015), highlighted that the outperforming of Malaysia REITs is affected by the moderation of government bond yields, specifically the 10-year Malaysia government securities (MGS) in the early of January 2015. Furthermore, Kok (2015) also mentioned that the decline in the 10-year MGS has created a lower pressure on the REIT stock price and improved the overall performance of REITs in the market. The 10-year MGS acted as proxy for benchmarking to stock return in Malaysia. Moreover, some of the analyst's report said Malaysia's bond market will be volatile further volatile as the uncertainties on global crude oil prices and the United State interest hike (Kok, 2015). On the other hand, the inflation is one of the issues faced by an investor on stock market, high

rate of inflation had a limited the purchasing power in structuring and rebalance the portfolio. In April 2015, Malaysia government ha implementation Goods and Services Tax (GST) that has a negative impact on REIT investment (Kok, 2015). In addition, the revision of GST into sales and services tax (SST) in 2018 witnessed an increase the real estate construction cost eventually it decreases the REIT management company profit margin (Thean, 2018). The revision of tax system in Malaysia furnished a long run affected the dividend payout and volatility of REIT stock price. Therefore, this impact on the REIT stock liquidity and gauged by the stock trading volume (Tapa & Hussin, 2016). Nevertheless, Tapa and Hussin (2016) stated that low trading volume indicates the market is illiquid, and the price would be volatility to influence the stock return.

As well as the mirror between two type of REITs in Malaysia stock market create a same determining underlying factors, does the determined factors highlighted in the conventional REIT literature impact on the Islamic REIT? The challenges faced by an investor in determining the best alternative investment vehicle as portfolio are not only limited to choose but also the underlying structure of foundation in the stock. The Islamic REITs are subject both capital market regulation and the Shariah principles established by the Shariah committee of securities commission of Malaysia. The Shariah principle required the Islamic REIT underlying investment prohibited non-halal activities such as *riba* (interest), *maisir* (gamble) and *gharar* (uncertain) element. This requirement of investing Islamic REITs be stricter and more complicated for the managing the real estate property fund firm. Therefore, the element of Shariah principle imparted on Islamic REIT might draw a different conclusion as compared to the conventional REIT in Malaysia. Moreover, each of the study Nevertheless, the limited conceptual framework in the literature between mirror of the two type of conventional and Islamic REIT in Malaysia from the perspective of stock return, economic force and short run motivated this research paper. The microeconomic variables that are identified for this study are trading volume and dividend yield while the macroeconomic variables are global crude oil price, inflation rate and interest rate.

LITERATURE REVIEW

Microeconomic Variables and Stock Returns

According to McMillan and Wohar (2013), the researchers stated that there are two ways to define dividend yield from the scholar and investors point of view. The academic literature defines dividend yield as dividend payment between months $t - 1$ and t while investors define dividend yield as current dividend divided by current price. Alesii (2006) also found that dividend yield has positive relation with stock return in Italian stock market from 1913 to 1999. According to Campbell (1991), the researcher stated that there is a positive relation between stock return and dividend yield in New York Stock Exchange from 1927 to 1988. Besides, Gombola and Liu (1993) found that dividend yield has positive relationship with stock return during bear markets, however it also negatively related with stock return during bull markets throughout the period from January 1969 to December 1984. According to Campbell and Ammer (1993), the researchers stated there is a positive correlation between dividend yield and stock return. This means that dividend yield brings a positive impact on stock return. Hollifield, Koop and Li (2003) stated that dividend yield plays an important role in explaining the variance of stock return. According to Lewellen (2004) and Al-Mwalla, Al-Omari and Ayad (2010), the researchers stated that the dividend yield has a long run impact on stock returns. However, Khurshid, Raza and Azeem (2013) stated that there is significant short run Granger causality between stock return and dividend yield with the direction from dividend yield to stock returns with the evidence in Karachi Stock Exchange from 1997 to 2007 in monthly basis.

Furthermore, Chen, Firth and Rui (2001), trading volume is defined as the daily number of shares traded in the market and it can be used to forecast the changes in price and return volatility. Trading volume is considered as a significant indicator for practitioners and academicians in investment field to measure the strength of the stock market (Al Samman & Al-Jafari, 2015). The reason that makes the investors to concern on trading volume is because of the correlation between price volatility and trading volume which can used to indicate the liquidity of the market (Tapa & Hussin, 2016). When high price volatility is correlated with low trading volume, this indicates that the market is illiquid while the low-price volatility is correlated with high trading volume will indicate the market is highly liquid.

On the study by Tripathy (2011), the researcher stated that there is a long-run causality relationship between stock return volatility and trading volume in Indian stock market from January 2005 to January 2010, found that the stock return is strongly and positively influenced by trading volume. Hussain, Jamil, MaazJaved and Ahmed (2014) stated that there is a strong impact from stock returns to the trading volume by conducting research on Karachi Stock Exchange 100 index on the whole Banking Industry from January 2012 to June 2014. Furthermore, Tehranchian, Behraves and Hadinia (2014) stated that there is a long run relationship between trading volume and stock return on the 220 member companies at Tehran Stock Market from 1996 to 2009. The researchers also stated that there is a bidirectional causality relationship between stock return and trading volume in this study and this statement has been supported by Lu and Lin (2010). Furthermore, Chordia and Swaminathan (2000) stated that trading volume is a significant variable to predict the future stock return. This statement has been proven by Lu and Lin (2010).

Macroeconomic Variables and Stock Returns

The Crude oil is defined as the mixtures of hydrocarbons which exist in liquid state in natural underground reservoirs as well as at atmospheric pressure and it is a non-renewable energy resource (Selley & Sonnenberg, 2015). The crude Oil is an important determinant of global economic performance which the fluctuation in crude oil price can influence the economic activities of a country (Sahu, Bandopadhyay & Mondal, 2014; Ndubuisi, 2018). Furthermore, Sahu, Bandopadhyay and Mondal (2014) stated that a small change in crude oil price can affect almost all the economic activities and vital impacts towards the financial markets.

Basher and Sadorsky (2006) stated that oil price has significant positive relationship on stock return in emerging market. This statement has been supported by Sadorsky (2001) and Boyer and Filion (2007). Adaramola (2012) found that there is significant positive relationship from stock return to oil price stock in short run while the researchers also found that the oil price shock is significantly and negatively affecting the stock return in long run in Nigerian stock market from 1985 to 2009 in quarterly basis. In contrast to that, Raheman, Sohail, Noreen, Zulfikar, Mehran, Irfan and Adeel (2012), the researchers stated that there is no significant relationship between stock returns and oil prices, furthermore the researcher also found that there is a short run relationship between stock returns and oil prices in Asia Pacific countries. On the other hand, Sahu, Bandopadhyay and Mondal (2014) found that there is a long run relationship between stock return and oil price. Moreover, the authors stated that there is a unidirectional causality relationship from oil price to inflation rate with the evidence in South Africa. In the research by Subhani, Hasan, Qavi and Osman (2012) documented a unidirectional causal link from oil price to inflation rate with the evidence in Pakistan for the period of 1980 to 2010. Asghar and Naveed (2015) stated there is a unidirectional causality relationship between inflation rate and oil price with the direction from oil price to inflation rate in Pakistan for the period of January 2000 to December 2004 in monthly basis.

The inflation is measured through consumer price index that measured the changes in prices of a basket of goods and services that consumed by household. There are many researchers stated or supported that inflation affects the return of investors such in the study of Nittayagasetwat and Buranasiri (2012) and Sing and Low (2000). An investment can be eroded by the inflation, therefore investors have to factor in structured a portfolio or hold the assets for long-term (Sing & Low, 2000). Furthermore, Sing and Low (2000), stated that a real estate is a suitable in hedging inflation as the prices increased in the long term. The real estate in the long run makes the investment attractive compared to traditional investments, such as stocks, treasury bills and bonds. Therefore, the structured REIT as suitable investment to for retail investor given the small amount of investment and management of physical assets. The expected inflation is reflected by interest rate while unexpected inflation will not significant to real estate performance when inflation is low (Sing & Low, 2000). Moreover, unexpected inflation interdiction consists of market rate but it might affect by the interest rate changes. Chatrath and Liang (1998) indicated that REIT has inflation hedging component and expected or unexpected hedge inflation can be completely hedged by private residential real estate. Furthermore, the authors empirical finding that a positive relationship can be found between unsecuritized (direct) real estate return and inflation. This showed that inflation whether unexpected or expected can be partial hedged, so if the investment included in mixed assets can be effectively hedged once included real estate (Simpson, Ramchander & Webb, 2007). Securitized real estate such as REIT has negative or insignificant relationship and inflation. On the other hand, the

relationship between equity REIT stock return and inflation is negative in the long run (Nishigaki, 2007; Nittayagasetwat & Buranasiri, 2012).

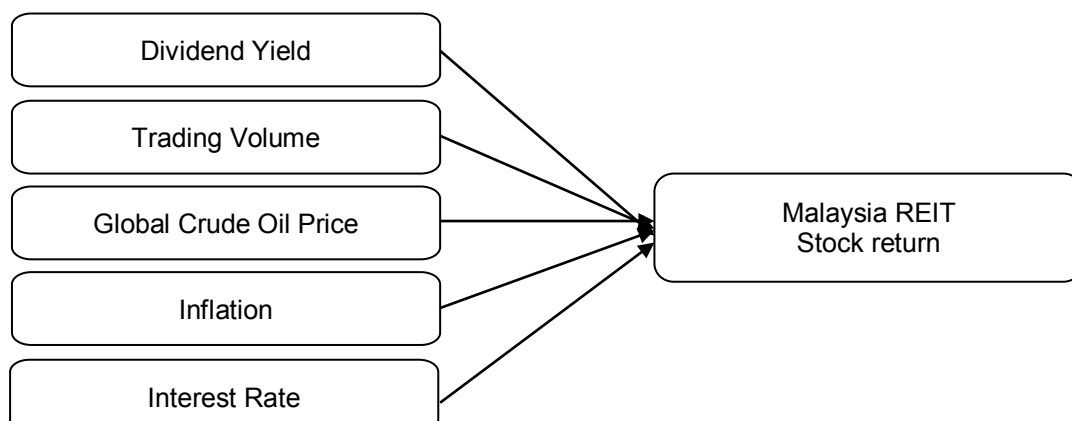
An inflation will have negative impact to total stock return as the preference and market information are the indicators that reflects the effectiveness and efficiency in stock market (Ibrahim & Agbaje, 2013). The price of stock increases and decreases will lead to uncertainty in investors' perspective and subsequently it affects the stocks' supply and demand. Therefore, inflation is vital factors investors decision making. Negative relationship between REIT stock return and inflation to behave more like common stock and it different from traditional real estate (Simpson, Ramchander & Webb, 2007).

According to McCue and Kling (1994), relationship between real estate return and nominal interest rate is strong in 'time to build' period, which development in real estate takes time, such as approval required, plan required, financing secured, and construct the structure. Moreover, a positive return can be gained from new construction in the short run (McCue & Kling, 1994). Estimated demand after the completion of project is important for developer in order to start a project. Instances, a demand of office space increase, as a developer will add more spaces to satisfy the demand. However, it required more time to add more spaces. At the same time, rental or lease of unused existing office spaces can be raised until the new office spaces completed. Thus, return increased during the construction to be completed.

Mortgage REITs are sensitive to long-term and short-term interest rate changes (Liang, Seiler & Chatrath, 1998). Allen, Madura and Springer (2000) stated that movement of interest rate can affect equity and mortgage REITs due to relied more on borrowed funds, hence, the cost of financing can influence the value of real estate. If an increase in interest rate and it will lead the real estate's value and demand be reduced. Based on study by Nittayagasetwat and Buranasiri, (2012), equity REITs' value changes also depend on interest rate as a part of cost of debt financing given the changes is market interest rate. Furthermore, investors calculated the required return based on risk-free rate and risk premium, therefore a slightly upward when the required return of investors increase and lower valuation. In the study of Chen and Tzang (1988) duration and sensitivity degree to interest rate changes is positively and significant as the longer the duration, the degree of sensitivity will be higher. Therefore, mortgage REIT has higher sensitivity to interest rate because it has longer duration compared to equity.

In the study of Giliberto and Shulman (2017), the empirical finding shows a mix result on long run relationship between the interest rate and REIT stock return, but there is a short run relationship between interest rate and return of REIT. However, in the study of Tsai and Lee (2012) has a different finding on interest rate and REIT stock return, the empirical finding shows a long run relationship which against finding of Giliberto and Shulman (2017). According to Campbell and Ammer (1993), found that there is a negative correlation from short term interest rate, change in short rate and relative bill rate towards the stock return which means that interest rate is negatively influencing the stock return. Hollifield, Koop and Li (2003) found that the innovation of interest rate is less important to explain the variance of stock return and Otieno, Ngugi and Wawire (2017), interest rate is a significant variable for investors in making investment decisions as well as the future stock return.

Figure 1: Conceptual Framework



The conceptual framework of this study as illustrated in figure 1, which are intended to guide this mirror two type of REIT in Malaysia as connection between identified explanatory variables and stock return. The development of the conceptual framework underpinned by the literature and empirical finding with the research gap as highlighted in the background of study. Briefly, this study was confined to five variables comprise of dividend yield, trading volume, global crude oil price, inflation and interest rate. Nonetheless, the study derived ten hypotheses a proposition that tentatively explain the facts between conventional and Islamic REIT in Malaysia.

RESEARCH METHODOLOGY

Research Design

This study is mainly to examine the short-run relationship on REIT dividend yield, REIT trading volume, global crude oil price, inflation and interest rate on Malaysia REITs stock return. According to Wilson and Natale (2001) and Kuo, Tseng and Chen (2016) quantitative involves numbers or quantities and collection of historical time series data. Therefore, this study is based on quantitative research to derive the empirical results of short-run relationship. The data of Malaysian REITs stock prices and study variables are collected from Bloomberg terminal respectively. This study retrieves quarterly data of 42 observations from the period of June 2009 to December 2019. The historical stock price of Malaysian REITs at the end of trading day of March, June, September and December from the period of 2009 to 2019 are collected from Amanah Harta Tanah PNB served as proxy for Conventional REIT stock return and AXIS REIT proxy for Islamic REIT stock Return, expressed in Ringgit Malaysia from Bloomberg Terminal. The data of global crude oil price, inflation rate and interest rate are collected as macroeconomic factors while data of dividend yield and trading volume are collected as microeconomic factors form bloomberg terminal.

Table 1: Data Collection Quantification

Variables	Quantification	Proxy	Unit Measurement
Stock Return (SR)	$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100\%$ <p>Where, R_t = Stock return in the month t P_t = Closing Stock Price at the end of the quarters, t P_{t-1} = Closing Stock Price at the end of the quarters, t-1.</p>	Amanah Harta Tanah PNB for Conventional REIT stock return and AXIS REIT for Islamic REIT stock Return.	Percentage
Dividend Yield (DY)	$\text{Dividend Yield} = \frac{\text{DPS}}{P_t}$ <p>Where, DPS = Dividend per Share P_t = Quarter-end Stock Price (Hsu & Lin, 2010)</p>	Conventional and Islamic REIT dividend Yield.	Percentage
Trading Volume (TV)	Based on Malaysia market force demand and supply.	Conventional and Islamic Trading Volume.	Log Number of Shares
Global Crude Oil Price (GCO)	Based on global market force demand and supply.	WTI Crude Oil Spot Price.	Log Per USD barrel.
Inflation Rate (INF)	$\text{Inflation} = \frac{(CPI_t - CPI_{t-1})}{CPI_{t-1}}$ <p>(Sing & Low, 2000)</p>	Malaysia Consumer Price Index.	Percentage
Interest Rate (INT)	$P = \frac{C_1}{(1 + \frac{i}{100})^{\frac{t_1}{365}}} + \dots + \frac{C_n + N}{(1 + \frac{i}{100})^{\frac{t_n}{365}}}$ <p>Where, P = Purchase Price of Government Bond (including accrued interest) n = Number of coupons C_n = Amount of the coupon payment for</p>	Malaysia Government 10 years bond yield.	Percentage

	the period of n N = Face value of Government Bond i = Effective yield on Government Bond t_n = Actual number of days until coupon payment for the period of n (Bank Negara Malaysia, 2018)		
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Unit Root Test

Unit root test is used to determine the trend stationary of a time series model and the difference in stationery and trend stationary of models in a same time series may affect the predictions (Diebold & Kilian, 2000). The Augmented Dickey-Fuller (ADF) test to determine the existence of unit root in a time series model which controls higher-order correlation by taking into account of lagged difference terms of the dependent variable to the right-hand side of regression (Olweny & Kimani, 2011). The equation 1.1 is the ADF test for this study.

$$\Delta y_t = \alpha + \beta_t + \gamma y_{t-1} + \sum_{j=1}^{p-1} \delta_j \Delta y_{t-j} + \varepsilon_t; t = 1, \dots, T \quad (1.1)$$

where, α is constant, β_t is the coefficient on a time trend, p is the optimal lag length and ε_t = error term.

Johansen Cointegration Test

Johansen Co-integration Test developed by Johansen in 1988 and it is used by the researchers to identify or analyze the number of co-integration vectors among variables in model (Yoon, Min, & Jei, 2019). Johansen co-integration test includes two tests that are maximum eigenvalue test and trace test in order to identify the co-integration vectors. According to Gomez-Biscarri and Hualde (2015), it is using the maximum likelihood estimation as the model parameters to identify the co-integration relationship between the variables in Vector Autoregressive (VAR) model. The equation of 1.2 is the trace test and the equation of 1.3 is maximum eigenvalue t-statistic is used to infer the number of co-integration vectors in this study.

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^n \ln(1 - \widehat{\lambda}_r) \quad (1.2)$$

$$\lambda_{max}(r, r+1) = -T \ln(1 - \widehat{\lambda}_{r+1}) \quad (1.3)$$

The r is the number of co-integration vectors under the null hypothesis, T is the sample size and λ is the eigenvalue. The null hypothesis of the r co-integration vectors and the alternative hypothesis of exceeding the r co-integration vector is tested by trace statistics. On the other hand, the r co-integration vector and the alternative null hypothesis of $r+1$ are tested by maximizing the eigenvalue statistics.

Vector Autoregressive Model (VAR)

According to Kalli and Griffin (2017), the VAR model is used for the prediction of short-run macroeconomic variables relationship in the time series data. Furthermore, it provides a foundation for the analysis of complex dynamics that is always occurs in between macroeconomic variables. The VAR model developed by Sim Chris in year 1980 for the uses in multivariate time series and the model's structure is assuming that each of the variables has linear relationship with the past lags of the variables and past lags of the other variables. The equation 1.4 is basic VAR (p) model.

$$Y_t = c + \Pi_1 Y_{t-1} + \Pi_2 Y_{t-2} + \dots + \Pi_p Y_{t-p} + \varepsilon_t \quad t = 1, \dots, T \quad (1.4)$$

Where, $Y_t = (Y_{1t}, Y_{2t}, \dots, Y_{nt})$ denote as an $(n \times 1)$ vector of the time series variable, c denotes as an $(n \times 1)$ vector of intercepts, $\Pi_i = (i = 1, 2, \dots, p)$ denote as $(n \times n)$ coefficient matrices, ε_t denotes as an $(n \times 1)$ vector of unobservable zero mean error term. In this study, equation 1.5 is the VAR (1) model to be investigated.

$$\begin{aligned}
 \Delta return_t &= \alpha_0 + \alpha_1 \Delta return_{t-1} + \alpha_2 \Delta div_{t-1} + \alpha_3 \Delta tv_{t-1} + \alpha_4 \Delta gco_{t-1} + \alpha_5 \Delta inf_{t-1} + \alpha_6 \Delta int_{t-1} + \varepsilon_{1t} \\
 \Delta div_t &= \beta_0 + \beta_1 \Delta return_{t-1} + \beta_2 \Delta div_{t-1} + \beta_3 \Delta tv_{t-1} + \beta_4 \Delta gco_{t-1} + \beta_5 \Delta inf_{t-1} + \beta_6 \Delta int_{t-1} + \varepsilon_{2t} \\
 \Delta tv_t &= \gamma_0 + \gamma_1 \Delta return_{t-1} + \gamma_2 \Delta div_{t-1} + \gamma_3 \Delta tv_{t-1} + \gamma_4 \Delta gco_{t-1} + \gamma_5 \Delta inf_{t-1} + \gamma_6 \Delta int_{t-1} + \varepsilon_{3t} \\
 \Delta gco_t &= \delta_0 + \delta_1 \Delta return_{t-1} + \delta_2 \Delta div_{t-1} + \delta_3 \Delta tv_{t-1} + \delta_4 \Delta gco_{t-1} + \delta_5 \Delta inf_{t-1} + \delta_6 \Delta int_{t-1} + \varepsilon_{4t} \\
 \Delta inf_t &= \theta_0 + \theta_1 \Delta return_{t-1} + \theta_2 \Delta div_{t-1} + \theta_3 \Delta tv_{t-1} + \theta_4 \Delta gco_{t-1} + \theta_5 \Delta inf_{t-1} + \theta_6 \Delta int_{t-1} + \varepsilon_{5t} \\
 \Delta int_t &= \tau_0 + \tau_1 \Delta return_{t-1} + \tau_2 \Delta div_{t-1} + \tau_3 \Delta tv_{t-1} + \tau_4 \Delta gco_{t-1} + \tau_5 \Delta inf_{t-1} + \tau_6 \Delta int_{t-1} + \varepsilon_{6t}
 \end{aligned} \quad (1.5)$$

Where, the return is REIT stock return, div is dividend yield, tv is trading volume, gco is global crude oil price, inf is inflation rate and int is interest rate.

Granger Causality

According to Mukhtar and Rasheed (2010), Granger Causality test shows the causation relationship between variables used in a study. The results reveal on whether a variable can cause changes to other variables. In the VAR model, the direction of short run can be established then followed by bilateral causality and unidirectional causality as in the equation 1.6 for this study.

$$\begin{aligned}
 \Delta Y_t &= \sum_{j=1}^n b_j \Delta X_{t-j} + \sum_{j=1}^n c_j \Delta Y_{t-j} + u_{t-1} \\
 \Delta X_t &= \sum_{j=1}^n b_j^* \Delta Y_{t-j} + \sum_{j=1}^n c_j^* \Delta X_{t-j} + u_{t-1}^*
 \end{aligned} \quad (1.6)$$

It is important to note that granger causality signifies only a correlation between the previous values and the current value of one variable. The interpretation of the term “granger causality” implies that there exists a correlation between the previous values of another variable and the current value of one variable.

Variance Decomposition

Variance decomposition that is also known as forecast error variance decomposition was developed by Campbell (1991) with the purpose of forecasting or interpreting the movements of the stock market. According to Asmah (2013), variance decomposition is used to measure the proportion of forecast error variance in one variable explained by innovations and other variables. Besides, variance decomposition also enables researchers to determine the sensitivity of changes in the forecasting variables used in the study (Campbell, 1991).

DATA ANALYSIS

This study analyzes the short run relationship between the conventional and Islamic REIT stock return on selected microeconomic and macroeconomic variables from June 2009 to December 2019. In addition, the unit root test to reduce the chances of the model suffering econometric problems and the ordinary least squares method is not efficient and no longer valid to capture the effect of short-run analysis. Hence, the VAR model will be applied that is specifically designed to capture the liner independencies among multiple time series. Furthermore, the granger causality test determining whether one time series to confirm the directional effect between the study variables with supported by the variance decomposition to measure the amount of microeconomic and macroeconomic variables contributes to Malaysia REIT stock return. The table 2 is the ADF unit root test t-statistic for the study variables.

Table 2: Augmented Dickey-Fuller Unit Root Test (t-Statistic)

	At Level		First Difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
Dependent Variable:				
SR (Conventional)	-4.9585(0)***	-5.5588(0)***	-9.0595(0)***	-7.2378(2)***
SR (Islamic)	-6.0408(0)***	-6.1772(0)***	-5.5414(3)***	-5.3565(3)***
Independent Variables:				
DIV (Conventional)	-2.1058(0)	-3.39347(3)**	-5.8511(0)***	-5.7750(0)***
DIV (Islamic)	-2.3097(0)	-3.4045(0)*	-7.8867(0)***	-7.8713(0)***
Log (TV) (Conventional)	-4.0094(0)***	-4.1083(0)**	-9.3539(0)***	-9.2300(0)***
Log (TV) (Islamic)	-3.7972(0)***	-4.2745(0)***	-6.0232(2)***	-6.0460(2)***

Log (GCO)	-2.2888(0)	-2.5639(0)	-6.8231(1)***	-6.7494(1)***
INF	-4.2716(1)***	-5.9042(7)***	-5.1622(0)***	-5.0903(0)***
INT	-4.3305(0)***	-4.2873(0)***	-7.8331(0)***	-7.8097(0)***

*, **, *** denotes the rejection of null hypothesis at 10%, 5% and 1% significance levels respectively.
Number of parentheses is the number of lag length.

The unit root tests include time trend and without a linear time trend as in table 2; it indicated that all the study variables are stationary at first differencing, which the t-statistic of all variables first difference are more than 10%, 5% and 1% of critical value. This indicates that the null hypothesis must be rejected. Therefore, there is sufficient evidence to conclude that there is no unit root for all the variables of issue at first difference and the study variables are stationary. Furthermore, the result of unit root test shows that study data achieve stationary and it is reliable to use for the research to strengthen the accuracy.

Table 3: The Johansen Cointegration Test

	Trace Statistic	Critical Value	Max-Eigen Statistic	Critical Value
Conventional REIT Stock Return				
None	143.6674***	95.7537	55.0009***	40.0776
At most 1	88.6666***	69.8189	33.7869*	33.8769
At most 2	54.8797***	47.8561	23.1682	27.5843
At most 3	31.7115**	29.7971	19.4629*	21.1316
At most 4	12.2486	15.2927	9.7941	14.2646
At most 5	2.4544	3.8415	2.4544	3.8415
Islamic REIT Stock Return				
None	140.6681***	95.7537	50.6884**	40.0776
At most 1	89.9797***	69.8189	39.6774**	33.8769
At most 2	50.3023**	47.8561	24.9258	27.5843
At most 3	25.3765	29.7971	18.9131*	21.1316
At most 4	6.4634	15.4947	5.1516	14.2646
At most 5	1.3118	3.8415	1.3118	3.8415

*, **, *** denotes the rejection of null hypothesis at 10%, 5% and 1% significance. MacKinnon-Haug-Michelis (1999) p-values

Based on Table 3, it shows the result of Johansen cointegration test for Malaysia conventional REIT stock return. It indicated that a four cointegrating equations for conventional REIT stock return at 5% significance level in Trace test while there is one cointegrating equation for conventional REIT at 5% significance level in Max-eigenvalue test. On the Malaysia Islamic REIT stock return, it shows the result of three cointegrating equations at 5% significance level in Trace test while there are two cointegrating equation at 5% significance level in Max-eigenvalue test.

Table 4: The Vector Autoregression of Coefficients and P-value

Variables	Coefficient	P-value
Conventional REIT Stock Return		
S	0.1309	0.4565
DIV	2.6871	0.0054***
Log (TV)	0.0461	0.9775
Log (GCO)	-0.3343	0.8689
INF	-0.4184	0.3723
INT	-2.0864	0.3711
Islamic REIT Stock Return		
SR	-0.2141	0.1879
DIV	2.8067	0.0016***
Log (TV)	1.2532	0.6086
Log (GCO)	-0.9996	0.7971
INF	-1.3280	0.1535
INT	-8.5381	0.0462**

*, **, *** denotes the rejection of null hypothesis at 10%, 5% and 1% significance levels respectively.

In Table 4, the coefficient of Malaysia conventional and Islamic REIT stock return in VAR model, the result shows that there is a significant relationship between dividend yield and conventional REIT stock return as it less than 1% of significance level. On the other hand, the coefficient of dividend yield is 2.6871 which indicates a large impact towards to the changes of conventional REIT stock return. Therefore, the dividend yield can be considered as a strong predictive variable in forecasting the future conventional REIT stock return. The VAR model for conventional REIT shown in equation 1.7.

$$\Delta return_t = -8.5348 + 0.1309\Delta return_{t-1} + 2.6871\Delta div_{t-1} + 0.0461\Delta log(tv)_{t-1} - 0.3343\Delta log(gco)_{t-1} - 0.4184\Delta inf_{t-1} - 2.0864\Delta int_{t-1} \quad (1.7)$$

On the Malaysia Islamic REIT stock return, the empirical finding on Table 4 show two independent variables are significant to explain the Islamic REIT stock return, which are dividend yield and interest rate. The both independent variables shown a p-value of less than the significance level of 5% with coefficient of dividend yield and interest rate are 2.8067 and -8.5381 respectively. The dividend yield has brought a huge impact while the interest rate signified negative impact on the Islamic REIT stock return. Therefore, the dividend yield and interest rate are considered as significant predictive variables on forecasting future Islamic REIT stock return. The VAR model for Islamic REIT shown in equation 1.8.

$$\Delta return_t = 5.2496 - 0.2141\Delta return_{t-1} + 2.8067\Delta div_{t-1} + 1.2532\Delta log(tv)_{t-1} - 0.9996\Delta log(gco)_{t-1} - 1.3280\Delta inf_{t-1} - 8.5381\Delta int_{t-1} \quad (1.8)$$

Table 5: The Granger Causality Test for Malaysia Conventional REIT Stock Return

Dependent Variable	Variables					
	SR	DIV	Log (TV)	Log (GCO)	INF	INT
SR	-	0.00427 [0.9483]	5.8808** [0.0202]	5.2200** [0.0280]	0.3929 [0.5346]	0.00689 [0.9343]
DIV	13.9151*** [0.0006]	-	3.6789* [0.0626]	0.11409 [0.7374]	1.1252 [0.2955]	0.00341 [0.9528]
Log (TV)	2.7545 [0.1052]	3.8845* [0.0561]	-	0.09227 [0.7630]	13.2331*** [0.0008]	2.0936 [0.1561]
Log (GCO)	0.00051 [0.9821]	2.2170 [0.1448]	1.1873 [0.2827]	-	4.6112** [0.0382]	0.2203 [0.6415]
INF	1.5532 [0.2203]	2.5497 [0.1186]	4.8055*** [0.00346]	9.3832*** [0.0040]	-	3.0489* [0.0889]
INT	1.8055 [0.1870]	0.6526 [0.4242]	0.08109 [0.7774]	10.4811*** [0.0025]	3.4609* [0.0706]	-

*, **, *** denotes the rejection of null hypothesis at 10%, 5% and 1% significance levels respectively.

In Table 5 is the results of short-run granger causality test on all the variables of Malaysia conventional REIT stock return. The empirical result shows the trading volume and global crude oil price has granger cause unidirectional towards the changes of short-run conventional REIT stock return. However, dividend yield, inflation rate and interest rate does not have granger cause on short-run conventional REIT stock return. Furthermore, the result shown there is unidirectional granger cause of dividend yield towards short-run conventional REIT stock return at significant level of 1%. Next, there is a bidirectional granger cause of inflation rate on trading volume and global crude oil price in short run while trading volume does not granger cause on stock return, dividend yield and interest rate. Besides that, there is only one granger cause relation for interest rate which is from interest rate to global crude oil price in short run.

Table 6: The Granger Causality Test for Malaysia Islamic REIT Stock Return

Dependent Variable	Variables					
	SR	DIV	Log (TV)	Log (GCO)	INF	INT
SR	-	3.2663* [0.0786]	0.00421 [0.9486]	0.7547 [0.3904]	1.7300 [0.1963]	0.3586 [0.5529]
DIV	10.6287*** [0.0024]	-	0.6814 [0.4142]	4.7995** [0.0347]	1.6529 [0.2063]	1.5455 [0.2214]
Log (TV)	0.4426 [0.5094]	0.5267 [0.4725]	-	0.00097 [0.9753]	0.5234 [0.4738]	0.07946 [0.7796]
Log (GCO)	0.3004 [0.5868]	0.05133 [0.8220]	0.03951 [0.8435]	-	4.6112** [0.0382]	0.2203 [0.6415]
INF	6.6232** [0.0141]	2.4359 [0.1269]	0.2813 [0.5989]	9.3832*** [0.0040]	-	3.0489* [0.0889]
INT	3.7917* [0.0589]	0.1539 [0.6971]	0.00788 [0.9297]	10.4811*** [0.0025]	3.4609* [0.0706]	-

*, **, *** denotes the rejection of null hypothesis at 10%, 5% and 1% significance levels respectively.

The empirical finding on Table 6 shows the granger causality test between the study variables Malaysia Islamic REIT stock return. The result shows that dividend yield and Islamic REIT stock return has bidirectional short-run granger causality. The dividend yield has a greater short-run granger cause effect at 1% significant level as compared to Islamic REIT stock return at 10% significant level. On other hand, it found that, inflation and interest rate have unidirectional short-run granger causality towards the Islamic REIT stock return at 5% and 1% significant level. Furthermore, the empirical finding shows that there is no granger causality relation between Islamic REIT stock return with trading volume and global crude oil price. Moreover, in table 6, there is a bidirectional granger cause between global crude oil price and inflation rate in short run. On the global crude oil price, it does not granger cause on other variables. Finally, there is a granger causality relation for interest rate which is between interest rate and global crude oil price in short run with the direction from interest rate to global crude oil price.

Table 7: The Variance Decomposition

Period	SR (Con.)	DIV	Log (TV)	Log (GCO)	INF	INT
Conventional REIT Stock Return						
1	100.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	89.0822	6.5188	0.2091	1.2280	1.4443	1.5175
3	80.6513	11.6055	3.8467	1.1054	1.4370	1.3541
4	76.5761	14.3218	5.0175	1.3985	1.3674	1.3187
5	74.3490	15.3790	5.0826	2.3528	1.5072	1.3294
6	73.0140	15.7536	4.9882	3.3397	1.6029	1.3017
7	72.2449	15.8978	4.9359	3.9675	1.6068	1.3472
8	71.7526	15.9634	4.9089	4.2558	1.5962	1.5232
9	71.3314	16.0073	4.9251	4.3670	1.6022	1.7671
10	70.9390	16.0551	4.9846	4.4159	1.6110	1.9944
Islamic REIT Stock Return						
1	100.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	69.5872	17.1046	2.2542	1.9239	3.8880	5.2421
3	65.8820	19.7491	2.2312	2.2752	3.7817	6.0808
4	64.4087	21.1794	2.1683	2.2512	3.9127	6.0797
5	63.7859	21.3155	2.3249	2.2643	4.2833	6.0260
6	63.3831	21.2340	2.5355	2.3603	4.4294	6.0576
7	63.1317	21.1657	2.6950	2.4581	4.4624	6.0872
8	63.0154	21.1480	2.7758	2.5146	4.4599	6.0862
9	62.9571	21.1576	2.8096	2.5394	4.4558	6.0805
10	62.9163	21.1764	2.8226	2.5491	4.4529	6.0827

In Table 7, it shows the result of variance decomposition on Malaysia conventional and Islamic REIT stock return towards the microeconomic and macroeconomic variables. The conventional REIT stock return contributed around 89.08% of shock towards itself by its own innovation in second period. Moreover, the trading volume only influences the conventional REIT

stock return of 0.21% which is the least impact towards the stock return as compared to other independent variables in second period. The impact of trading volume on conventional REIT stock return turn out to be greater from third period until period of ten. Moreover, there is around 6.52% of conventional REIT stock return influenced by the dividend yield in period 2 and increasing an impact towards to then end of period 10 with the value of 16.06% as it consistence empirical finding in VAR model as important explanatory variable. Therefore, variance decomposition result shows that dividend yield has high impact towards the conventional REIT stock return throughout the study periods. On the other hand, global crude oil price has a small impact in the first four periods as compare to other variables and the impact contributed becomes greater throughout the periods.

On the empirical finding of variance decomposition for Malaysia Islamic REIT stock return as in Table 7, it contributed around 69.59% towards itself by its own innovation in second period. The dividend yield toward the impact on Islamic REIT stock return has a great impact throughout the study periods, which consistence with the finding in VAR model as significant variables with the highest figure of 21.32% in fifth period and the lowest figure of around 17.10% in second period. Moreover, the interest rate proven be one of explanatory variables in explaining the Islamic REIT stock return, in the variance decomposition it shown second innovation among the study variables. The finding on interest rate variance decomposition shown an increasing trend across the study period with the highest marked at period ten. Moreover, the impact of global crude oil price towards the stock return is the smallest as compare to other variables with around 1.92%, it starts to decrease from fifth period until eight period and slightly increase thereafter.

CONCLUSION AND DISCUSSION

The analysis of Johansen Cointegration Test show that there are four co-integrating equations for Malaysia conventional REIT stock return at 5% significance level in Trace test while there is one co-integrating equation at 5% significance level in Max-eigenvalue test. Besides, the Islamic REIT stock return results show that there are three co-integrating equations at 5% significance level in Trace test while there are two co-integrating equation at 5% significance level in Max-eigenvalue test. In the VAR coefficient and p-value in conventional and Islamic REIT stock return, the results show that dividend yield is the most important variables to explain the REIT stock return in Malaysia with significance level less than 5%. This empirical finding consistent with Hardin and Hill (2008) and Olanrele, Fateye and Adegunle (2017) stated that payment of dividend is important factors in associated with reduced the agency cost and indicating strong firm performance. Furthermore, Boudry (2011) supported that REIT dividend is considerable important variation factors as dividend payout indicated the excess and healthy cash flow the firm to meet the contractual liability. Moreover, McMillan (2019) found there is relative movement between stock return and the dividend yield, the stock price contains predictive power in accelerating toward the dividend declaration. In this study there is a strong with coefficient to predict the future stock return of 2.6871 and 2.8067 for conventional and Islamic REIT stock return respectively. Moreover, a positive significant short-run relationship documented between dividend yield and stock return of both REITs. On the other hand, the interest rate to be found negative significant short-run with Islamic REIT stock return as the p-value is less than 5% significance level and coefficient of negative 8.5381. This indicates the interest rate is a strong negative significant predictive variable in forecasting the future Islamic REIT stock return. The empirical finding consistence with Yi, Ma, Huang and Zhang (2019) found the variation of interest rate is contemporaneous and react rationally to explain the stock return. Furthermore, Yi, Ma, Huang and Zhang (2019) mentioned that this pattern is social norm and investors behavior in react to the changes in the interest rate and demand higher return from the stock market. Furthermore, Bissoon, Seetanah, Bhattu-Babajee, Gopy-Ramdhany and Seetah (2016) a high level of interest rate influences the stock price as the given the firm cashflow discounted to derived lower valuation and weak stock price performance. The justification for negatively positively found on Islamic REIT stock return as lower REIT valuation at higher interest rate. On the other hand, the interest rate and conventional REIT stock return found to be insignificant as the Malaysia REIT industry categories as matured REIT industry and its underlying property portfolio withstand any changes in the interest rate supported finding by Reddy and Wong (2017) found that interest rate insignificant to explain the REIT stock return.

On the granger causality finding, it shown that the conventional REIT stock return ganger caused on the trading volume and global crude oil price in short-run analysis. The empirical finding consistent with Hussain, Jamil, MaazJaved and Ahmed (2014) and Patra and Poshakwale (2006)

stated that REIT stock return has unidirectional granger cause as investors tend to invest more in the stock as comparably gained a higher return than other investments in same industry and this creates an increase in stock trading volume and directly influence on the stock return. Furthermore, the result of short-run unidirectional granger cause of global crude oil price towards the conventional REIT stock return is supported by Adaramola (2012), explained that a changes in the global oil price impact on the changes in stock return, the empirical finding show that general stock return comparably higher than the stock return in energy industry when oil prices increase. The argument by Adaramola (2012) is that country with petroleum output gained the benefit in the economy and contribute to overall economic development. Therefore, the same finding as in Malaysia conventional cases, as petroleum income part of nation income, it stimulates economy growth when oil price increase, translated into property investment and REIT stock return. To support on that, Nazlioglu, Gormus and Soytaş (2016) argued that there is gradual adjustment when oil prices increases due to long-run REIT portfolio diversification and REIT stock volatility spillovers may be relevant in short-run.

In addition, the conventional and Islamic REIT stock return found to be short-run granger caused on dividend yield, it documented a bidirectional granger caused on Islamic REIT stock return but conventional REIT stock return on unidirectional. Furthermore, dividend yield found to be most important variables in explaining the Malaysia REIT stock return as it consistent with Khurshid, Raza and Azeem (2013) and McMillan (2019) stated dividend yield has a strong predictive power to predict the stock return and will affect the changes in the stock price in the market. Moreover, the explanation of the unidirectional granger causal link from the dividend yield to global crude oil price in short run which is found in Islamic REIT stock return. Instances, the stock return is affected by the dividend yield and the performance of an energy industry related company influenced by the capital generated from the investment. Furthermore, this study also documented there is a unidirectional short run granger causality relationship between global crude oil price and interest rate in Malaysia REIT stock return, with the direction from interest rate to global crude oil price, as the pricing standard for the financial assets and the adjustment made on interest rate may influence the real estate and stock market as well as the economic circumstances (He & Li, 2009). Instances, the interest rate increases, it will depress the stock price of the company which consuming or trading crude oil and his will influence its capital flows. Additionally, the results of Islamic REIT stock return and inflation rate has granger cause relation on unidirectional short-run and consistent with Ogunmuyiwa and Segun (2015) and Muradoglu and Sivaprasad (2000). In the event an inflation rises, a lower purchasing power that limited an investor decision to invest in the stock market and influence the Islamic REIT stock prices.

Apart from the Granger Causality to determine the short-run analysis, variance decomposition to measure the sensitivity of changes in forecasting variables in this study. Built on the result of variance decomposition, the conventional and Islamic REIT stock return of has contributed about 89.08% and 69.59% of shocks respectively towards itself by its own innovation in the second period. Simultaneously, the trading volume of conventional REIT contributes the least impact which is about 0.21%, however, the impact of trading volume on conventional REIT stock return becomes larger overtime and this indicates that the impact of trading volume becomes more distinct. This consistent with Tehranchian, Behraves and Hadinia (2014) and Tripathy (2011) that trading volume can be considered as a significant variable to forecast the future stock return. On the Islamic REIT stock return, the global crude oil price contributes the least impact which is about 1.92% in second period and overtime it remained weak throughout testing periods as compare to other independent variables. This indicates that there is a weak relationship between crude oil price toward the response to the Islamic REIT stock return which consistent with empirical finding by Maghyreh (2004). Furthermore, the dividend yield of Malaysia REIT market has contributed the most impact on the stock return with about 6.52% and 17.10% for conventional and Islamic REIT respectively in second period These results are consistent with Kheradyyar, Ibrahim and Mat Nor (2011) and Hollifield, Koop and Li (2003) which stated that dividend yield is a strong and significant variables to predict the future stock return and explaining the variance of stock return. Moreover, the impact of dividend yield becomes greater overtime as it reached tenth period same as documented by Lewellen (2004) and Al-Mwalla, Al-Omari and Ayad (2010). On the other hand, the impact of dividend yield, inflation rate and interest rate contribute on Islamic REIT stock return are comparably greater than the conventional REIT stock return as new Islamic innovation products established 15 years in Malaysia. While the impact of trading volume and global crude oil price on the conventional REIT stock return is greater than the Islamic REIT stock return as the properties underlying and the features of both REITs especially the Shariah principle that existed in Islamic REIT.

In a nutshell, a multivariate analysis such as VAR model, granger causality and variance decomposition used in derived the empirical evidence on the impact of microeconomic and macroeconomic variables concerning the conventional and Islamic REIT stock return. The dividend yield is the most vital explanatory variable in forecasting the conventional and Islamic REIT stock return behavior in Malaysia REIT market. followed by the interest rate, trading volume and global oil price. The external and internal force among Malaysian REIT sectors in should be given necessary attention by researchers in ensuring the newly develop Islamic REIT are competitive and stability as the conventional REIT. Therefore, the objectives of this study and its findings are not only important to academicians and investors, but also to policy makers. It is the hope of the futures researcher will deepen the knowledge of investors from perspective of qualitative point of view and provides a discussion of Malaysia REIT structure roadmap.

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BAFE055:
**LONG-RUN DYNAMIC OF MALAYSIA ISLAMIC BANK FINANCING
AND ECONOMIC GROWTH: A CONCEPTUAL FRAMEWORK**

Choo, William Keng-Soon^a, Chan, Pui-Yee^b

^{ab}Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Kampar, Perak, Malaysia

^aEmail: chooks@utar.edu.my

^bEmail: pychan@utar.edu.my

Abstract

Islamic bank's financing is a financing activity that refers to the Islamic Law (Shariah) and its sources are the Quran and Sunnah. It emphasizes the profit and loss sharing and prohibits the interest as well as the activities that are related to the risks, uncertainty, and speculation. Islamic finance also prohibits the harmful activities such as investment in businesses dealing with alcohol, drug, and gambling. In addition, Islamic bank's financing always a question that do Islamic bank's financing promote the economic growth in Malaysia. Therefore, the main purpose of this study is to develop a solid conceptual framework to determine the cointegration and long-run relationship between the Islamic banks' financing and economic growth in Malaysia. The measurement of Malaysia economic growth consists of gross domestic product, gross fixed capital formation, foreign direct investment, international trade and inflation. The samples size consist of ten Malaysia full pledge local Islamic banks and the quarterly data are collected from Bank Negara Malaysia and IMF's International Financial Statistics from period 2011 to 2019. In addition, the dynamic relationship between the economic growth are investigated by Johansen cointegration test and vector error correction model. This study can provide solid conceptual framework foundation to the parties like policymaker, government and investors in understanding the connection between the Islamic banks financing and economic growth.

Keywords: Malaysia Islamic Banks Financing, Economic Growth and Long-run Relationship

INTRODUCTION

Islamic banking operation accordance to the shariah principles and guided by Islamic Muamalat. The shariah principles defined as an Islamic law that refers to the profit and loss sharing basis as well as the inhibition of receiving and counting of interests. The utilization of money for the reasons for earning money is explicitly illegal hence the wealth must be created from the asset-based investment and real exchange ("Introduction to Islamic finance", n. d.). On the other hand, Islamic Muamalat refer to set of ruling governing commercial transaction and is part of Islamic jurisprudent. The origin of Islam Muamalat in the seventh century was the beginning with Prophet Muhammad worked as an agent for his first wife's business. Islamic banking standards were determined by the exchange and business action in the Muslim world in the middle ages. Through the Mediterranean, Spain and other countries were spreading their banking standards. Hence, the basis of the western baking standards as well as principles were apparently based on these principles and standards. In the year of 1963, the Islamic banking in Malaysia started with an investment funds body was made to set aside money for future pilgrims of Haj also known Haj Pilgrims Fund or Tabung Haji. The aim for establishing this institution is to help the Muslims to save to perform Haji. However, the development of Islamic banking was established in 1980 which same as the Islamic banking people are aware today. Islamic Banking Act 1983 was officially set up and guide the Bank Islam Malaysia Bhd (Abdullah, 2019). This act diagrams the guidelines which must adjust to the Islamic banks that desire to work in Malaysia and entrusting the powers of Central Bank in controlling and administrating Islamic banks in Malaysia. A policy that is known as Interest free banking scheme was introduced to the society in 1993. The banking scheme is allowing the banking institutions as well as finance companies to provide the Islamic banking services and products. Hence, Islamic banking are preferred by the Muslim and non-Muslims and encouraging them to invest this sector. Total amount of 20 financial institutions began to provide Islamic banking services in 1993 (Nakagawa, 2009). In the

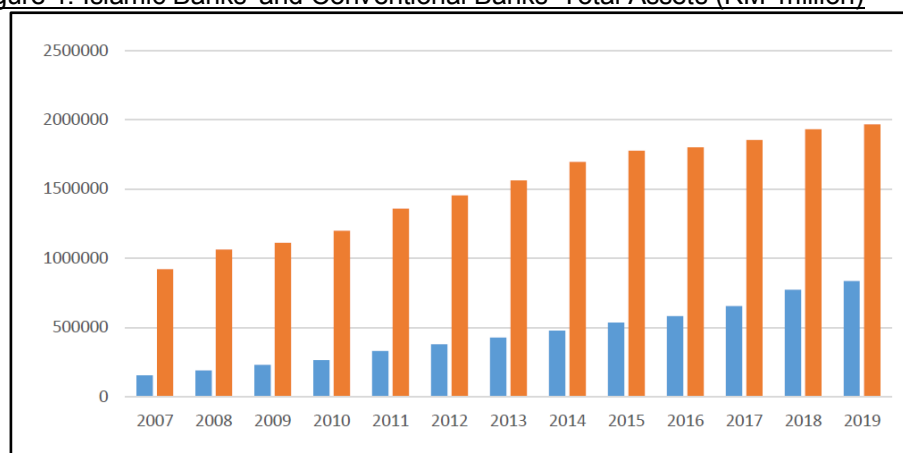
year of 1994, for the purpose of allowing Islamic banking to operate as smooth as completely banking system, Islamic Interbank Money was established.

The Islamic finance represents the financial market and part of banking sector with its enormous financial surpluses as a supplier and demander as consumers of financial and banking services. According to Zin and Kadir (2011), Islamic finance is a financing activity that refer to the Islamic law and its sources are the Quran and the Sunnah. It emphasizes the profit and loss sharing according to the Shariah that prohibits the interest as well as the activities that are related to the risks, uncertainty, and speculation. Nonetheless, the harmful activities such as investment in businesses dealing in alcohol, drug and gambling are also prohibited in Islamic finance. The savings account in Islamic banking industry has been introduced as the Islamic investment packages such as Murabahah, Musharaka, and Mudharabah concept. The components of Islamic banking total financing included hire purchase, leasing, factoring, personal financing, housing financing, trust receipts, etc. Nevertheless, Islamic finance promote economic development by utilizing the concept of profit and loss sharing arrangements which empowers the lending of funds to productive companies or firms that can increase output and create jobs and equitable distribution of wealth (Alawode, 2015). Moreover, Aziz (2013) stated a redistributive instrument, such as mandatory aid giving, endowment and charity work together with the risk-sharing financing tools as an effective tool to reduce poverty and develop a more balanced economic growth

Furthermore, Islamic Finance involves redistributing the wealth and opportunity according to Islamic rules in ensuring economic justice ("Islamic finance: promoting real economic development", 2015). The people in the society are able to achieve justice before production which indicates that they have the same opportunities in the utilization of resources by transferring the collectivity's right of legislative mandate from those who are more able to use the resources. Moreover, Islamic finance is to foster economic growth by encouraging regional and international trade by encouraging investment flows, therefore, intermediating huge cross border monetary flows (Aziz, 2013). According to Aziz (2013), recently, London and Hong Kong international financial centres have been expanding their network with the Middle East and Asian regions, a significant development centres in the worldwide economy. The expanded global dimension of the financial market specifically has encouraged the flows of funds across borders from regions with excess funds to regions with investment opportunities.

Over the last three decades, the accelerated growth of Islamic banking antonyms potential to become the alternative to conventional banking system in both Muslim and non-Muslim countries (El-Ghattis, 2011). In Figure 1, the growth rate in total bank's assets of Islamic banks and conventional banks have grew significantly from year 2007 to 2019. The Islamic banks' total assets rise dramatically from 2007 to 2019 by 446 percent while conventional banks' total assets increased by 114 percent. The increment of total assets in Islamic banks has more substantially changes compared to conventional banks, therefore, there are many policy makers, investors, as well as the government being attracted by the robust growth rate and the resiliency of Islamic finance during the financial crisis. In addition, according to Abduh and Omar (2012), bankers has positive outlooks towards the performance of Islamic banking and forecast it will control over 50 percent of savings in the Islamic countries within the next decade. Furthermore, most of empirical review investigate the differentiation of the impacts of conventional banking and Islamic banking on economic performance.

Figure 1: Islamic Banks' and Conventional Banks' Total Assets (RM' million)



Source: Monthly Highlights & Statistics - Bank Negara Malaysia.

However, as the researchers study the topic about conventional banking and the period used to carry out the study of Islamic banking in Malaysia is too short to make a conclusion for the findings, most of the research were unable to illustrate the overall impact of Islamic Banks Financing on the economy of Malaysia. Moreover, there are only a few empirical studies examining the impacts of Islamic banking activity development in Malaysia. For instance, most of the researchers focus on the studies about the banking products which are followed on the practices of Islamic principles. The research paper done by Ahmad, Palil, Abu Bakar and Dolah (2015) studied the knowledge and principles of Islamic banking towards the Islamic banking products among the Muslim entrepreneurs. Besides that, there are also some researchers examining the monetary and financial system for an interest-free economy which follow the Islamic principles in the past. One of the researches is carried out by Al-Jarhi (1980) as well. Apart from that, other studies about the awareness or acceptance of Islamic products among the consumers in Malaysia also have been done by many researchers. According to Ahmad Razimi, Romle and Jumahat (2017) and Latip, Yahya and Junaina (2017), the authors aimed to study about the consumers' acceptance towards Islamic banking products and services as well as the factors affecting the customers' acceptance both in the case of Malaysia.

Nevertheless, many conventional banks across the globe underperformed compared to Islamic banks during the financial crisis in 2008. The author demonstrated that due to Islamic banks are highly regulated operational according to the Shariah principles, therefore, they were largely insulated from the crisis. It is because the Shariah principles prohibited *riba* (interest), *gharar* (uncertainty) and *maysir* (gambling) which can greatly impact conventional banks' performance and prompted the crisis (Tabash & Dhankar, 2014a). In this respect, in order to study the contribution to Malaysia's economy, it is more critical to reflect on the Islamic Banks Financing. Therefore, this study is to promote Islamic finance literacy to the public and reduce the gap in literature by determining whether the Islamic Banks Financing and economic growth are cointegrated in the long-run and short-run in Malaysia.

LITERATURE REVIEW

Islamic Banks Financing

According to Zin and Kadir (2011), banks financing activity operated by following the rules of Islamic Law that are different from conventional banks such as all banking activities must not involve any element of interest as it is interest free. According to Shariah principle, it emphasizes the profit and loss sharing and the elements of uncertainty and gambling are not allowable to be involved in banking operations. There are many type of banks financing such as hire purchase (leasing), trust receipt, revolving credit, overdraft and long term loan. According to "Hire-Purchase (Leasing) in Islamic Finance" (n. d.), the hire purchase (leasing) is provided the option to the hirer as the owner of an item at the end of the tenure, with the conditions that have to be fulfil by the hirer in the agreement. The borrower rent the capital goods by requesting from the bank and it is charged from the delivery date taken by the lesser or when the lease is determined. Besides, trust receipt is used to finance purchase or import as a financing product, which is governed by the *Murabahah* principle. This

principle refers to any acquisition cost and markup are disclosed to the buyer. The bank will let the customer as an agent to get the required asset in the Murabahah transactions ("RHB Islamic Bank Berhad Trust Receipt-i", 2015). Moreover, working capital requirements (overhead expenses) are financed by a facility, which is provided by a bank, known as the revolving credit. In addition, the Islamic overdraft is also known as the cash line, which is the account of the customer authorised up to its approval limit with the financing granted under the current account ("Affin Islamic", 2016).

Banks financing plays an important role that contributes to economic growth due to its connected to physical assets and the real economy. Normally, Islamic banks provide financial support to those productive firms that can increase output and create jobs due to the utilization of profit and loss arrangements (Alawode, 2015). Nevertheless, banks financing can promote an equitable distribution of wealth because the redistributive instruments such as mandatory aid giving (zakat), endowment (waqf) and charity (sadaqah) help to reduce poverty and develop a balanced economic growth (Aziz, 2013). Furthermore, redistribution of the wealth encourages economic growth to ensure all members of society could get equal opportunities in the utilization of resources (Zamir, Rostom & Fu, 2012). Furthermore, banks financing leads to economic growth by encouraging regional and international trade and investment flows (Aziz, 2013). This is because the expanded global dimension of the sukuk market facilitates the flows of funds across border from regions with excess funds to regions with investment opportunities. Instances, Malaysia as one of the Asian countries that has utilized the sukuk market to raise funds to finance the infrastructure in many fields such as healthcare, transportation, education and telecommunication that accelerates economic growth (Kwakwa, 2017). According to Kwakwa (2017), Malaysia has launched the "green sukuk" initiative recently in order to achieve sustainable goals and close the gap of both infrastructure and green finance by transferring the sukuk to do some environment-friendly investments.

Gross Domestic Products and Islamic Banks Financing

Gross Domestic Products (GDP) is the key indicator of national income level and benchmarks economy health. According to Farahani and Sadr (2012), found that Islamic banks financing and GDP has significant relationship in the long-run and bidirectional relationship in the case of Iran and Indonesia. Moreover, the authors claimed that Islamic Banks Financing acts as a vital role in improving the economy positively contributed to the real sector of economy in Iran and Indonesia. Hence, the results showed the expansion of Islamic banking may boost the economic upsurge in the long-run. Furthermore, according to Abduh and Chowdhury (2012), the examine the significance relationship between Islamic bank financing and economic growth in Bangladesh, the empirical findings shown GDP have a long-run relationship and bidirectional causality with Islamic bank financing. Moreover, the study suggests the growth of Islamic banking has significant influence on the real sector of economy in Bangladesh and the positive evolution of Islamic banking help to support the economic growth, hence it improve the income level of a country.

In the same vein, according to Tabash and Dhankar (2013b), the researchers determined the linkage between the Islamic bank financing and economic growth in Qatar and supported the view a long-run and bi-directional relationship exists between Islamic bank financing and GDP. The authors claimed that the economy in Qatar facilitates the expansion and improvement of Islamic banking which stimulate the real sector of economy in the long-run. As a result, it helps to reduce poverty in a country, therefore the social equality achieved. Moreover, according to Gudarzi and Dastan (2013), the authors seek to analyze the significance impact of Islamic banks financing on economic growth in Malaysia, Indonesia, Bahrain, UAE, Saudi Arabia, Egypt, Kuwait, Qatar and Yemen. The empirical finding shown Islamic banks financing has significant long-run relationship and bidirectional causality with GDP in the studies countries. Furthermore, the authors argued that the bidirectional causality in the long-run is more significant than the causality in the short term between Islamic banks financing and GDP because of the cause-and-effect is greater in the long-run.

On the other hand, according to Ibrahim (2012), the empirical finding found that there was a contradictory statement which Islamic Banks financing and GDP are cointegrated in the long-run but only unidirectional causality. In other words, Islamic bank financing affects GDP in one-way and authors concluded that the government in Nigeria issued sovereign Sukuk to finance the deficit budget in 2016 has greatly stimulated economic growth. The improvement of economic growth will attract investors from Gulf Countries and other Islamic markets players to contribute capital which enhance the economic performance. In addition, according to Abduh and Omar (2012), the authors

analyzed the significance of Islamic banks financing and GDP in Indonesia demonstrated Islamic banks financing and GDP has a long-run relationship and supported the theory of supply-leading between variables. The Islamic bank financing has one-way causality to GDP and the growth of Indonesian economy was contributed by domestic financing by Islamic banking. Therefore, the transmission of funds from surplus to deficit households has facilitated due to Islamic banking acts as an effective financial intermediary.

Gross Fixed Capital Formation and Islamic Banks Financing

The Gross Fixed Capital Formation (GFCF) is defined as the producers' investment in fixed capital assets, minus the depreciation in the domestic economy during a certain accounting period. It includes the cost of the improvements on land, plants, machinery as well as the purchases of equipment. It is one of the proxies of economic growth used to determine the relationship between Islamic bank financing and economic growth (Tabash & Dhankar, 2014a). According to Tabash and Dhankar (2014a), study the relationship between Islamic bank financing and GFCF in the United Arab Emirates shows cointegrated unidirectional causality in the long-run. It indicates that Islamic bank financing will granger cause GFCF in a unique direction but not in the opposite direction. Furthermore, the empirical findings also supported by Tabash and Dhankar (2014b), found that Islamic bank financing and GFCF have unidirectional causality and long-term cointegrating relationship in Qatar and the movement of both the variables will be the same in the long-run. Moreover, a study by Abduh and Omar (2012) examine the relationship between Islamic banks financing and GFCF in the case of Indonesia show a significant relationship in the long-run. However, the result of the granger causality test proved that there is no causality relationship between Islamic banks financing and GFCF.

On the other hand, there are also several empirical findings are contradicted between Islamic banks financing and GFCF. According to Echchabi and Azouzi (2015), the researchers conducted a research in the United Arab Emirates discovered that Islamic banks financing and GFCF are not cointegrated in the short-run and long-run. Moreover, the granger causality test also proves that no granger causality relationship between the variables and hence, there is no causality relationship among them. In support to that, Wahab, Mufti, Murad and Arif-ul-Haq (2016) carried out a study in Pakistan and Malaysia showing that Islamic banks financing and GFCF do not have cointegration and significant association among the study variables. Therefore, the Islamic banks financing and GFCF do not have a causal link and will not affect each other in the economy. On the other hand, the study proved that in the case of Malaysia, the Islamic banks financing and GFCF have stable relationships and significantly in the long-run and short-run respectively.

Foreign Direct Investment and Islamic Banks Financing

The significance between Foreign Direct Investment (FDI) is used to measured foreign investment in a country and it contributed to economic growth. According to Tabash and Dhankar (2014a), study the connection between Islamic bank financing and FDI in the United Arab Emirates founds a cointegration relationship and also proved that Islamic banks financing contributes to the growth of foreign investment in the long-run. Moreover, the findings suggested that the Islamic banks financing and FDI are existing with bidirectional causality relationship, proved that Islamic banks financing moves together with the economic growth in the long-run. In addition, the authors claimed that the findings proved that FDI strengthens Banks financing and Islamic finance is an appropriate and charming surrounding the attraction foreign investments. Moreover, according to Tabash and Anagreh (2017), examine the cointegration relationship between Islamic banks financing and FDI, it shown a long-run relationship and granger causality relationship in UAE. On top of that, the research stated that Islamic banks financing and FDI have stable cointegration relationships in the long-run and granger causality test shown an exist bi-directional causality. The justification the United Arab Emirates is having a sound banking system hence provides a good environment for FDI and the sector of Islamic finance would promote economic growth.

On the other hand, Tabash and Dhankar (2014b) examined the cointegration and granger causality connections economic performance with various factors in Qatar, the empirical findings shown a Islamic banks financing and FDI consists of the stable and long-run cointegration relationship. In long-run, Islamic banks financing will move together with economic development by the investment of foreign investors. However, the authors found contradicting results in the granger causality test which showed that FDI and Islamic banks financing contain unidirectional granger

causality affects FDI. The study claimed that, Islamic bank financing creates an ideal environment for FDI. In addition, according to Tabash and Dhankar (2015), the researchers determine the relationship of Islamic bank financing with economic growth in the Kingdom of Saudi Arabia. The Johansen cointegration test showed that the cointegration relationship exists between FDI and Islamic banks financing and continuing association among the variables. This indicates that Islamic bank financing and economic development work together in long-run. Furthermore, the findings showed that there is unidirectional causality relationship from Islamic banks financing to FDI, an appropriate and attractive environment for absorbing FDI and enhances economic growth. This study also claimed that if the Islamic financial institution promote economic growth and important for the long term association of economics since it brings welfare to the economy and reduces the poverty of the society. Furthermore, Lawal and Iman (2016) studied the relationship of Islamic banks financing and economy performance Nigeria, the empirical findings showed that FDI are cointegrated in long-run towards the Islamic banks financing. Besides, the authors found consistent results that Islamic banks financing and FDI exist a long-run and do not have a granger causality relationship.

International Trade and Islamic Banks Financing

International trade is important to drive economic indicator in driving the health of a country. According to Nursyamsiah (2017), the author examined the relationship between Islamic banks financing and macroeconomic variables in Indonesia. The empirical findings shown Islamic banks financing and international trade have a long-run relationship. Moreover, the authors utilized the granger causality test, found a unidirectional relationship exists from international trade to Islamic banks financing and contribute productive activity to the real economy. On the other hand, there are also several researches showing the results which are contradicted with the results above. According to Tajgardo, Behname and Noormohamadi (2013), study short-run and long-run effect on Islamic banking and economic growth in Asia such as Bahrain, Iran, Malaysia, UAE, Iraq, Pakistan, Kuwait, Oman, Saudi Arabia, Qatar, Turkey and Yemen. The findings revealed that Islamic banks financing and international trade have no long-run relationship and unidirectional causality effect. Moreover, Wahab, Mufti, Murad and Arif-ul-Haq (2016) studied the cointegration and causality between Islamic banks financing and also development of Pakistan and Malaysia economy. In the case of Pakistan, the empirical results showed that there is no significant association and co-integration between Islamic banks financing and international trade. The reasons are less participation in Shariah based modes of financing and investment. Shariah based and Shariah compliance are the two main modes of financing and investment in the banks financing. Shariah based modes of financing can contribute more to real economic development as compared to Sharia compliance. However, it is difficult for Islamic banking institutions to involved because it required to demonstrate the viability of the project before investing. Therefore, most of Islamic banking institutions prefer in Shariah compliance modes of financing. In the case of Malaysia, both short-run and long-run relationships are significant in Islamic banks financing and international trade and unidirectional in the granger causality test.

Furthermore, Echchabi and Azouzi (2015) studied the significant connection between Islamic banking development and economic growth in the United Arab Emirates. The empirical findings shown Islamic banks financing and international trade do not have relationships in short-run and long-run. However, the granger causality test indicates that Islamic banks financing does not cause-and-effect international trade. On the other hand, Miniaoui and Gohou (2011), found a contraction finding between Islamic banks financing and international trade because a larger number of financial institutions and the percentage of Islamic financial institutions in the global banking sector of UAE is relatively small, which is 20 percent (Rivzi, 2012). In the same vein, Muhammad and Dauda (2018) investigated the linkage between Islamic finance development and economic growth in Nigeria, showed that Islamic banks financing does not affect international trade and similar results with Echchabi and Azouzi (2015) on the granger cause effect.

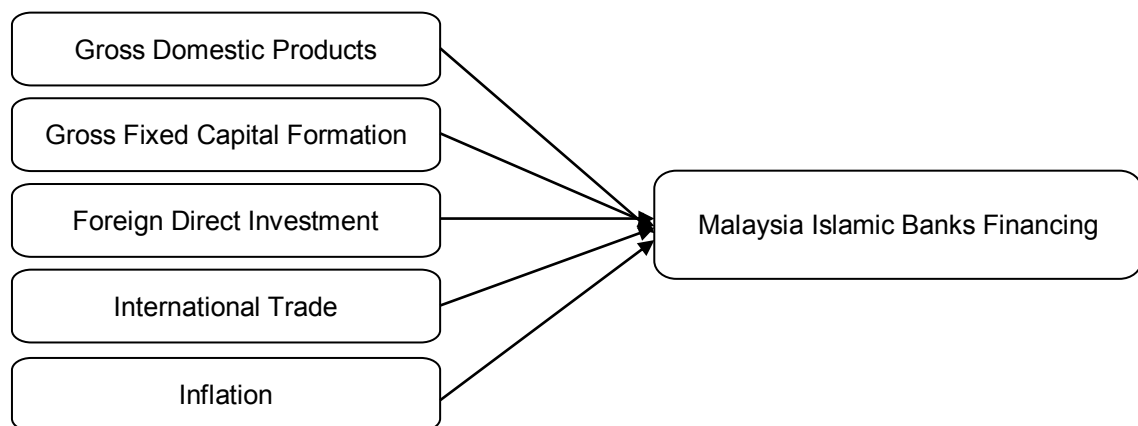
Inflation and Banks Financing

Inflation defined as the increasing rate of the general price level of goods and services in a country. According to Nursyamsiah (2017), the fluctuation of inflation is significantly influencing long-run effect on Islamic banks financing in Indonesia. On top of that, the authors found inflation has the bidirectional causality with Islamic banks financing. Moreover, the authors test on impulse function to strengthen the findings, inflation is responded negatively by the Islamic banks financing and is affected by the diversity using the variance decomposition. Furthermore, Setyowati (2019) also

showed a similar result as in the study of Nursyamsiah (2017), Islamic banks financing and inflation are cointegrated in long-run relationship in Indonesia. The inflation has short term shock in the formation of a stable relationship towards the Islamic banks financing and the significant negative long-run effect. It also showed that Islamic banks financing and inflation have bidirectional causality relationships. In justification, the author mentioned that almost 70 percent of Islamic banks financing structured with Murabahah concept financing on purchasing assets. In which the changes in inflation affect the consumer demand on goods and services with Islamic banks. Moreover, Islamic banks financing has a negative response toward the inflation, the high inflation forces the Islamic banks lowering its financing cost as it caused lesser consumer to have the ability to purchase items (Setyowati, 2019).

In addition, Zahid and Basit (2018) found that inflation is significantly reacted toward Islamic banks financing in Pakistan on the cointegrating test. It indicated that the declining growth of Islamic banks financing is caused by a higher inflation rate. This situation happens as the increasing price level of commodities causes a lower purchasing power among the consumers. Hence, the consumers tend to reduce the investment, savings and business activities that are promoted by Islamic banks based on the profit and loss basis. Moreover, when the salaries are not adjusted for inflation, it causes the distribution of income to become unequal, especially between lenders and borrowers. This study also found a negative and statistically significant by inflation to achieve the long-run equilibrium. Furthermore, Bm and Uddin (2016) concluded that inflation and Islamic banks financing are significantly related to each other in the long-run relationship as empirical finding with cointegrating test. In support to the result, authors test on autoregressive distributed lag bound test, inflation has a unidirectional relationship with Islamic banks financing. However, there is contradicting by Sumarti, Hayati, Cahyani and Wahyudi (2017) an insignificant relationship between Islamic banks financing and inflation in Indonesia. This indicated that Islamic banks financing and inflation has no significant relationships in the long-run. Moreover, inflation has a unidirectional causality with Islamic bank financing.

Figure 1: Conceptual Framework



RESEARCH METHODOLOGY

Research Design

This study employed secondary data to capture the dependent and independent information and it is collected from various types of resources such as Bloomberg terminal, bank annual report, Bank Negara Malaysia and IMF's International Financial Statistics. According to Rouse (2017), secondary data is the data that has been collected from studies, surveys and experiments and accessed by the researchers. The secondary data is used to increase the sample size of research and it is more efficient and faster to do the research since it is an existing resource. Moreover, the quantitative data is used to measure the time series data being collected in terms of numbers and statistics. The quarterly data from first quarter 2011 until fourth quarter 2019 are collected on quarterly basis for ten Malaysia local Islamic banks to derive a 360 observation data. A quantitative data is an approach of quantifying problem by using numerical data and several statistics, which provides a

more suitable data for data analysis (Wyse, 2011). In the Table 1 it show the data quantification and measurement for this study.

Table 1: Data Collection for independent and dependent variables

Variables	Measurement	Unit of Measurement	Sources of data
Islamic Banks Financing	Overdraft + Hire purchase + Leasing + Block discounting + Bridging financing + Syndicated financing + Factoring + Personal financing + Housing financing + Term financing + Bill Financing + Trust receipts + Revolving credit + Foreign currency financing	Volume, Ringgit	Respective bank annual report
Gross Domestic Product	Consumption + Investment + Government Purchases + Net Exports	Volume, Ringgit	IMF's International Finance Statistics
Gross Fixed Capital Formation	Malaysia investment – Malaysia disposal in fixed assets	Volume, Ringgit	IMF's International Finance Statistics
Foreign Direct Investment	Malaysia inflows of FDI – Malaysia outflows of FDI	Volume, Ringgit	Monthly Statistical Bulletin, Bank Negara Malaysia
International Trade	Malaysia exports + Malaysia imports	Volume, Ringgit	Monthly Statistical Bulletin, Bank Negara Malaysia
Inflation	Cost of market basket in a given year / Cost of market basket at base X 100	Percentages changes	IMF's International Financial Statistics

Data Analysis

Unit Root Test

The unit root test is used to determine the order of each of the variable's integration. The series of data are collected to check the stationarity to prevent the result to be invalid. The mean, variance, and covariance of series are constant across different periods which indicate that the variables are in stationary trend (Gujarati & Porter, 2009). Hence, the stationary variables will provide more accurate results as compared to non-stationary variables. Most economists will argue that a macroeconomic time series contains unit root and its fluctuation over time might suggest a non-stationary trend. It is equally important to have a stationary time series to avoid biased results which is called spurious regression (Ling, Nor, Saud & Ahmad, 2013). Hence, the Augmented Dickey-Fuller (ADF) test is used to analyze the stationarity of the variables. Besides, Phillips-Perron (PP) test will also be applied to strengthen the accuracy of result.

Johansen Cointegration Test

According to Yoon, Min & Jei (2019), Johansen had developed the Johansen cointegration test in 1988. Number of cointegrated variables in the model is identified by using this test. This test can be called as likelihood-ratio tests. Maximum eigenvalue test and trace test are under the Johansen cointegration test. The importance of the test is to examine the cointegration relationship between the variables in the model (Gomez-Biscarri and Hualde, 2015). According to Dwyer (2015), the test statistics for both maximum eigenvalue test in equation 1 and trace test in equation 2 can be expressed as:

$$LR(r_0, r_0 + 1) = -T \ln (1 - \lambda r_0 + 1) \quad (1)$$

$$LR(r_0, n) = -T \sum_{i=r_0+1}^n \ln (1 - \lambda_i) \quad (2)$$

Where;

r = number of cointegration vectors under the null hypothesis

T = number of sample size
 λ = eigenvalue

Vector Error Correction Model (VECM)

According to Zou (2018), trace error correction model was developed by Engle and Granger by combining cointegration and error correction models. It suggested that when there is a cointegration relationship between variables, VECM can be further derived to determine whether there is a short run and long-run relationship. On the other hand, the modification of VECM is needed to allow variables stationary among the series if the time series are not stationary. The VECM is used when the variables are stationary in their differences. Besides, according to Nursyamsiah (2017), usually time series data tends to have stationarity at the first difference level. Moreover, VECM can indicate the changes for short-term behavior of a variable over the long term behavior due to the permanent change. The VECM model specifications can be expressed in the equation 3.

$$\Delta y_t = \mu_{0x} + \mu_{1x}t + \Pi_x y_{t-1} + \sum_{i=1}^{k-1} \Gamma_{ix} \Delta y_{t-1} + \varepsilon_t \quad (3)$$

CONCLUSION

In conclusion, this study aims to deliver a solid conceptual framework in understanding the long-run dynamic relationship of Malaysia Islamic Banks Financing and the economic growth. Furthermore, with the solid foundation of conceptual framework it eases the policy makers in obtaining more information of the impact on the changes of economic growth indicators and implement monetary policies in response to any Islamic banks financing composition changes. Moreover, the investors make a better decision in understand the long-run effect in investing on Islamic stock given the changes of the economic growth indicators. Nevertheless, this study provides a discussion of Islamic banks composition in financing to set a basis for Malaysia Islamic banking industry and conceptual model in Malaysia. This review lays a theoretical framework for establishing the study relevance and foundation basis and contribution to the Malaysia Islamic finance literature review.

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BAFE060:
**SUBJECTIVE FINANCIAL WELL-BEING AND PERSONAL FACTORS
OF EMERGING ADULTS IN MALAYSIA: A CONCEPTUAL
FRAMEWORK**

Liew, Feng-Mei^{a*}, Cheah, Siew-Pong^b, Tan, Chai-Thing^c, Foo, Chuan-Chew^d,

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: liewfm@utar.edu.my*

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: cheahsp@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: tanct@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: foocc@utar.edu.my

Abstract

Managing personal finance and making sound financial decisions are the paths for one to fulfill his current and future financial obligations and to achieve financial well-being. The idea of financial well-being is promoted by the Malaysian government, yet the desired level is not reachable. In the past decade, household debt to GDP ratio, and the number of bankruptcy was increasing in Malaysia because Malaysians tend to overspend and have insufficient savings. Thus, the factors that contribute to the subjective well-being are concerned in this study. The social comparison, emotional coping, financial socialization, and subjective financial knowledge are included as the explanatory variables in the conceptual framework. The primary data collection is applied, i.e. self-administered questionnaires are distributed to the targeted respondents.

Keywords: Subjective well-being, social comparison, emotional coping, financial socialization, subjective financial knowledge

INTRODUCTION

Background of the study

In the 21st century, the rise of the global economy has increased most people's standard of living and life expectancy. Managing personal finance and making sound financial decisions becomes an unavoidable responsibility for one to achieve his financial well-being. Financial well-being is one of the sub-domains of personal well-being and recently gained expanding attention from researchers and policymakers (Sabri et al., 2020). Even though the definition of financial well-being varies among researchers, its general idea is that a person can fulfill his current and future obligations, at the same time, feel secured and satisfied with his finance-related decision makings (Consumer Financial Protection Bureau, 2015).

The domain of financial well-being is even branched into the study of objective financial well-being and subjective financial well-being (Brüggen et al., 2017). The objective financial well-being is measured by the quantified figures, such as the calculation of net worth and financial ratios to know one's ability to meet his financial obligations (Mahdzan et al, 2020). Meanwhile, the subjective financial well-being measures the unquantified attributes, i.e. the psychological perceptions and emotional elements, which could affect financial behaviors and ultimately the financial satisfaction (Mahdzan et al, 2020). The study of subjective financial well-being gains popularity among researchers recently because it can measure the level of satisfaction more directly as compared to the objective financial well-being. As stated by Prawitz et al. (2006), two persons with the same level of earnings might have the same ability in bearing their financial obligations but they might be having different levels of happiness due to their perceptions and values.

In Malaysia, the government is actively promoting the idea of well-being among Malaysians. Economic Planning Unit (2013) has applied the Malaysia Quality of Life Index (MQoLI) and Malaysian Well-being Index (MWI) to measure the level of Malaysian's overall well-being. Besides, Malaysian family well-being is represented by the Malaysian Family Well-being Index (MFWBI). On the other hand, the Credit Counselling and Debt Management Agency (AKPK) that set up by the central bank endeavors to advocate financial wellness and positive financial behavior among Malaysians to enhance and sustain the households' financial well-being. Researches pertaining to the Malaysians' financial behaviors and financial well-being have been conducted by AKPK to gain more information on this area (AKPK, 2018).

Problem Statement

The household debt to GDP ratio in Malaysia has reached an alarming rate. It has increased from 60.4% in 2008 to 82.7% in 2019 (CEIC, 2020). The high level of household debt signals poor financial management among Malaysians in their daily life. According to the report of Financial Education Network (2019), approximately 30% of Malaysians faced difficulties to follow their spending behaviors based on their budget meanwhile 20% of working adults do not have savings in the past six months and 30% of them needs borrowings to purchase the necessities. Besides that, 52% of Malaysians feel difficult to raise RM1,000 when they face an emergency. For retirement planning, 68% of the EPF members do not meet the amount of basic savings recommended based on their age ranges.

Likewise, the number of bankruptcies in Malaysia has increased continuously in the last decade and this phenomenon has raised the concern of society and government. The total number of bankruptcies as of December 2019 was 299,186 cases and the highest number of bankruptcies was recorded in 2016 (19,588 cases) (Malaysian Department of Insolvency, 2020). Out of the total bankruptcy cases, the age group of 25-to-34 years old and 45-to-64 years old has accounted for one-quarter respectively (Carvalho et al., 2019). Carvalho et al. (2019) also stated that youths tend to overspend as they are affected by the latest trends. The data implied that the bankrupts are getting younger and younger.

Researchers discovered that the poor financial management practice and lack of financial planning are deteriorating the financial well-being (Gerrans, Speelman & Campitelli, 2014; Joo & Grable, 2004). Furthermore, the high level of household debts leads to financial distress and hindering financial well-being (Georgarakos et al., 2010). These situations are worsened when there are economic hardships, such as financial crisis and pandemic Covid-19, as these hardships further pressured the household's financial conditions especially the low-income groups because they struggle to meet the basic needs and could not weather the financial difficulties. (Taylor, Budescu, Gebre & Hodzic, 2012).

Financial well-being is affected directly by financial behavior while financial behavior is influenced by personal traits such as social comparison and emotional coping (Brüggen et al., 2017). Wills (1981) explained that people would feel better off if they compare with others who are deemed inferior. This psychological factor explains the overspending behaviors among the youths in Malaysia because they tend to show a sense of presence among their peers by possessing the most fashionable items. As one's financial behavior is not only affected by personal traits but also the influence of people around, this study is aimed to study the effect of social comparison, emotional coping, and financial socialization agent on the financial well-being.

On the other hand, a low level of financial literacy could lead to undesired results of financial well-being because a financially illiterate person is vulnerable to any emergency or financial shock such as losing his job or suffering from critical illness as he or she is unlikely to manage his personal finance well. Researches show that financial literacy is highly correlated with financial knowledge (Riitsalu & Murakas, 2019; Yong et al., 2018). In Malaysia, Financial Education Network (2019) revealed that one-third of Malaysian perceive that there are having low financial knowledge, especially for those who come from low-income households. In recognizing the importance of financial knowledge, subjective financial knowledge is included as one of the explanatory variables in this study.

In this study, the state of the financial well-being of emerging adults in Malaysia is focused. According to Arnett (2014), emerging adults are the adults who experienced the transition from parental dependence to self-dependency, i.e. adults aged between 18 to 29 years old. They are the

groups who are fighting for their career path, entering marriage, building a young family, and taking care of their parents. They need to make their own financial decisions wisely, otherwise, it causes financial burden and stress to their spouse and other family members. Thus, the financial well-being of emerging adults needs to be concerned to secure the household's financial well-being.

Research Questions

This research aims to provide answers to the following research questions:

- (a) Is there a significant relationship between social comparison and subjective financial well-being of emerging adults in Malaysia?
- (b) Is there a significant relationship between emotional coping and subjective financial well-being of emerging adults in Malaysia?
- (c) Is there a significant relationship between financial socialization and subjective financial well-being of emerging adults in Malaysia?
- (d) Is there a significant relationship between subjective financial knowledge and subjective financial well-being of emerging adults in Malaysia?

Significance of Study

This study focuses on the personal factors that influence the subjective well-being of emerging adults in Malaysia. As a contribution to academia, this study has bridged the personal traits (i.e. social comparison, emotional coping) and subjective financial knowledge with the financial well-being as these factors are deemed to affect one's financial behaviors which in turn reflects on the financial well-being. Furthermore, financial socialization agent is also added in the conceptual frameworks to examine its impact on one's financial behaviors.

As the Malaysian government concerns on the alarming rate of household debt level as well as the increasing cases of bankruptcy, this study can be served as the guideline for the government to design the appropriate policies and initiatives which could change the financial behaviors of emerging adults in Malaysia to achieve the desired status of financial well-being. Furthermore, emerging adults can get insights regarding financial well-being. Thus, they can improve and sustain their financial well-being as it is closely related to their household's financial well-being.

LITERATURE REVIEW

Financial Well-Being – Subjective Financial Well-Being

Financial well-being is one of the sub-domains of personal well-being and its definition varies among researchers (Brüggen et al., 2017). Strumpel (1977) described financial well-being as the happiness or general satisfaction with one's financial situations, enveloping a person's fulfillment with wage and investment funds, a sense of material security, perceptions of opportunities available, and a sense of rationality of the reward distribution system. Other researchers defined it as the state of a financially sound person, satisfied as well as worry-free from financial situations and the formation of the state is based on subjective evaluation of his financial circumstance (Joo, et al., 2008; Sabri & Falahati, 2012).

The topic of financial well-being has attracted the attention of scholars in recent years (Mahdzan et al., 2019; Mahdzan et al., 2020) and the domain is even branched into objective financial well-being and subjective financial well-being. Objective financial well-being examines the level of satisfaction by using measurable information such as the savings level, income level, debt level, borrowing-to-income ratio, etc. Meanwhile, subjective financial well-being studies the level of satisfaction based on the "invisible" attributes, for example, one's satisfaction with the current economic situation, satisfaction with the personal financial situation, perceived financial wellness, and level of stress about personal finance. As subjective financial well-being focuses more on the psychological consciousness and emotional conditions rather than countable figures, it provides a clearer and more direct depiction of a person's financial well-being (Mahdzan et al., 2020).

Nonetheless, the topic of financial well-being needs more exploration as it still has a lot of unknown (Brüggen et al., 2017). Some researchers have developed conceptual models to look for the determinants of financial well-being (Chikezie & Sabri, 2017; Kempson et al., 2017). The commonly recognized parameters include socioeconomic and demographic factors such as age, gender, ethnicity, education, marital status, and income (Hira & Mugenda, 1999). Other factors that explored by researchers include money attitude (Chikezie & Sabri, 2017; Gasiorowska, 2015; Sabri et al., 2020), financial practices (Kim et al., 2003; Sabri et al., 2020), perceived financial self-efficacy (Farrell & Risse, 2016; Netemeyer et al., 2018; Sabri et al., 2020) and emotion coping (Sabri et al., 2020).

Meanwhile, some researchers have developed the financial well-being index for measurement purposes (Devlin, 2009; Mahdzan et al., 2020). For instance, Mahdzan et al. (2020) have constructed the Malaysian households' financial well-being index which addresses people's economic and social perceptions of their financial well-being. They revealed that the households' financial well-being index is significantly different among different income groups but there is no significant difference for the groups with different religions, ethnic groups, and residential areas.

Social Comparison

The social comparison refers to the action where ones are attempting self-evaluation or self-enhancement by comparing themselves to other individuals within a social group (Thorton & Arrowood, 1966; Wood, 1989; Wills, 1981). The seminal study of Wills (1981) suggested that one can increase their self-regard by looking into another individual who is deemed inferior or worst-off than themselves (downward comparison). Similarly, an upward comparison can cause ones to lower their self-regard when they compare themselves to someone that they deemed as better-off (Tesser et al., 1988).

The psychological impact of social comparison is well documented in social science across different sub-domains, including the literature of economic well-being. For instance, some early studies showed that satisfaction levels of workers are negatively related to the reference wage rates (Clark & Oswald, 1996; Diener & Suh, 1997). Another study further argued that the changes in relative income tend to exert a larger effect on an individual's perceived well-being than the changes in absolute income (Ball & Chernova, 2008).

The existing studies of social comparison and financial well-being are conceptually similar to the economic literature counterpart, with an extended scope covering the overall financial well-being of the subjects. However, this branch of study is relatively scant than the studies of other domains. Within the limited number of evidence, Thomas and Azmitia (2014) found that undergraduates tend to feel worse-off financially when they compare themselves with peers. More recently, Sorgente and Lanz (2019) revealed that older emerging adults (aged 25 to 29) tend to believe that they are financially better-off when compared to the younger emerging adults (aged 18 to 24).

Emotional Coping

Coping refers to the self-engaged efforts to reduce the negative impacts arising from an event or stressful situation (Carroll, 2013). Coping strategies can be broadly classified into two types: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). While problem-focused coping aimed to minimize the adverse impacts through removing the source of the stress, emotion-focused coping aimed at managing the negative emotions arising from the stressful events rather than changing the event itself.

Some studies showed that emotional coping helps students in dealing with stress, thereby improves overall subjective well-being (Scheier et al., 1994; Por et al., 2011). Nonetheless, some studies documented a negative correlation between emotion-focused coping with the overall physical and psychological well-being (Kolenc et al., 1990; Lapp & Collins, 1993), and other studies argued that there is no relationship established between coping strategies and level of stress (Arthur, 1998). In the context of financial well-being, Barnard et al. (2010) found that a stronger sense of coherence positively relates to the financial well-being of employees. More recently, Sabri et al. (2020) documented a significantly negative effect of emotional coping on the financial well-being of Malaysian public sector workers, implying that emotion-focused coping worsen the overall financial well-being rather than improving it.

Subjective Financial Knowledge

Subjective financial knowledge can be defined as a person's confidence in his own knowledge of financial issues (Lind et al., 2020; Rosen & Sade, 2019). Financial knowledge is always used interchangeably with financial literacy, but the two terms are not necessarily identical conceptually. Huston (2010) explained that financial literacy has an extra application measurement which infers that a person must have the ability and confidence to utilize his financial knowledge to create a financial decision.

Researchers have found mixed results on the relationship between financial knowledge and financial well-being. For instance, Joo and Grable (2004), Lind et al. (2020), and Xiao et al. (2014) discovered that financial knowledge has a positive relationship with financial well-being. A similar result has also reached by AKPK (2018) which focused on the study of Malaysian working adults. In contrast, Mahdzan et al. (2019) argued that financial knowledge has a significant negative relationship with subjective financial well-being across all households in Malaysia. However, they found that financial knowledge and subjective financial well-being had no significant relationship among the B40 group.

From another perspective, previous studies found that subjective financial knowledge has a stronger relation with financial well-being as compared to the objective financial knowledge (Allgood & Walstad, 2016; Lind et al., 2020; Riitsalu & Murakas, 2019). Allgood and Walstad (2016) found that a score that measures both subjective and actual knowledge correlates better with the behaviour than what separate estimates do. However, while the importance of subjective knowledge for improving financial well-being is recognized, the majority of the financial education programs tend to concentrate on the promotion of objective knowledge alone.

Financial Socialization

Besides financial education and its commitment to financial knowledge, Sundarasan et al. (2016) claimed that interaction of a person with socialization agents such as parents, friends, teachers, and media is vital amongst young adults toward money and wealth optimization. Financial Socialization can be defined as a process by which individuals acquiring the necessary skills, knowledge, and attitudes to maximize their ability in the financial marketplace (Albeerdly & Gharleghi, 2015; Ward, 1974). Financial socialization influences financial attitude, financial capability, and knowledge transfer, and all these components in turn influence the financial well-being of a person (Danes & Yang, 2014).

Some studies have highlighted the importance of financial socialization on financial well-being. Past studies revealed that financial socialization has positive impacts on the financial well-being of students (Chandra & Memarista, 2015; Chikezie & Sabri, 2017; Sabri et al., 2012; Setiyani & Solichatun, 2019). In the context of Malaysia, Falahati and Paim (2011) revealed that both primary and secondary socialization agents are significant predictors of the financial well-being of undergraduates, while the significance is stronger among male students than female students. It is noticeable that most of the previous studies on financial socialization have focused on the financial well-being of students rather than emerging adults. Lanz et al. (2019) is one of the exceptions that studies how the subjective well-being of emerging adults is being influenced by their parents as their financial role models. The results show that family financial socialization significantly affects the financial well-being of emerging adults.

PROPOSED CONCEPTUAL FRAMEWORK

Based on the literature review, this paper proposes a conceptual framework on the relationship between personal factors and subjective financial well-being among the emerging adults in Malaysia. The personal factors mentioned include social comparison, emotional coping, financial socialization, and subjective financial knowledge. The proposed conceptual framework is illustrated in Figure 1.

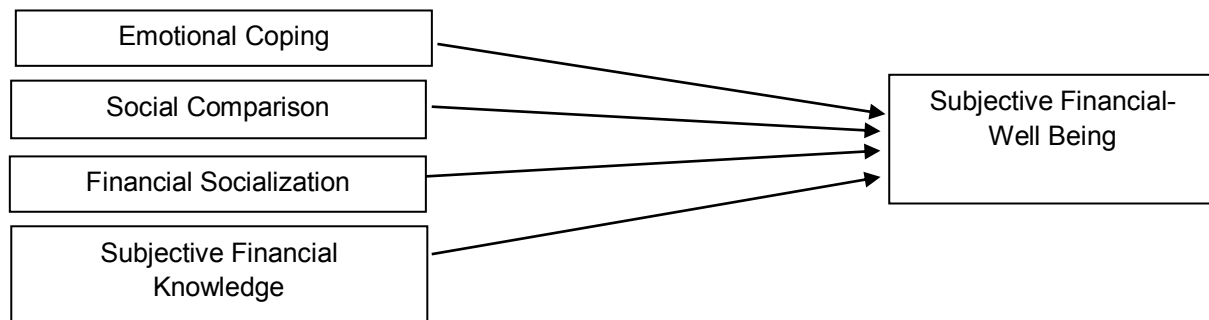


Figure 1 Proposed Conceptual Framework of the Present Paper

HYPOTHESIS DEVELOPMENT

A few hypotheses are developed in the present study:

Hypothesis 1:

Social comparison is significantly related to subjective financial well-being.

Hypothesis 2:

Emotional Coping is significantly related to subjective financial well-being.

Hypothesis 3:

Financial socialization is significantly related to subjective financial well-being.

Hypothesis 4:

Subjective financial knowledge is significantly related to subjective financial well-being.

CONCLUSION

The Malaysian government has been actively promoting the concept of well-being among Malaysians. To this end, financial well-being is one of the key contributors to the overall well-being of individuals. However, recent data reveal that the financial management skills and the general level of financial literacy of most Malaysians are far from satisfactory. This phenomenon is especially apparent among the groups of emerging adults, whose age range falls within 18 – 29 years old and are transiting from parental dependence to self-dependency. Emerging adults are relatively vulnerable to financial insecurities as compared to the older and established age groups, consequently, it is deemed more challenging for emerging adults to attain the desired state of financial well-being. This study proposes a conceptual framework to identify predictors of subjective financial well-being, by incorporating the effect of personal psychological factors. The proposed conceptual framework is useful for future research pertaining to answer the research questions.

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BAFE062:
SIGNALING ROLE OF AUDIT QUALITY ON FINANCIAL DISTRESS:
EXPERIENCE OF MALAYSIAN PUBLIC LISTED COMPANIES (PLCs)

Tengku Rahimah Tengku Arifin^a, Fathyah Hashim^b

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: rahimah@utar.edu.my

^bGraduate School of Business, Universiti Sains Malaysia, Malaysia,
Email: fathashim@usm.my

Abstract

This study extends the previous researchers on the audit quality by examining the association between audit quality and financial distress in Malaysian Public Listed Companies (PLCs). This study proposes the use of the signaling theory as investors are not informed on the financial condition of the PLCs and may decide to either sell or retain their shares due to uncertainty of the company's condition. Therefore, the use of high-quality auditors will signal the financial condition of the company to the capital markets either they are in good shape or in financial distress. This is due to the fact that there is no available actual information especially on current financial condition of the companies. This study specifically investigates the impact of audit quality proxied by different audit attributes including Big 4 audit firms, industry-specialised audit firms, audit fees, international audit firms, non-audit services, gender of the auditor and auditor's ethnicity. This research recommends build up a research model for this purpose. This study proposes a negative relationship between audit quality and financial distress. The probability to be listed as financial distressed company is lesser for the companies audited by the higher quality auditors and vice-versa. This model will be useful for regulators and different stakeholders particularly on the relationship between audit quality and financial distress.

Keywords: Audit quality, financial distress, signaling theory, Malaysia.

INTRODUCTION

Based on the research conducted by KPMG, more than 1,000 companies are in acute distress situations with one in five businesses in the UK are financially distressed (KPMG, 2020a). Similarly, in the US, there are many large and high-profile companies have filed for the chapter 11 (bankruptcy) in the year of 2019 with aggregate liabilities of nearly US\$93 billion for only eight largest companies. This amount is more than equivalent to the combined aggregate liabilities of all companies in 2018 (PWC, 2020). Moreover, the announcements of various countries to close their borders, restrict travel, lockdown and other ways to control the spread of the Covid-19 pandemic in the early of 2020 is like rubbing salt into the wounds. Many of the corporate sectors have experienced challenges which include 94% of the Fortune 1000 (KPMG, 2020b). The World Bank announced an extraordinary outflow has ever been documented amounted to US\$83 billion (RM357.7 billion) from emerging markets (Choy May, 2020). Not only in the Western markets, China's Shanghai Composite, Hong Kong's Hang Seng and South Korea's KOSPI show the similar declining style in the Asian market's stock performance (Nicola et al., 2020). The growth in Gross Domestic Product (GDP) is predicted to drop to the slowest growth rate in 2020 cross the South East Asia region since the global financial crisis in 2008 (Surin Murugiah, 2020).

The global economic downturn not only affect the large companies but can increase the risk of financial distress in small companies. The Public Listed Companies (PLCs) on Bursa Malaysia that experienced financial distress and difficulties are listed as the Practice Note 17 (PN17) companies for the main market and Guidance Note 3 (GN3) companies for the ACE market. Bursa Malaysia will suspend the trading of the PLCs if they triggered one of the PN17 prescribed criteria and are required to regularise their condition by restructuring the regularisation plan. Consequently, these companies may be delisted from the stock exchange if they failed to comply with the provisions. But again, Kim-soon et al. (2013) noticed that not all companies with financial difficulty were classified as PN17 and

not all PN17 companies were financially distressed. Lu and Ma (2016) believe that auditing is a good governance instrument during the financial distress and crisis. Audit quality is an essential indicator that the financial results shown in the financial statements correctly represent the performance of the company.

As the archival of audit quality studies are inconclusive and mostly from foreign countries and foreign companies' data, there is a need to conduct this route of study in Malaysia. In general, foreign jurisdictions, litigation risk, capital market setting and effects are different. Cross-country comparisons, differences in regulations and culture may give benefits to the literatures concerning the audit quality and auditor independence as differences in the incentives, perceptions including behaviors of various parties containing auditors, clients and users of financial statements would be discovered through the examinations of various countries (Tepalagul & Lin, 2015). Therefore, it would be interesting to study the relationship of the audit quality using different audit proxies and financial distress in Malaysia. This study will contribute to the body of knowledge to the audit quality and financial distress literatures. This study proposes a sample of the most recent PLCs that were listed on Bursa Malaysia in the year of 2015 to 2020. This period is chosen as it reflects the current situation and condition of the financial distress in Malaysia in different governments rule that include the 2020 government (starting March 2020), 2019 government (May 2018 to March 2020) and six decades' government (since 1957). This study will investigate further explanatory variables of audit quality to understand their relationship with financial distress in Malaysia.

The main purpose of this study is to investigate the relationship between audit quality and financial distress in Malaysia. Thus, this study poses the following research objectives.

- To investigate the relationship between Big 4 auditors and financial distress in Malaysia.
- To investigate the relationship between international auditors and the financial distress in Malaysia.
- To investigate the relationship between audit fees and financial distress in Malaysia.
- To investigate the relationship between Industry-specialised auditors and financial distress in Malaysia.
- To investigate the relationship between non-audit services and financial distress in Malaysia.
- To investigate the relationship between auditor's gender and financial distress in Malaysia.
- To investigate the relationship between auditor's ethnicity and financial distress in Malaysia.

LITERATURE REVIEW

Signaling Theory

Signaling theory plays an influential role in a number of management literatures, including strategic management, entrepreneurship and human resource management (Connelly et al., 2011). It arises when specific information is held by only one party and that party must choose the information that he/she wants to communicate (signals) to another party. This environment is called as information asymmetry. On the other side, the party who received the information must use his/her ability in the interpretation of the shared information. Thus, the signaling theory is used to reduce the information asymmetries between parties inside the companies and the other stakeholders. However, the information could be positive or negative depends on the intention of those with the valuable information. For example, the signaler may send false signal or alarm to the inferior receiver in an attempt to conceal certain important information to avoid lost/cost. On the other hand, signals may be sent as a positive sign to attract parties outside the organisation such as the potential investors. This is shown in the study by Alarussi and Shamkhi (2020) who demonstrate that in general, the established and matured company disclose additional information to distinguish themselves from the new entrant on the stock exchange. This is to signal the company stability to the market players.

Good company performance and well-being will increase the interests of different stakeholders especially the investors to invest in a company. However, stakeholders do not have any reference on the financial condition of a company including the financially distressed companies. Therefore, there is always higher demand for better audit quality as it is perceived to be trustworthy and it reflects the company performance and financial health. The auditor is another entity who, in addition to the management of the company, will have access to the company's financial statements and activities (Agostini & Agostini, 2018). Audit is a crucial instrument for reducing information

asymmetries and ensuring an efficient market environment. Therefore, there must be integrity and reliability in the audit process and audited financial information for it to increase company performance (Elewa & El-Haddad, 2019). Taqi (2013) find that to gain high reputation, an auditor must send signals to the stakeholders about their high audit quality. He finds that there is a positive relationship between audit quality and value of the company. Management of the companies must also signal to the stakeholders that they have hired high quality auditor in order to increase the value. In addition, Sawan and Alsaqqa (2013) conclude that investors can have a better risk assessment and return profiles from the information provided by high quality auditors as the information is deemed to be reliable. They assert that investors have better confidence in higher quality auditors as they normally use professional approach to auditing.

This study will use the signaling theory due to the uncertainty of the company's condition that may affect the decisions of the investors and shareholders. It will provides a special, realistic and empirically testable view on the problems of social selection in the sense of incomplete knowledge (Connelly et al., 2011) and investors regularly depend on audited financial statements of a company before making any important decision. Therefore, the high reputation auditors may help to reduce the uncertainty faced by the stakeholders through their signals with regards to company's financial condition. In addition, this study suggest different audit quality attributes since there is no absolute measurements for audit quality. Defond and Lennox (2016) suggest that it is the role of the auditor in ensuring that the companies disclose relevant and reliable information to the capital markets. Auditors must be competent, independent and provide adequate efforts in order to detect any irregularities and resolve the identified issue in their client's pre-audit financial statements (Aobdia, 2019). Moreover, Connelly et al. (2011) recommend to study on the signal reliability as the interpretation of the signal may have variances if different signals are sent by same signaler or same signal from different signalers. Therefore, it is in great interest to investigate the effects of different audit quality proxies in the financial distress event.

Big 4 Auditors

The use of reputable auditor in a company can exhibit a significant signal to the public including on the company's financial condition. Higher reputation auditor especially the Big 4 auditors will gain more public confidence and their quality is perceived to be higher as compared to small and medium-sized audit firms because they have to protect their brand name and various clients. Therefore, to maintain their reputation, Big 4 auditor will try not to compromise their quality and independence audit works. Big 4 auditors are considered firms with knowledge and experience (Elewa & El-Haddad, 2019). Although audit process is unobservable publicly but Big 4 auditor is perceived to offer better incentives and competencies. They are able to identify problems in the internal controls system of a company and able to reduce the audit risk (Lu & Ma, 2016). Alfraih (2016) states that Big 4 auditors are perceived to possess greater ability plus a strong incentive to deliver better audits to their client, hence increase their quality.

In addition, Joshua Aronmwan et al. (2013) investigate the relationship between audit firm reputation and audit quality by choosing the listed trading companies trading on the Nigerian Stock exchange as a sample. Their data consists of audited annual report as at 2010 of 35 sample companies. The Ordinary Least Square Model estimation technique was used and the results revealed that the audit firm reputation is significantly and positively affect audit quality. Using a mixed methods of quantitative and qualitative approach, Sawan and Alsaqqa (2013) find that there is a positive relationship between size of audit firms and audit quality in their study based on two different perceptions, demand (oil companies) and supply (audit firms). The current financial state of clients can be reported more precisely by Big 4 auditors than most companies as they possess better resources and audit technology that motivate them to be professional in their job. Using their resources and technology, Big 4 auditors are able to design a better audit plan for variety of clients effectively. By hiring the Big 4 auditors, companies can signal to the market that they are in good financial health. While in conflict situations, Big 4 auditors are better in resisting the pressure from the management thus, enhanced the companies' credibility. Moreover, Boubaker et al. (2018) document a strong association between Big 4 auditor and investment efficiency. On the contrary, the Big 4 auditor has a negative relationship with company performance of French companies (Bouaine & Hrichi, 2019). The researchers find that the appointment of Big 4 in France does not increase the performance of a company. As there is still on-going debates around the audit services performed by

the Big-4 audit firms, hence this study try to explore its relationship with the financial distress of Malaysian PLCs.

International Auditors

Following the globalisation, the need for harmonisation of the accounting and auditing standards had increased overtime. All the international audit firms who perform the audit especially the foreign companies need to comply with international standards. Therefore, they are perceived to perform a high-quality audit services due to established governance mechanism. The audit firms' membership with the international firms allowed them to use the international brand name, resources, methodologies, knowledge and expertise (Lenz & James, 2007). As a global network, the international auditors may also have a better audit program using their large resources to cater their international clients. For instance, there are numbers of international audit firms in Malaysia among others Grant Thornton, BDO and Crowe Horwarth International. Although these international firms are not the Big 4 auditors but they need to prepare adequate resources in order for them to operate in various countries with different audit settings.

Chen et al. (2013) find that audit firm size is positively associated with audit quality. They divide the audit firms used in their samples in three different categories that are national, regional and local. This is similar to the research by Salehi et al. (2019) who find that there is a positive relationship between audit firm size and audit quality. Moreover in general, Sawan and Alsaqqa (2013) discover that better audit quality is typically correlated with international audit firms. Compared to local audit firms, international auditors possess more advanced technology, skills and knowledge to cater the different audit clients. In addition, they have more supports from their head-quarters if needed especially on the resources. In addition, most international audit firms operate in various countries with a large number of staff collectively thus, the support system, trainings and development are considered better than the small audit firm. Hence, they may use the available resources to provide better audit services in order to protect their firm globally. Therefore, this study proposes to use the international auditor as a proxy for audit quality and explore its impact on financial distress in Malaysia.

Audit Fees

The discussion on the relationship between audit fees and audit quality have been in the literatures since years ago. Audit fees are the most desirable indicator of the audit quality. In particular, audit fees can be observed as a direct indicator of the auditor's commitment in the client companies and indicate the exact unit price of the audit services provided (Aobdia, 2019). The decisions and judgements made during the planning and risk assessment stages are important in defining the amount of audit fee (Ittonen & Peni, 2012). The differences in audit fees reflect the performance of the auditor and reflect the factors of demand and supply (Ghafran & O'Sullivan, 2017). Hoitash et al. (2007) agree that there is a negative relationship between audit fees and audit quality and the profitability of the auditor will better exhibit their quality and independence. It is common for a seller/service provider to charge a significant higher amount of fees in exchange of their high-quality services as they may incurred various resources, skills and knowledge to meet their purpose. Audit fees can be useful mechanism to and act as a competitive advantage in improving audit quality offered by the audit firms (Asthana et al., 2019).

Using firm value as a measure for company performance, Sayyar et al. (2015) find a significant positive relationship between audit fees and company performance in Malaysia. Auditor charged higher audit fees for the transfer of their knowledge and resources to the company to help improving the company performance by giving recommendations and suggestion to achieve the company's goals. Whilst the discussion in the preceding paragraph, Lu and Ma, (2016) report a negative relationship between audit quality proxied by audit fees and financial distress in China. The relationship is moderated by ownership and they demonstrate that higher audit fees do not reduce the financial distress risk and may contribute to bad financial situation. It is believed that when the companies are in financial difficulties, the auditor needs to develop a more extensive audit plan and strategy, use more hours for auditing and thus charged higher audit fees. This is similar in the study by Tee (2018) who find that auditors will charged higher audit fees in the institutional deficiencies due to increase in their audit efforts.

Industry-specialised Auditors

It is said that the competence and expertness of an industry-specialised auditor are obtained from the repetitive tasks on the audit procedures in specific industries (Sarwoko & Agoes, 2014). They will be able to conduct an effective audit works for their clients compared to non-specialised auditors. Knechel et al. (2007) stress that audit quality represents by the brand name reputation may be incomplete. Therefore, another proxy to measure the audit quality should be used. Mayhew and Wilkins (2003) document that the industry-specialised auditors are able to provide higher quality services due to more industry-specific knowledge and expertise developed by them. The experts in the specific industry may identify at early stage if a company performance such as its accruals and earnings deviate from the industry trends (Cenciarelli et al., 2018). They can help the company on the improvement plan that can be implemented to reduce the risk of financial distress. Failure to do so may result in their reputation status as the industry specialist at risk and the auditors may lose their clients as well as potential clients.

Therefore, in the event of financial distress, industry-specialised auditors should be able to detect the irregularities and suggest to the companies on the corrective actions that can be done at the earliest stage possible. Furthermore, industry-specialised auditors have more experience in particular industry that required different skills, specific expertise and knowledge. The complexity in the specific industry with different rules and regulation such as in banking and finance industry has made the industry-specialised auditor as an important attribute of higher audit quality (Tepalagul & Lin, 2015). Industry-specialised auditors possess a deep knowledge and longer experience on the specific sector that include among other their business process, accounting principles and risk (Sarwoko & Agoes, 2014). However, Minutti-Meza (2013) report that industry knowledge does not improve audit quality but the new approach does not inherently capture the impact of the expertise of the auditor. Salehi et al. (2019) also find a non-significant relationship between industry specialisation with audit quality. However, they are positively and significantly related when industry specialisation countries' economic status is different, grouped by developed, developing and emerging countries. Hence, it is interesting to include this variable to study the effect of industry-specialised auditor in Malaysia, a developing country on the financial distress status of PLCs companies.

Non-audit Services

There is concern on the auditor's independence relating to the provision of non-audit services (NAS) to their clients especially if their clients pay high non-audit fees as this may result in low audit quality (Cenciarelli et al., 2018). A study by Salehi and Moradi (2010) documents that practicing NAS to the same audit clients have strong negative effects on auditor independence based on Iranian accountants' and shareholders' perceptions. They had used survey in their research as they include the qualitative behavioral approach to assess the audit independence especially on the non-public information. They also find that the NAS negative effects on auditor independence are perceived from those who possess accounting and auditing information as reasonable.

However, audit professionals defend that the auditor's knowledge and understanding of the client's company will increase and the audit performed will be more efficient and effective. In addition, there is no evidence in most of the previous researches proving that NAS impair actual audit quality (Tepalagul & Lin, 2015). On the other hand, by providing the NAS, auditors will have a better and in-depth understanding on the operation of client's companies that may help them to develop appropriate audit programs. They may also discover the financial difficulties and problems occurred in the companies and suggest a corrective measure immediately before the companies fall into the distress situation. Previous researchers also find that empirically, NAS increase the quality of audit particularly when the auditors provide NAS related to tax. This is similar to the results in Bell et al. (2015) who report that total NAS fees are not related to audit quality in general but have a positive association with SEC registrant companies. Therefore as there is still debate on the effect of NAS provision, this study will provide a better understanding of the impact of NAS on financial distress in Malaysia.

Auditor's Gender

Growing debates on gender equality have led to a large number of global legislations aimed at increasing the inclusion of women on corporate boards. Current global issue on gender in Malaysia is discussed in the area of participation of female in the Board of Directors such as in (Ahmad-zaluki,

2012). The auditor's gender in accounting profession is a new issue to discuss. A study by Ittonen & Peni (2012) however examine the effect of auditor's gender on fees paid by client. They find that the female audit engagement partner will increase the audit efforts and audit fees due to the higher investment in planning the engagements. The result also shows that the female auditors may assess some of the clients' risk components higher than their male counterparts. Therefore, female auditors are perceived to design more extensive audit programs for their clients. This is due to differences in the gender-based behaviour especially in decision-making, risk-taking, communication and overconfidence.

On the contrary, Abed and Al-badainah (2013) report that there is no difference between gender and audit fees charged by the auditor, based on the interviews with male and female auditors in Jordan. However, they find that in general, female auditors are more likely to follow the professional codes of ethics and avoid any unethical behavior. The similar results also documented in Al-Dhamari and Chandren (2018) who assert that female auditor or audit partners are more risk-averse, have a greater degree of planning and perform high level of ethical behaviour in the audit program. They find that there is increase in the investors' confidence in audit report signed by female audit partners from higher quality audit firms. Hence, the previous findings suggest that if a company is facing the financial difficulties, a female auditor will perform her duty independently and competently without any bias. Thus, indirectly sending an accurate signal to the stakeholders with regards to the company's financial status. In addition, Oradi and Izadi (2019) stress that it is common in Western countries to have the involvements of females in leadership and management positions than in Islamic countries. Hence, this study proposes to investigate the impact of gender of the auditor on the level of financial distress of Malaysian PLCs.

Auditor's Ethnicity

The selection of auditor is crucial for a company as auditor must be from trusted party and able to respond to new ideas through the understanding of the operation of client's company. Companies always need to weigh the cost and benefit arises from the selection of specific audit firm (Nazri et al., 2012). In a multiracial country like Malaysia, the selection of auditor may be affected by the various cultural values, different lifestyle, religious beliefs and different behavioral patterns in different ethnic group of company's boards of directors (BODs). Currently, there are 29.7 million citizens in Malaysia with a composition estimates of 69.6% Bumiputera, 22.6% Chinese, 6.8% Indians and 1% other ethnic group in 2020 (*Department of Statistics Malaysia Official Portal*, n.d.). Nazri et al. (2012) address that Malays prefer to work in the Malay community due to similar beliefs, same needs and understanding while Chinese perceive business and own feelings as separate entity. Thus, they are comfortable to work in their own community as well as others. Therefore, the various mixture of differences in ethnicity's believe and value may shape different audit quality.

As to improve transparency, it is required for the engagement partner to disclose the name in the audit reports. It is believed that the disclosure of the name will improve the auditor objectivity and independence as the engagement partner's reputation is in the line (Tepalagul & Lin, 2015). In addition, the responsibility on the whole audit process lies on the decisions of the audit partner (Ittonen & Peni, 2012). Ahmad et al. (2006) report that Chinese- and Bumiputra-controlled companies are tend to hire auditors from the similar ethnicity while foreign-owned companies choose quality-differentiated auditors. Berglund and Eshleman (2019) investigate the role of similar ethnicity in the relationship between audit client and manager as well as explore the impact on the decisions of auditor selection and retention. They find that ethnic similarity impaired the auditor's independence and plays an important role in auditor-client alignment as it is negatively associated with audit quality. They promote that ethnic diversity will increase audit quality. Based on the previous literatures, there is no empirical evidence related to the relationship between auditor's ethnicity and financial distress. Therefore, it is the intention of this study to the signaling role of the auditor's ethnicity in Malaysia as suggested in Ahmad et al. (2006), the objectivity and judgement of the auditors might potentially influenced by different ethnic feeling and obligation, specifically in the perceived possible threat from other ethnic groups.

Financial Distress

Financial distress, financial difficulties, financial problems are regularly used interchangeably. Its definition includes a permanent negative situation in a company facing poor financial conditions

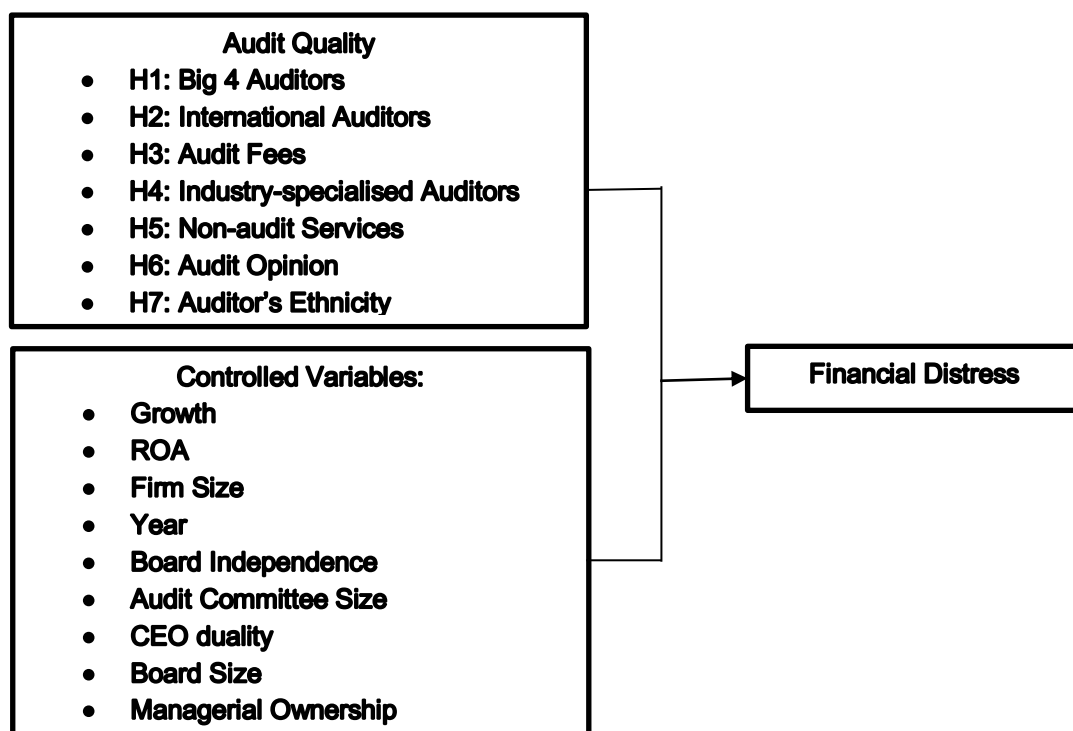
such as low liquidity, debts payments failure, limitations on policies of dividend payment, higher cost of capital, restricted access to external financial resources and lower credit rating (Agostini & Agostini, 2018). Although a company's financial distress is driven by company's own distress, it will have impact on the economic distress of an industry due to the contagion effects of customers as well as market players. Platt and Platt (2006) state although there is no absolute definition of financial distress if compared to bankruptcy but financial distress situation is far from the company's normality and it is as a result of operational actions or external factors. Agostini and Agostini (2018) assert that a company can either recover from financial distress or go down into bankruptcy, which inevitably means a macro-failure. This bankruptcy event is not only affecting the company but will cost other stakeholders as well.

In a financial distress environment, auditor may charge higher audit fees and modify their audit plan to provide the extensive works as they believe the likelihood of violation in a troubled company would be extensive. Moreover, in a more severe financial distress occasion, auditors may issue a going concern opinion or withdraw from their appointment to lessen the risk of lawsuits and loss. Therefore, quality of the audit services performed by the auditor considered as essential attribute in the improvement of company's and industry's financial situation as audit quality can be used to estimate the financial distress likelihood. It is also used by companies to signal their increased market value to the other players in the industry especially the stakeholders (Sayyar et al., 2015). Nevertheless, various factors can deter auditors' capability to reveal the client's financial problems due to fear of losing clients, lawsuits and more. Hence, the auditors need to always be independence and competent in performing their engagement and do not compromise their professional assessments and judgements. Their independent substantial role in the case of financial distress is essential to guarantee their trustworthiness in reducing the audit loss.

CONCEPTUAL FRAMEWORK

The above discussions lead to the following conceptual framework for this study. The company's characteristics and corporate governance components will be controlled following the Lu and Ma (2016). Company's characteristics include growth, ROA and firm size while corporate governance components are board independence, audit committee size, CEO duality, board size and managerial ownership.

Figure 1: Proposed Conceptual Framework



RESEARCH METHODOLOGY

Proposed Research Methodology

This study uses a sample for the period from 2015 to 2020, utilising the PLCs that were listed on Bursa Malaysia. The period is in interest to reflect the current capital market situation in Malaysia in different governments rule within these five years. In addition, the Securities of Commission in Malaysia has urged all the auditors to continue providing high quality of audit services performed during the global pandemic (Securities Commission Malaysia, n.d.). Therefore, there should not be a compromise of audit quality amid the Covid-19 pandemic which started at the end of 2020. Secondary data will be used in this study. The samples are the public listed companies (PLCs) listed on the main market of Bursa Malaysia from the year of 2015 to 2020. The total number of PLCs is 772 on the main market in 2019 while to date, there is 765 companies listed in 2020. The annual reports of the companies will be downloaded from Bursa Malaysia website to gather the data needed for this study especially for the explanatory variables such as the auditor, audit fees, gender and others. The data from the annual reports will be hand-collected. In addition, the Datastream/Bloomberg terminal will be used as well in the collection of data needed for this study.

CONCLUSION AND DISCUSSION

This research aims to provide theoretical model on the signaling role of audit quality on financial distress in Malaysia. This research targets the PLCs to see whether there are any differences on the level of audit quality on financial distress of PLCs during the period of study. Besides, this research provides evidences on the combination of few proxies or attributes of audit quality that include Big 4 auditor, industry-specialised auditor, audit fees, international auditor, non-audit services, auditor's gender and auditor's ethnicity of Malaysian PLCs which very few studies have been done in Malaysia. In addition, the findings will become a strong direction for regulators whether to implement prohibition of non-audit services by the external auditor. As for enhancement of the research, further investigation should be carried out to test, validate and enhance the model shown above in the Malaysian context as suggested under the proposed research methodology part of this study.

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BAFE003:
**THE SIGNIFICANCE OF THE COVID-19 PANDEMIC AND
IMPOSITION OF MCO: A BOON OR BANE TO THE MALAYSIAN
ECONOMY**

Kho, G.K.^a, Yap, W.O.^b, Zulkifli, R.^c, Kandasamy, S.^d,

^aFaculty of Accountancy and Management, University Tunku Abdul Rahman, Malaysia.
Email: khogk@utar.edu.my

^bFaculty of Accountancy and Management, University Tunku Abdul Rahman, Malaysia.
Email: yapwo@utar.edu.my

^cFaculty of Accountancy and Management, University Tunku Abdul Rahman, Malaysia.
Email: rozitaayu@utar.edu.my

^dFaculty of Accountancy and Management, University Tunku Abdul Rahman, Malaysia.
Email: shamini@utar.edu.my

Abstract

The outbreak and fast acceleration of the novel coronavirus (Covid-19) is considered as the most critical black swan and a perfect storm in the year 2020. Due to the global spread and seriousness of the disease, the World Health Organization (WHO) has declared the coronavirus outbreak as pandemic on March 11, 2020. Malaysia is not spared from this deadly virus either. Prompted by the rapid spread of the Covid-19 and to contain further outbreak of the disease, the Malaysian government has declared and issued a Movement Control Order (MCO) effective March 18, 2020. Throughout this MCO period, members of the public were advised to stay at home and all private and government premises to be shut down with the exception of those involved in providing essential goods and services. Inter-state travelling was curtailed with public gathering events being cancelled. This fatal pandemic definitely have had a devastating impact onto the Malaysian economy as well as onto the social-economic welfare of the Malaysian people. With the unprecedented disruption to the supply chain together with depressing private consumption that arises from the enforcement of the MCO, affecting severely all businesses across the board in particularly those that are related to tourism, retail, leisure & hospitality and airlines industry. Those vulnerable groups like those micro businesses and those lower income individuals that fall under the B40 categories are also economically impacted. This paper seeks to examine the background nature of the Covid-19 pandemic, the necessity of issuing the MCO and both its positive and negative implications to the economic landscape of Malaysia, whether accelerating or decelerating the nation's economic activities.

Keywords: Covid-19, MCO, pandemic, unprecedented, economic landscape of Malaysia.

INTRODUCTION

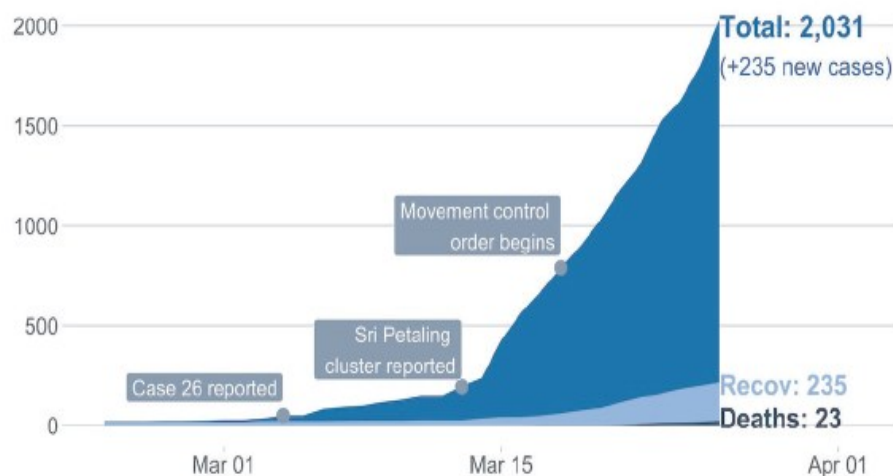
In the year 2019, due to the adverse impact of the US-China war and the Brexit event, the IMF had predicted only a moderated global economic growth of only 3.4% for the year 2020. However, the emergence of the Covid-19 pandemic has completely changed the global outlook unexpectedly. Here in Malaysia, the economic situation is of no better and is also equally affected. With the fear and uncertainty caused by this SARS-CoV-2, a novel strain of coronavirus from the SARS species many economic activities has come to a complete stand-still.

Coronaviruses are a large family of viruses that are capable of triggering illness in both human and animals and affecting many living species in this world. These coronaviruses that are known to affect humans are Middle East Respiratory Syndrome (SARS) and the Severe Acute Respiratory Syndrome (SARS). (Guarner, 2020). The 2019 novel coronavirus or better-known as Covid-19 is the most recently discovered coronavirus is a virus strain first identified the Wuhan city, Hubei Province of China in December 2019. (Novel, 2020). Since its discovery and identification, this deadly virus has managed to spread across the globe, infecting more than 4 million people across

various continents and causing deaths. With the virus rapid spread, and outbreaks growing at an exponential rate, the World Health Organization (WHO) decided to declare it as a pandemic and a global emergency on 11th March 2020. (Gates, 2020). At the present moment, there are no therapeutics and vaccines proven and effective enough to treat or prevent Covid-19. (WHO, 2020). In view of this, adequate preventive measures are very critical to prevent and control the rapid spread of the pandemic virus.

Malaysia reported its first case of Covid-19 on the 25th January 2020 and traced three Chinese nationals who previously had close contact with an affected person in Singapore. (NST, 2020). As at 17th April 2020, there were reported Covid-19 cases in which including 86 deaths and 2,967 cases of recovery reported by the Ministry of Health (MOH) in Malaysia. (MOH, 2020). The state of Selangor had recorded the highest number of confirmed Covid-19 cases (1,338).

Table 1: Cases of Covid-19 in Malaysia (updated as at 26 March 2020)



Source: Calvin Cheng, Data: JHU CSSE GitHub Repo, MOH

With the rapid rise of the Covid-19 cases in Malaysia, the Malaysian government has no other alternative but to issue the Movement Control Order (MCO) effective 18th March 2020 to curb its spread. (MM, 2020) MCO aims to control the movement of people in order to reduce the in-person contact. The MCO implemented a series of precautionary measures to minimize the further outbreak of Covid-19 in the country which include shutting down of all government and private premises except for those involved in dealings with essential goods and services which include banking, transportation, telecommunication, food preparation and supply, electricity, water, and e-commerce. Travelling bans are imposed on all foreigners entering Malaysia and on Malaysians leaving the country. Throughout this period, there are no public gatherings including religious meeting, recreational activities and social activities.

Despite enforcement of the MCO, there is still no major improvement in the containment of the virus. As at 10th April 2020, there were a total of 4,346 Covid-19 cases reported by the MOH, Malaysia including 70 deaths. With the QHO estimated that the number of Covid-19 cases in Malaysia would grow exponentially and peak in mid-April, the Malaysian government decided to extend the MCO a further 14 days until 28th April 2020. (NST, 2020). The government implemented an "Enhanced Movement Controlled Order (EMCO)" for specific areas in the Kuala Lumpur vicinity area including Kluang, Hulu Langat, Menara City One, Selangor Mansion and Malayan Mansion effective until 28th April 2020. Residents who were under the EMCO were not permitted to leave their houses, receive visitors or enter Covid-19 affected areas.

As an unforeseen global phenomenon, this deadly virus definitely has damaging effects onto the Malaysian economic performance as well as onto the social economic welfare of the Malaysian public. The negative impact to the Malaysian economy are in twofold: firstly, is the knock-on effect from the impacts of the coronavirus pandemic overseas and secondly, is the domestic slow-down effect due to the imposed movement control measures. The MCO measures and the standard

operating procedures imposed which are absolutely necessary in impeding the outbreak of the virus in Malaysia, have a devastating economic costs to the country. With closure of businesses and services together with travelling and movement controls, private consumption and investment are greatly impacted. Individuals and businesses affected by the temporary closures will be at high risk of facing cash flow liquidity issues as their sources of incomes are reduced. (Cheng, 2020)

This paper seeks to evaluate the impact of the Covid-19 pandemic and analyses the possible outcome to the Malaysian economic performance. This report will also describe to what extent the level of financial crisis suffered by the country economic performance due to the pandemic and the effectiveness of the introduction government aid and its fiscal policies in mitigating the impact. It is not all gloom and doom for the Malaysian economic landscape as the pandemic has increased demand for medical supplies and care services. The pharmaceutical and healthcare sectors are the main beneficiaries in Malaysia with demand surge and continue to grow well into the future.

CONCEPTUAL FRAMEWORK

Research framework and hypothesis specifications

With the Covid-19 pandemic spreading with an alarming rate, infecting millions of people and bringing the economic activity to a near stand-still as countries around the globe imposed tight restrictions on the people movement to halt the spread of the virus.

The pandemic is expected to plunge most countries in the world into recession in the year 2020 with the global 2020 expected to decline by 2.1% while developing countries GDP is expected to decline by 2.5% and high income countries by 1.9%. The biggest GDP losses under the global pandemic scenario are expected in East Asia and Pacific (EAP) countries. (World Bank, 2020)

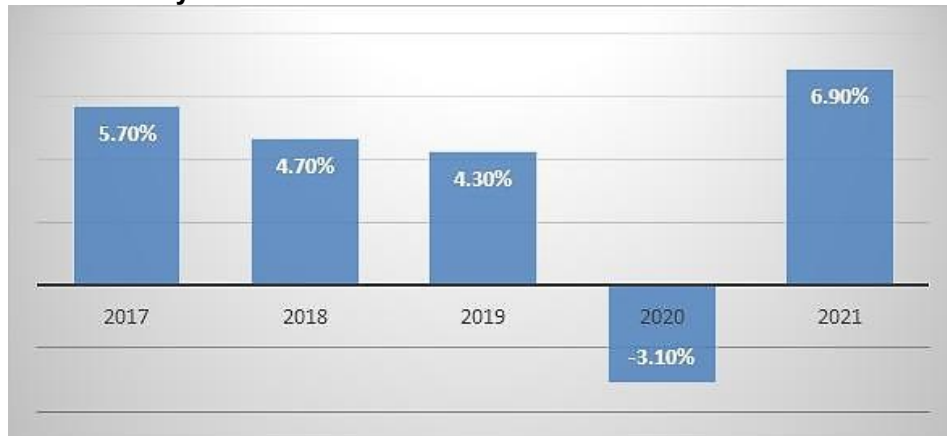
Domestically, the Malaysian economy is anticipated to feel the full brunt of the coronavirus pandemic with its borders shut to foreigners and a standstill in world trade commerce. The economic conditions deteriorated further with the disruption of the production of immediate inputs that had a negative impact on the supply chain. Domestic movement restrictions and the external spillovers have resulted in a significance reduction in consumption, investment, production and trade flows to lead to the sharpest fall in economic activity since the Asian financial crisis. (World Bank, 2020)

Malaysia's economy only expanded at a nominal rate of 0.7 percent in quarter one, 2020 representing a sharp deceleration from the rate of 3.6 percent recorded in quarter four, 2019 which itself was significantly lower than in the preceding quarters of 2019. With household expenditure and business investment spending are expecting to improve gradually, they are likely to remain subdued throughout the year due to the high levels of uncertainty. (World Bank, 2020).

In the following second quarter of 2020, Malaysia's gross domestic product (GDP) contracted by 17.1% making the country as the worst-performing economy in ASEAN. The pandemic has caused the economy to be at a standstill with 735 industries recorded a contraction in output. There are certain industries such as tourism and aviation that may not be fully operational in the immediate term especially when travelling across countries is still very much limited. For Malaysia, the economic figure is the worst double-digit quarterly contraction since 1998, or about 22 years following the unprecedented lockdown imposed to stem the spread of Covid-19 pandemic. (The Edge, 2020)

The massive GDP decline forced Bank Negara Malaysia (BNM) to revise down the country's 2020 GDP forecast to -3.5% to -5.5% from -2% to 0.5% previously, as the initial assumption was based on a lockdown period of only four weeks instead of seven weeks. Malaysia's road to recovery within the final two quarters of 2020 would need other contributors, especially private consumption to further improve and enhance its economic growth. BNM's Governor, Datuk Nor Shamsudin Mohd Yunus today said the economy is expected to recover and post a growth of 5.5% to 8% in 2021. (The Edge, 2020)

Table 2: Malaysia's Real GDP Growth at Market Rates in %



Source: World Bank, 2020

Hypothesis 1: Outbreak, spreading and containment of the Covid-19 virus pandemic in Malaysia.

The Covid-19 is caused by a novel corona virus that infects the respiratory tract. Started in early December 2019, this disease spread rapidly among the residents of Wuhan City, Hubei Province, China. The first Covid-19 case outside of China was reported in Thailand on January 13, 2020 two days after China reported its first death on January 11, 2020. (WHO, 2020)

In Malaysia, the threat of Covid-19 pandemic became increasingly apparent when neighboring Singapore reported its first imported Covid-19 case from Wuhan, China on January 23, 2020 which was the first positive case in the republic.

Initially, Malaysian did not really realize how deadly the virus is. Furthermore, as announced on the January 25, 2020 the Malaysian government has no intention of banning travelers from China although China had already quarantined the entire population of 11 million in Wuhan due to the deadly virus. (The Star, 2020)

During the same period, Malaysians were also not prepared to combat the pandemic mainly because of the political crisis that was happening at the same time and also because they were assured that the virus would not spread so easily in Malaysia. (Majid, 2020)

The first Covid-19 pandemic in the country occurred between the period of 24 January 2020 and 21 February 2020 amounting to 23 cases, mainly comprising infected individuals arriving from China. The first Malaysian was confirmed with Covid-19 in the February 4, 2020. The 41- year old man had recently returned from Singapore when he started to develop a fever and cough. He was quarantined at Sungai Buloh Hospital, Selangor. (Elengoe, 2020)

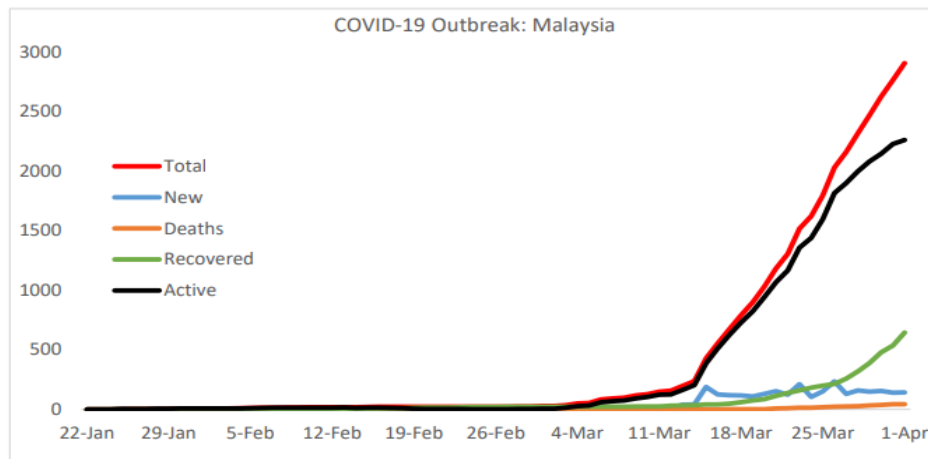
The overall reported cases in Malaysia can be sub-divided into three waves with the first wave was successfully handled by February 27, 2020 with all 22 previously reported cases being discharged from hospitals. The second wave began on 27 February 2020, establishing community transmission of COVID-19. After a number of individuals who attended a gathering of more than 10,000 people at the Sri Petaling mosque were confirmed with COVID-19. The number of critical cases in the intensive care unit (ICU) increased each day, with the first two critical cases being reported on the March 9, 2020. Malaysia's first fatal case was reported on the March 17, 2020 related to the religions gathering in Seri Petaling. This is followed by another death reported on the same date from a case in Sarawak. (Abdullah, 2020)

As at March 31, 2020 a total of 2,766 positive cases had been reported to the Ministry of Health (MOH) with 537 recovered cases and 43 deaths. This points to a total of 2,186 active cases currently being treated in hospitals and 580 closed cases. The Malaysian government together with the MOH has made tremendous effort to face and handle the outbreak during this period and beyond. (Abdullah, 2020).

Among the initial efforts adopted by the MOH to prevent the disease transmission was the enforcement of health screening at all entry points. According to the Director-General of the MOH, Datuk Dr. Noor Hisham Abdullah, one of the strategies was the placement of thermal scanners to enhance the detection of fever amongst tourists and locals returning aboard. (Bernama, 2020)

The subsequent actions taken by the MOH along with the government to overcome the spread of Covid-19 was to increase the number of hospitals that treat Covid-19 cases.

Table 3: **Progression of Covid-19 outbreak in Malaysia**



Source: World Bank, 2020

Hypothesis 2: Enforcement and extension of the Movement Control Order (MCO) in Malaysia.

To protect Malaysian citizens from the deadly Covid-19 disease, Malaysia was one of the first countries to come up with various quick responses aiming at minimizing economic and social impacts, limiting its spread and providing care for its citizens especially the elderlies.

A Movement Control Order (MCO) was implemented by the government on March 18, 2020 to keep the spreading and mortality of the disease under control. The MCO is related to the restriction of people movement into or out of an area. The Director-General of the MOH emphasized that the order enforced came under the Prevention and Control of Infectious Diseases Act 1988 and the Police Act 1967 to assists in the controlling of the spread of the virus. (Bernama, 2020)

The 2020 MCO, also known as a form of partial lockdown prohibits mass movements and gatherings at all places nationwide including religious services and demand closure of all business premises except manufacturers, suppliers, retailers and food outlets. (Kumar et al., 2020)

The MCO intends to reduce in-person contact through three main actions:-

1. Shutting down of government and private premises.

All government and private premises are to be closed and all operations are to cease, except for those that come under "essential services". These essential services include banking, transportation (air/land/sea), telecommunication, electricity and water, food supply and preparation services and e-commerce.

2. Travelling ban.

During the MCO period, Malaysians are not permitted to leave and non-citizens are not allowed to enter the country. Malaysians overseas may return but be subject to medical examinations upon arrival and be quarantine for a period of 14 days. For non-citizens wanting to enter Malaysia, only those with diplomatic status, permanent residents and expatriates will be permitted to do so on a case-by-case basis and will also be subject to a 14-day quarantine upon entry. No land travel is permitted, except for those transporting essential goods and services.

3. Movement restriction.

There will be no public gatherings including religious meetings, recreational activities and social gatherings throughout this MCO period.

Any violation of the MCO are subject to a fine amounting to RM1,000 and a maximum of 6 months imprisonment. (Prime Minister's Office of Malaysia, 2020)

Effective from 1 April onwards, operating hours of all businesses were limited to 8 am to 8 pm, and all citizens were confined to a 10-km travel radius while traveling for the purchase of essentials was limited to only one person at one time from each household (Bernama, 2020).

Residents in locations identified as hotspots of Covid-19 underwent stricter MCO, with prohibition of permanent and temporary residents in those areas from leaving their homes and prohibition of non-residents from entering. Food was provided by the government to the affected individuals, and medical bases were set up in those areas (Prime Minister's Office of Malaysia, 2020).

With the daily Covid-19 diagnosis showing a downtrend, more businesses are allowed to resume operation, including manufacturers of packaging and printing materials, hardware stores, laundries, barbers, and optometrists, with conditions applied (Koya, 2020).

The strict MCO enforced since 18 March 2020 was aimed at putting the brakes on the rapid increase in the number of cases of COVID-19 at the beginning of the second wave, thereby 'flattening' the curve to prevent overwhelming the healthcare system.

This intervention appears to be having an impact on slowing down the COVID-19 transmission, as the curve for the second wave of active cases in Malaysia has peaked, and is on a slow but apparently steady decline. However, this extreme public health measure is not without costs and criticism, as the enforcement of the MCO to an estimated 95% compliance has resulted in significant disruptions to economic activities and other civil liberties. (Khazanah Research Institute, 2020)

Table 4: Stages of MCO and its coverage period

<u>PHASE</u>	<u>DETAILS</u>	<u>PERIOD</u>	<u>DURATION</u>
Phase 1	Original MCO	March 18 to March 30, 2020	2 weeks
Phase 2	1st Extension	April 1 to April 14, 2020	2 weeks
Phase 3	2nd Extension	April 15 to April 28, 2020	2 weeks
Phase 4	3rd Extension	April 29 to May 12, 2020	2 weeks
Phase 5	4th Extension	May 13 to June 9, 2020	4 weeks
Phase 6	Recovery MCO	June 10 to Aug 31, 2020	12 weeks
Phase 7	Recovery MCO	Sept 1 to Dec 31, 2020	18 weeks

Source: NST, 2020

Hypothesis 3: Economic stimulus program, financial aid and fiscal policy introduced by the Malaysian government.

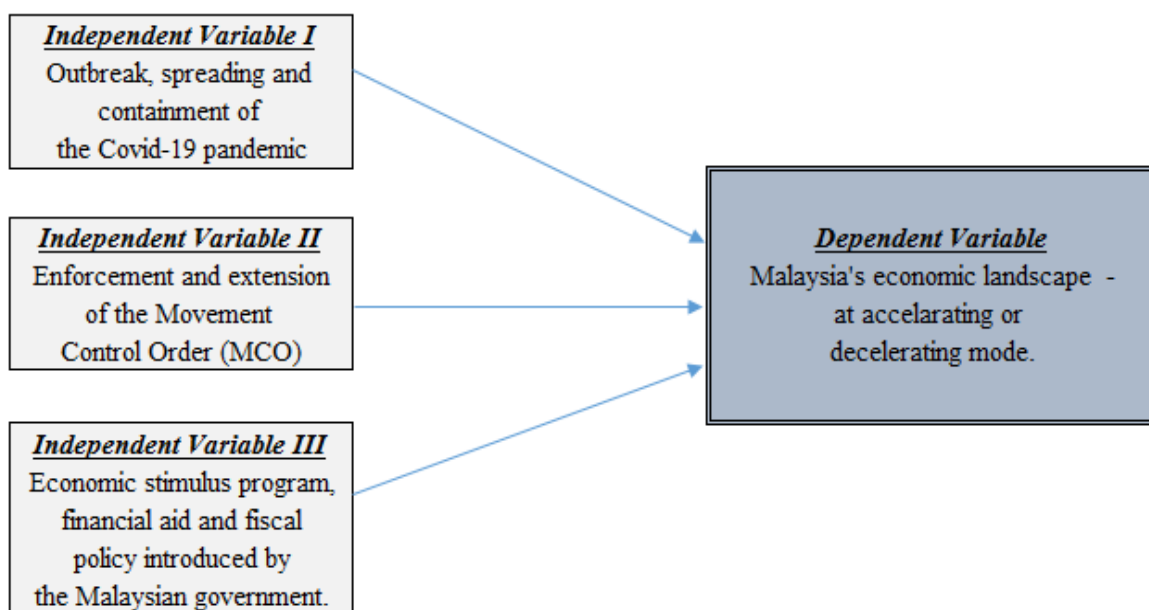
The massive and ongoing outbreaks of the pandemic virus have become a serious threat with profound consequences for the economy and the financial market as whole. As expected, the financial market is predicted to collapse with a new global recession becoming a reality. (Majid, 2020) With the sudden enforcement of the MCO by the Malaysian government, various sectors and industries of the economy are in jeopardy. The Covid-19 caused a direct damage to key economic sectors like tourism and travel industries, retail, manufacturing, construction, mining and agriculture, with many workers being laid off and others being placed on unpaid leave. (Murugiah, 2020) The forced closure of small micro businesses, mainly the small and medium-sized enterprises (SMEs) and services could most probably lead to permanent shutdowns and many losing their jobs as well as individuals going bankrupt. (Cheng, 2020)

To minimize the social-economic impact of this virus pandemic, Malaysia has initiated and adopted several mitigating actions to recover the economy. In February 2020, the former Prime Minister of Malaysia, Tun Dr. Mahathir Mohamad announced a RM 20.0 million financial stimulus package to lessen the effect of Covid-19, encourage people-based economic growth and quality investments. This announced strategy aimed to stimulate the travel industry, easing cash flow and providing support to affected individuals. (The Star, 2020)

Bank Negara Malaysia (BNM) also has taken some drastic measures to reduce the financial impact caused by Covid-19 jointly together with the government. On March 24, 2020 BNM offered a moratorium or postponement of payment for all bank loans except for credit card debts. According to the Deputy Governor of BNM, Jessica Chew, the initiative was taken by considering the financial constraints of borrowers. (Anuar, 2020)

The Prime Minister of Malaysia, Tan Sri Muhyiddin Yassin has announced on March 27, 2020 a new aid package as part of continuous efforts to reduce the negative effect of Covid-19. This package is worth RM 250 billion and has been designed to safeguard the people's welfare, support businesses including SMEs and strengthening the Malaysian economy. (Yassin, 2020). Known as PRIHATIN Rakyat Economic Stimulus Package (PERIHATIN Package), this aid package will provide immediate assistance to lessen the burden of all, especially those who are financially affected during the Covid-19 pandemic,

Diagram 1: Conceptual Framework – Determining and influencing factors towards the progress of Malaysia's economy.



LITERATURE REVIEW

The pandemic has made lives of most Malaysians unexpectedly vulnerable. Many did not expect that in the modern age there was such a pandemic that made individual and business income materially reduce. Lifelines of workers were disrupted as the pandemic causes a multitude of domino effect.

The disruptions of critical infrastructures in the travel, airline and transportation creates a collapse of economies which are direct economic boost to countries that rely on it.(Daniel Felsenstein et al, 2020) The cascades of this disruption hence are uncontrollable as there was no enforcement to this disruptions.

The global economic vulnerability has a direct link to the Tourism industry. According to the estimation by WorldTravel and Tourism Council (WTTC), tourism sector has contributed to US7.2 trillion (9.8% of global GDP) and 284 million jobs (9.1% jobs globally) (WTTC, 2016) The lack of assessment of understanding such disasters and its impact to the economies have been taken lightly

(Scott et al., 2012, Scott et al., 2016) Climate change will definitely pose to the contributions to the Sustainable Development Goals (Daniel Scott, 2019).

The lockdown because of the pandemic had a negative impact on the food security in the households as the income shock (Arndt, Channing et al., 2020). The negative effect of the prolonged lockdown has created a medium term to longer term recovery being prolonged. The Government has to create many economic stimulus packages such as the RM35 million Penjana, a Government initiative to bring about a turnaround. Initiatives such as subsidising spending for citizens, RM50 for every citizen in the form of e wallet. Loan moratorium provided until 30th September 2020 to the public who have loans to pay for, helped ease their burden. Subsidies to companies for salaries of workers to help companies sustain the workforce. The Penjana initiative also gives training to workers to upskill themselves. Without the Government initiatives the economy of countries will collapse as it needs a push factor to improve the money spending, GDP and businesses.

The lockdown caused public transport to be minimised, people to work from home except those running essential services and those frontlines. Digitalisation such as online food delivery, online shopping caused the delivery services to work overtime and revenues and profits to improve. The pandemic increased the revenues of these sectors. The unemployed managed to get another stream of income as there was no help to substitute their income. The policies in place must be affordable and in line with Sustainable Goals. Before the Pandemic the process towards the Sustainable Goals were lacking and the Pandemic gave an eye opener why the policies were necessary to make sure the Goals were important.

Affordable policies need to be processed in order to align itself to economic incentives for longer term sustainability. (Edward B. Barbier et al., 2020) The Pandemic has caused poverty, disruption to food production and distribution, reduced quality of healthcare, school closure and less accessibility to online learning and unemployment on the rise were the major concerns. Uncertainties like the pandemic has made countries aware on the development of the policies and prioritising them to cater for unforeseen problems. Subsidies for the poor and carbon tax are policies which can help towards the sustainable goals.

To date the Covid-19 virus is spreading and the Director General of Health has been warning if there the number of new cases and new clusters, there will be a possibility of another lockdown. This will be a great impact on the economy. Businesses also have called for stricter enforcement on the public and businesses as the business community cannot withstand the possibility of another lockdown. The second lockdown will not only hurt business revenue but would wipe them out stated by Malaysia Retail Chain Association president Datuk Seri Garry Chua. (Lai, 2020)

RESEARCH METHODOLOGY-SAMPLING DESIGN, RESEARCH PROCEDURES AND DATA COLLECTION

The study is a quantitative study and will be based on the secondary data obtained from the Ministry of Finance, Bank Negara Malaysia and other relevant sources. The variables will be analyzed by using SPSS 22.0 to test the relationship via Pearson Correlation and regression.

Pearson Correlation coefficient is used to find out the relationship between economic performance and individual variables. While, regression analysis is used as a method to find out which of the independent variables consist of outbreak of COVID 19, MCO enforcement and financial aid affecting the dependent variable economic performance were significant with respect to predicting the most influential capital structure determinants.

Regression analysis is conducted to reveal the linear relationship between economic performance and other independent variables of the country. The variables (GDP) are retained in the regression model on the basis of high t value ($|t| > 2$) and low p-value ($p < 0.05$).

DATA ANALYSIS

Table 5 shows the correlation among the different variable in the study. The variable economic performance a significant positive correlation with pandemic outbreak ($r=0.722$, $\text{sig}=0.030$) MCO ($r=0.716$, $\text{sig}=0.04$) and financial aid ($r=0.326$, $\text{sig}=0.50$)

Table 5: Correlation between Economic Performance and Other Individual Variables

		Economic	Outbreak	MCO	Financial
Economic Performance	Pearson Correlation	1	.722*	.716	-.326
	Sig. (2-tailed)		.030	.004	.50
Outbreak	Pearson Correlation	.722*	1	.833**	-.145
	Sig. (2-tailed)	.021		.000	.337
MCO	Pearson Correlation	.516*	.871**	1	-.314
	Sig. (2-tailed)	.049	.000		.437
Financial Aid	Pearson Correlation	-.427	-.337	-.165	1
	Sig. (2-tailed)	.378	.517	.517	

Hypothesis Testing

- H0: There is not significant positive relation between economic performance and COVID 19 outbreak.
- H1: There is significant positive relation between economic performance and COVID 19 outbreak

In this case both the variables economic performance and COVID 19 pandemic are continuous variables. At the significant level of 0.05, we found that $|t|$ -value > 2 (t-value 2.116) and p-value=.022 (Table 6) which is less than 0.05. Hence, we can reject the null hypothesis and accept that there is significant positive relation between COVID 19 pandemic and economic performance.

Table 6: Regression Analysis of Economic Performance and COVID 19 Pandemic

Variable	R Square	Adjusted R Square	Beta	t-Value		
Pandemic	.516	.426	.722	2.116		
ANOVA Table						
Model	Sum of Squares		Df	Mean Square	F	Sig.
Regression	.017		1	.017	8.369	.022
Residual	.017		8	.002		
Total	.034		9			
a. Predictors: (Constant), Tangibility						
b. Dependent Variable: leverage						

- H0: There is not significant positive relation between economic performance and MCO.
- H1: There is significant positive relation between economic performance and MCO.

In this case both the variables economic performance and MCO are continuous variables. At the significance level of 0.05, we found that $|t|$ -value > 2 (t-value 3.180) and p-value=.050 (Table 3). Hence, we can reject the null hypothesis and accept that there is significant positive relation between MCO and economic performance.

Table 7: Regression Analysis of MCO and economic performance.

Variable	R Square	Adjusted R Square	Beta	t-Value	
MCO	.329	.341	.614	3.560	
ANOVA Table					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.013	1	.014	5.210	.056
Residual	.021	8	.003		
Total	.034	9			
a. Predictors: (Constant), NDTs					
b. Dependent Variable: leverage					

- H0: There is no significant negative relation between economic performance and financial aid.
- H1: There is significant negative relation between economic performance and financial aid.

In this case both the variables economic performance and financial aid are continuous variables. At the significance level of 0.05, we found that $|t|$ -value > 2 (t-value 3.560) and p -value=.056 (Table 7). Hence, we can reject the null hypothesis and accept that there is significant positive relation between financial aid and economic performance.

CONCLUSION

The main objective of the study is to test the relationship between economic performance (dependent variable) and the MCO, COVID 19 Pandemic and Financial aid (independent variables). Due to time constraints, the study only managed to collect economic data for quarter 1 and quarter 2 of 2020 and the rest of the data were obtained base on the forecast value from Ministry of Finance, Bank Negara Malaysia.

The data collected were considered as sample to analyze the determinants of economic performance by applying regression analysis. For the purpose of the study, independent variables were tested for the relationship which considered understanding the effect on the economic performance (dependent variable) position of the country.

With the help of regression analysis, it is found that MCO, COVID 19 pandemic and financial aid have a positive relation with economic performance. Hence, our government as the policy maker have to adopt a more serious consideration towards the impact of the three independent variable for future economic decision making and policy formulation. At the same time ensuring the people of Malaysia are being shield from the negative impact of the economic crisis.

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BAFE017: MALAYSIANS' WILLINGNESS TO WORK IN GIG ECONOMY

Siew, Xin-Jie^a, Ng, Kar-Yee^b

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: siewxinjie@1utar.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngky@utar.edu.my

Abstract

Innovation in technology not only changes the business models of traditional industries, but also significant changes have been brought about by technological innovation in the organisation of work and employment relationships. The gig economy, which refers to economic activities involving the recruitment of temporary or freelance workers who do not work for an employer and are paid separately per piece of work. In order to connect employees with customers for one-off tasks or on-demand jobs that are completed either virtually or in person, online platforms use technology. These 'workers' groups are recruited under a more flexible arrangement, usually referred to as 'independent contractors' or 'consultants' whose employment is for a specific duration by task-based or project-based employees. Gig workers are attracted by the flexibility and freedom offered by gigs compared to jobs, despite job insecurity. This alternative work arrangement may satisfy the relatively well-paid gig workers and enjoy the work-life balance, but not for those workers who are being discharged from their formal employment due to the recent episode of economic recession around the world. This research seeks to investigate the willingness of Malaysians to work as gig employees and the reasons for their preference. The study will therefore conduct a survey to gather the perception of Malaysian on gig economy employment. The findings of this research could provide the government with insights into the design of labour market regulation policies.

Keywords: Gig economy, freelancers, long-term employment, digital transformation

INTRODUCTION

Due to technological innovation and the rise of the shared economy, there has been a significant change in labour relations, work organisation and employment relations in recent years. As such, larger economies such as the United States have experienced a dramatic decrease in long-term employment relationships where a growing proportion of the American workforce is no longer employed in 'jobs' with a long-term relationship with a business, instead working as a freelancer or independent contractor known as a gig worker (Friedman, 2014). Gig workers are generally hired to perform jobs that are not permanent, and they take on-demand jobs through online platforms that serve as a labour market, either temporary or project-based in nature. These digitally mediated labour markets or online labour platforms use technology to link freelancers (labour supply) to customers (labour demand) for one-off tasks / jobs performed either virtually or in person.

As defined by (Ancy & Rukhsar, 2019), the individuals involved in the gig economy or 'freelance economy' come from a wide range of backgrounds, including an e-hailing driver or Airbnb host, a project manager or a software developer. Freelance gigs have been classified by Randstad Talent Sdn Bhd into two broad groups: independent contractors and project-based gigs. Compared to the desk-bound corporate job, the first group consists of employees who enjoy the flexibility and freedom of gig operations. The gig works best suit the needs of families and students who by performing gigs on their own time can now make a living or extra household income. Examples of project-based gigs include companies that outsource a highly skilled and experienced project manager or IT specialist to the task of creating user-friendly and mobile-optimized websites. Similarly, De Stefano (2016) distinguishes two business models of the gig economy, namely "crowdwork" and "on-demand work via apps." Crowdworkers, on the one hand, operate online through platforms that connect a large number of customers and companies across borders. Work on demand through apps,

on the other hand, refers to jobs that are platform-facilitated but location-based and geographically restricted, such as e-hailing drivers, food deliveries, home repairs and domestic work.

Both workers and the economy benefit from these on-demand gigs, particularly helping to support job growth and household income in the post-Great Recession recovery of the labour market in the US and European countries. Most of the gig works provide flexible arrangement of work and lower barriers to the entry of workers. These characteristics allow gig workers during difficult times to generate fresh income or supplement their primary incomes. Companies and businesses have also benefited from the gig economy's flexibility as they can outsource freelancers to one-off tasks; and thus, businesses are able to reduce the operating costs of retaining permanent employees. In addition, customers who also buy such on-demand services have benefited from the convenience and availability of services often offered at lower costs (Dokko, Mumford, & Schanzenbach, 2015).

In their Global Gig-Economy Index, the digital payments platform, Payoneer, finds that America is the world's fastest-growing freelance markets in 2019, followed by the United Kingdom and Brazil, which is powered by data from a sample of more than 300,000 freelancers, service providers and outsourcing professionals using Payoneer to manage their cross-border payments (Payoneer, 2019). In the meantime, the report also highlights the highest regional growth in Asia, with four countries (Pakistan, the Philippines, India and Bangladesh) among the top 10 freelancers.

In these countries, the reason for the gig economy to grow so quickly varies by country. U.S. and U.K. in Platforms provide an option for those professionals who voluntarily choose to work as freelancers for lifestyle reasons where they have a more mature market (Payoneer, 2019). Because of the flexible hours, the lack of supervision from managers or they want to build their own business, more and more professionals are leaving their job to join the economy. Gig economy flexibility also works for businesses that want to hire employees but want to bear lower risks in hiring. In addition, in some other markets, particularly emerging economies such as Pakistan, the gig economy is attractive to younger generations who are more tech-savvy or who, due to improved educational levels, prefer less formal work structures. The strong support from governments through tax incentives and training schemes aimed at improving the IT-based knowledge of workers, which is crucial for them to be digital workers, particularly rural workers, is another key driver of the growth in the earnings of freelancers.

Not all gig employees choose to be an independent employee just to enjoy the flexibility and freedom of the gig work. Four key segments of independent workers are presented by McKinsey Global Institute (2016). The first segment is labelled as "free agents" who actively choose and derive their primary income from independent work. The second segment represents "casual earners" who use supplementary income for independent work and do so by choice. The third segment caters to those who make their primary living from independent work but are known as "reluctant" and prefer traditional jobs. And because they are "financially strapped," the last group of independent workers refers to those who do additional independent work out of necessity.

Given the recent developments in all countries, in particular the pessimistic views on the prospects and projections for economic growth impacted by the COVID-19 pandemic, policymakers are concerned about the slowdown in economic activity and the rise in unemployment. The Malaysian government encourages people to take part in the gig economy, particularly the unemployed youth. This research henceforth attempts to examine the variables that would affect the willingness of Malaysians to work as gig workers. This is an ongoing study, so the remainder of this paper will present the literature review and the study methodology proposed.

LITERATURE REVIEW

Innovation in technology, particularly in information and communication, has changed the landscape of the labour economy, contributing to the rise of the Internet of Things (IoT) and cloud computing. Consequently, to explain the new phenomena, there are some terms used. (Green, Walker, Alabulthim, Smith, & Phillips (2018) defines a gig economy as an economy in which people market their skills, whether in a less qualified labour market or a skilled professional. It can also be referred to as 'crowdsourcing,' sharing economy 'and' collaborative economy '(Steward & Standford, 2017), as gig workers offer their services using digital platforms. Some studies refer to gig workers

who are self-employed as a self-employed individual, which is considered a form of entrepreneurship (Baitenizov, Dubina, Carayannis, & Azatbek, 2018; Bogenhold & Klinglmair, 2017).

There are push and pull variables that influence individuals to work as independent employees, thus driving gig economy growth (Balaram, Warden, & Wallace-Stephens, 2017). The determinants of gig economy growth are separated into two groups, micro (individual) and macro (aggregate) variables by Millan, Congregado and Roman, (2012). The basic demographics such as gender, age, educational level, work experience and motivation and attitude of the person towards risks are included in individual variables. Meanwhile, the macro variables include the rate of economic growth, the unemployment rate of the country, subsidies and company tax incentives.

The high unemployment rate during the period of global financial crisis between 2007 and 2009 is one of the significant factors that drives people entering the gig economy. A 2017 study by the Chartered Institute of Personnel and Development (CIPD) found that 14 percent of UK individuals work as gig economy employees because they are unable to get a permanent full-time job with an employer (CIPD, 2017). Research conducted by Odgers Connect (2017) suggests that it is better for individuals to participate in gig work than to be unemployed. Another study by Pfeiffer and Pohlmeier (1992) found that there is a positive relationship between unemployment and self-employment, where a drop in the total number of jobs in large companies will increase the total number of small businesses at the same time or even at a faster pace. On the contrary, Blanchflower (2000) finds that in Austria, Denmark and Finland, self-employment has a negative impact on unemployment; and in France, the Netherlands, Greece, Sainte-Portugal, it has no impact on unemployment.

Using the Heckscher-Ohlin trade model and the Shapiro-Stiglitz unemployment model, Brecher and Chen (2010) examine the unemployment of skilled and unskilled labour in an open economy. They find that hiring employees outside the company has no impact on salaries and employment in a labour market that is balanced. However, hiring workers outside the company will have an impact on low-skilled workers inside the company, so free trade is essential to keep the market in balance.

In addition, today's younger generations have a different attitude to work, whereby they do not seek a job that they can work for their entire life. The younger generations, especially those millennials, are comparatively more open to work with lower job security levels (Kowske, Rasch, & Wiley, 2010). On the generational differences related to work values and attitudes, Samola and Sutton (2002) make a similar conclusion. They find that younger generations appreciate the flexibility of the job and, compared to their counterparts from previous generations, are more likely to accept work that has flexible schedules. In this era of technology, younger generations immersed in digital and growing up provide them with the facility to use their talents and skills (Hershatter & Epstein, 2010)

In their study, Ancy and Rukhsar (2019) found that the flexibility offered by the gig economy benefited 64 percent of respondents. Furthermore, 48% of their respondents indicate that by working as a freelancer, their income increased, and 43% of them gained self-satisfaction from the tasks they completed after joining the gig economy. In addition to another main job, it is often thought that people work in the gig economy is to get occasional revenue top-up. Most crowd workers surveyed by Huws and Joyce (2016) in the UK, however, are the primary providers in their household. As their sole or main source of revenue, they rely on the revenue earned through gig work.

Speaking of individual motivation, it is a process that fulfils needs. When his / her needs are met by some specific factors, an individual will strive as much as possible in their work (Robbins, 2001). There are a few theories, such as Maslow (1954), McClelland (1961) and Herzberg (1966), which define and examine the notion of motivation according to the assumption of individual needs. The Motivation-Hygiene Theory of Herzberg is also referred to as a two-factor theory that categorises factors influencing the satisfaction of workers into two dimensions, namely hygiene factors and motivational factors (see Table 1). Hygiene factors would not motivate employees to contribute effort, but dissatisfaction can be avoided, so these factors have no effect on satisfaction. By contrast, The real factors that motivate employees to work are motivator factors.

Hygiene factors are, according to this theory, extrinsic factors that are less important in motivating employees to work. It is recognised as factors of the work context that only prevent dissatisfaction from arising and act as a criterion for employers to provide a better work environment

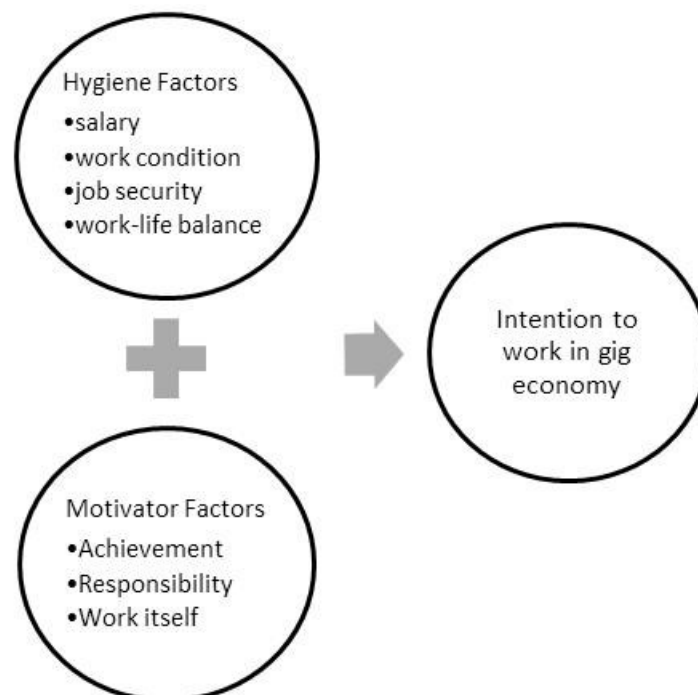
(Robbins, 2001). Motivational variables, on the other hand, are intrinsic variables that lead to job satisfaction and motivate them to contribute to their efforts. In short, hygiene factors affect employees' willingness to work, while the quality of work will be determined by motivational factors. However, in contrast to each other, these two groups of factors are not necessary (Robbins, 2001).

Table 1: Herzberg's Hygiene-Motivator Factors

Hygiene Factors	Motivational Factors
Salaries, wages and other benefits	Achievement
Company policy and administration	Status
Good inter-personal relationship	Recognition
Quality of supervision	Responsibility
Job security	Opportunity for advancement
Working conditions	Promotion
Work-life balance	Growth
	Work itself

As the aim of this study is to determine the willingness of Malaysians to operate in the gig economy, the study therefore proposes a conceptual framework that incorporates the two-factor model of the Herzberg. The conceptual framework showed the variables that motivate the willingness of gig employees to work in the gig economy. The dependent variable of this study is the intention to operate in the gig economy, and two hygiene factors and motivating factors categorise independent variables. Hygiene variables include wages, working conditions, job security and work-life balance, while achievement, accountability and work itself are motivational variables. It suggested in this study that these two main factors will have a major impact on the intention to operate in the gig economy.

Figure 1: Proposed Conceptual Framework



METHODOLOGY

The target population for this study is Malaysians 18 years of age and above who, in accordance with the provisions of the Employment Act 1955, can work within normal working hours (i.e. 8 hours per day). As there is no sampling frame, this study will therefore use two non-probability sampling techniques to select the respondents, which are convenience and snowball sampling technique.

In order to collect the primary data, the research uses self-administered questionnaires. Four sections consist of the questionnaire. Section A aims to collect the respondents' basic demographic information, such as gender, age, level of education and job status. The second part of the questionnaire asks respondents a few questions about their gig economy awareness. Section C extracts information on the perception of the gig economy by the participants. Use the 5-point Likert scale to design the questions. The last part of the questionnaire describes the willingness of respondents to work in the gig economy as well as the ranking of variables influencing their choice.

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BAFE018: PUBLIC PERCEPTION OF BELT AND ROAD INITIATIVE PROJECTS IN MALAYSIA

Lee, Si-Ying^a, Ng, Kar-Yee^b

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: siyinggglee@1utar.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia,
Email: ngky@utar.edu.my

Abstract

Since the launch of BRI in the year 2013, more than 68 countries have gladly expressed their interest in joining the largest infrastructures and projects in modern history as the initiative aims to close the 'infrastructure gap' and accelerate the economic growth across the Asia Pacific area, Africa, as well as Central and Eastern Europe. Although the Chinese government claimed that this ambitious foreign policy would enhance regional connectivity and embrace a brighter future, especially among the developing countries, BRI received criticism from the neighbouring countries and western countries, particularly the United States. These critics are mainly concerned about the debt sustainability issue as most of the developing countries that participate in the BRI infrastructure projects borrow heavily to fund the mega projects. The BRI mega infrastructure projects in Malaysia were also put under the spotlight and provoked criticism, particularly during the 14th General Election in year 2018, despite China is our main trading partner. The aim of this study is therefore to examine the public understanding of BRI projects in Malaysia and their perception of Malaysia's involvement in BRI. Surprisingly, half of the 200 respondents surveyed indicated that they had never heard of the BRI. Nevertheless, most of the respondents feel positive and welcome more infrastructure investments, as they perceived these investments would create more jobs and business opportunities. The findings suggest that several parties play a different role in improving the public's understanding towards the effects of BRI projects in Malaysia.

Keywords: Belt and Road Initiative, public perception, ECRL, MCKIP

INTRODUCTION

Chinese President Xi Jinping proposed an ambitious programme for global and economic policy in 2013. It is known as the Silk Road Economic Belt and 21st Century Maritime Silk Road (Cai, 2017). It is also commonly referred to as the Belt and Road Initiative (BRI). The programme links Asia with Africa and Europe through land and sea networks along six corridors to boost regional integration, increase trade and promote economic development (European Bank for Reconstruction and Development, n.d.). The aim of this initiative is also to build and develop physical, political and financial conditions that will boost foreign trade, investment and economy (HSBC Bank Malaysia Berhad, n.d.). Malaysia is China's main trade partner in ASEAN, while China has been Malaysia's largest trading partner in the last decade (Grassi, 2020). Since 2016, China has become one of Malaysia's largest investor. Following the introduction of BRI in 2013, Chinese investment in Malaysia has increased significantly. The well-established China- Malaysia diplomatic relationship has resulted to Malaysia actively participated in various BRI projects.

Malaysia, however, was surprised by the Chinese Government's first 60-year change of power in May 2018. Prior to the 14th general election (GE14), the coalition of opposition parties, *Pakatan Harapan*, had criticised the BRI mega-projects. They argued that multi-million-dollar projects would have cost Malaysian sovereignty. The debates between the political parties over the issues and controversies of the BRI projects have been widely reported in the media (through news coverage in the main media) and social media. The problems of the BRI did not fade away after the general election; instead, the newly elected government of *Pakatan Harapan* either cancelled or suspended some of the infrastructure projects for renegotiation. They argued that the terms and conditions of

these projects are "unfair" to Malaysia and that construction costs are over-budgeted. For example, the Government suspended the ECRL project in July 2018 but agreed to continue the project at RM44 billion after months of negotiation. Subsequently, Malaysia also revived the *Bandar Malaysia* project with a revised RM140 billion ('East Coast Rail Link Proceed, Malaysia China Slash Costs,' 2019).

BRI projects typically involve large companies and businesses that neglect farmers, small and medium-sized enterprises, students and grassroots. It may seem attractive to small and medium-sized enterprises when BRI is first launched (Careem, 2017). However, the impact of the initiative has yet to be seen and may be of direct or indirect benefit to small- and medium-sized enterprises. Opportunities can only be seen in large companies, construction companies and service sectors, rather than in small and medium-sized enterprises. Moreover, BRI presents the public with an ambiguous and hysteric image, because no one really knows what this initiative really is (Ang, 2019). The Chinese Government has never published an official statement on the development of BRI projects and the list of companies involved in this initiative. Consequently, the Chinese interest groups have been given the opportunity to claim that their projects are in the BRI.

Not many studies have been conducted to understand public awareness and perception of BRI projects in the country. The objectives of this study are therefore twofold. First, the aim of this study is to examine public understanding of BRI projects in Malaysia. Second, this study seeks to assess the public perception of Malaysia 's involvement in BRI despite the mega-project disputes and the ambiguity of the government's attitude.

LITERATURE REVIEW

Malaysia Economic Outlook

The economy of Malaysia is market oriented (Nor, 2013). Every part of Malaysia has a crucial role to play in promoting economic development. Malaysia 's economy was ranked third in South East Asia and 28th in the world in 2012. According to the OECD (2019), Malaysia has been performing well in recent years compared to other developing countries that are rapidly catching up with living standards in OECD countries. Malaysia's Gross Domestic Product (GDP) per capita was almost two-thirds of the OECD average for 2017, which was above Mexico, Turkey and Chile. Malaysia's longevity towards external stocks has improved thanks to the diversity and development of export products as well as national economic prudence. The mid-term review of the Eleventh Plan, revealed in October 2018, has postponed the target year to 2024 due to recent trends in macroeconomics. It would be necessary to maintain the pace of growth and focus on increased productivity in order to achieve the expected goal. High-quality development of operations requires more action to ensure social inclusion and to protect the environment.

Malaysia has moved from the agricultural economy to the manufacturing and service industries. Integrating agricultural exports to manufacturing, particularly electrical and electronics, has increased in the global value chain. Malaysia is now one of the freest markets in the world, with global trade accounting for about 130 %of GDP. China, Singapore, the United States, Japan and Thailand are the main trading partners that have collectively contributed more than 50% of Malaysia's overall trade balance since 2010. Malaysia was ranked 20th in total exports in 2018, 25th in total imports and 26th in the world's most dynamic economy (OEC, 2020). Malaysia exported \$270B in 2018 and imported \$212B resulted in a positive trade balance of \$57.6B. Malaysia's exports per capita were \$8.56k in 2018 and its imports per capita were \$6.73k.

According to Malaysia's Department of Statistics (2020), Malaysia's total trade amounted to RM160.2 billion , an increase of RM2.9 billion or 1.9 %in 2019 compared to the previous year. The trade surplus, estimated at RM12.6 billion, increased by RM1.6 billion (14.7%) in 2019 compared to 2018. Annually, exports increased by 2.7%, which amounted to RM86.4 billion in 2019. China and Singapore were Malaysia 's two largest export markets in December 2019. Exports to China totalled RM13.7 billion, or 15.8 %of total exports, and increased by RM2.1 billion (17.8 per cent) compared to 2018. Moreover, exports to Singapore were priced at RM11.6 billion, or 13.4 %of total exports, reduced by RM322.2 million (2.7 per cent). Imports increased by RM665.1 million or 0.9 %to RM73.8 billion. Import growth was mainly due to intermediate and consumable goods. China and Singapore were the main sources of imports to Malaysia in December 2019. Imports from China, which reported

RM16.0 billion, increased by RM473.7 million (3.1 per cent) compared to the previous year. Imports from Singapore reported a decrease of RM392.7 million from the previous year to RM7.2 billion.

In 2016, total trade increased by 1.5 % to MYR 1.485 trillion compared to MYR 1.463 trillion in 2015, mainly due to the high volume of trade with China (Beh *et al.*, 2018). Malaysia's total exports amounted to MYR 690.25 billion in the first nine months of 2017, an estimated 16.6 % increase in exports in 2017 compared to 2016. Malaysia's trade increased by 21.7% to MYR 1,311 trillion in the same period of 2016 in the first nine months of 2017. Export volumes increased in 2016 mainly due to higher exports of manufactured goods such as electrical and electronic goods, petroleum products, transport equipment, optical and scientific equipment, apparel, rubber products and iron products. The second highest in volume is the export of mining goods, followed by the segment of agricultural goods.

The COVID-19 pandemic ultimately affected Malaysia's trade and economy due to China's rapid slowdown in global trade (Rajamoorthy, 2020). Malaysia's total import, export and trade balance decreased from December 2019 to January 2020 compared to the total import, export and trade balance that improved from November 2019 to December 2019. As the pandemic began in Wuhan, China, in early December 2019, Malaysia's exports improved, while imports decreased due to an increase in the trade balance from November 2019 to December 2019. Electrical and electronic products as well as liquefied natural gas products show a positive increase in exports as of January 2020. In the meantime, palm oil and palm oil products and machinery, equipment and parts have shown growth in imports. Malaysia is exporting gas to Singapore, Taiwan, Korea, Japan and China. The pandemic has led to a decline in exports to Taiwan and China. However, Japan showed a higher increase in exports of liquefied natural gas in December 2019 and January 2020. The exports of electrical and electronic products in December 2019 and January 2020 show improvements which indicate the positive impact of the COVID-19 pandemic on the export of these products. Despite the pandemic, Singapore remained the main exporter of electrical and electronic products in January 2020. China and Taiwan have decreased exports, while Japan has the highest exports. In addition, the USA and Germany have the highest imports. In the first quarter of 2020, wholesale and retail trade is expected to decline by 5.3%, which will have a direct impact on Malaysia's economy, particularly if the pandemic continues.

Infrastructure

According to Hamood *et al.* (2018), some countries have grasped the attractiveness of foreign direct investment (FDI) by building high-quality infrastructure. This would boost the country's economic performance. In addition, some countries are borrowing to build better transport and telecommunications to attract FDI to their region. In other words, the relationship between infrastructure and FDI is positive. Malaysia is taking the initiative to strengthen infrastructure and telecommunications (Sulong & Harjito, 2005). It is said that it is crucial to attract more foreign investors.

Malaysia has been an attractive market for foreign investors through several strengths, including well-developed infrastructure, labour and economically prosperous countries, as well as a country with a clear legal system and offering attractive benefits to investors (Malaysian Investment Development Authority, n.d.). Malaysia's infrastructure is being built to support business groups. It's one of the best in Asia. The fibre optic and online communication infrastructure, five international airports with air-cargo infrastructures, well-maintained highways and international seaports have made Malaysia a perfect gateway to the Asia-Pacific market. Malaysia's industries are primarily located in more than 500 industrial sites and free trade zones across the region. These zones are classified as zones for the processing of export products that meet the criteria of export-oriented industries. Industrial parks are also accessible to meet the needs of specific industries.

According to Li & Hilmola (2019), China has the largest high-speed rail system in the world. High-speed rail improves the capacity of rail transport. This improves customer experience at a reasonable price and improves the growth of passenger transport. Most infrastructure projects require complex building technology and specifications, such as the ECRL project (Zhang *et al.*, 2020). 33% of the project consists of tunnels passing through the Genting Plateau in the form of a 'double-hole and single-lane tunnel,' which have incredibly high criteria for the design of the tunnel and technical personnel to be imported from China due to the lack of qualified staff in Malaysia. Malaysia also

hopes to increase local employment opportunities, introduce new technologies, stimulate the economy and improve the domestic economy.

Economic Integration

According to Yew et al. (2010), regional integration is where FDI flows through the countries in which they are in the Regional Trade Area (RTA). Inflows of FDI into Member States will increase as a result of trade and investment liberalisation. Globalization involves processes that strengthen the economy, politics and socio-culture across international borders (Zhang *et al.*, 2019). The objective of the BRI project under globalisation is to improve trade and socio-culture in order to achieve sustainable economic growth.

BRI encompasses a wide range of international collaborations. The BRI defines between them three focal points for the implementation of the initiative (Fan, 2018). Connectivity to the infrastructure is certainly the most common. The elimination of infrastructure bottlenecks will be the most important prerequisite for regional economic integration and growth, given the low level of infrastructure projects in the majority of participating BRI countries. The development of BRI infrastructure involves the construction of rail and highways, port stations, pipelines, airports and energy and communications infrastructure.

The second main area of BRI is manufacturing cooperation. Huge investment in infrastructure projects in BRI participating countries would increase the demand for building, construction materials and energy, transport and telecommunications equipment. BRI provides a larger platform for Chinese manufacturing companies to reshape their supply chains. Some leading Chinese manufacturing companies will distribute resources more widely through investments in BRI countries. On the other hand, this allows Chinese companies to have greater and more secure access to capital and customers. In addition, other less developed BRI countries will have the opportunity to engage with these Chinese companies in global supply value chains. By developing regional supply chains, the BRI trading partnership can be upgraded to a more competitive FDI-based and new intra-industry trade based on conventional comparative and advantage-based inter-industry trade. Collaboration in manufacturing requires both a robust infrastructure and a soft infrastructure. For example, regulatory reform, economic integration, bilateral trade agreements and investment contracts.

Financial cooperation is the third major area of BRI. By improving China's financial position in BRI countries, China's global expansion would be supported, leading to mutual improvement between financial cooperation and manufacturing cooperation.

RESEARCH METHODOLOGY

This study is aimed at the public in Malaysia, regardless of nationality, and at respondents from all age groups in Malaysia. The research tool used is to distribute Google Forms to respondents. Data can be easily obtained from the public in Malaysia through an Internet survey as there is no geographical constraint. The location of sampling is therefore not applicable in this study. The target respondents for this study are those who have previously heard about BRI. A qualifying question is included in the questionnaire to screen the respondents who are eligible or ineligible to respond. Respondents must therefore have heard about BRI in order to reply to the questionnaire. Publics who have previously learned about BRI are selected as they are expected to have knowledge and perceptions of BRI projects in Malaysia that will be important for this study. They are likely to have an idea of how to respond to the questions in the Internet survey.

In this study, the non-probability method is used as an efficient and convenient method for collecting samples (Showkat & Parveen, 2017). The forms of non-probability sampling used in this study include convenience sampling and snowball sampling. Convenience sampling is used as samples are selected based on the convenience of the data collector and samples are readily available (Acharya et al., 2013). For example, approaching friends or family as a sample is easier than approaching individuals we do not know (Taherdoost, 2016). The second form of the non-probability method used is snowball sampling. The researcher would ask the respondent to provide information on another potential candidate (Showkat & Parveen, 2017). Snowball sampling is helpful if the population is small or if the population is uncertain. As a result, it helps to increase the size of the research sample (Taherdoost, 2016). According to Halim and Ishak (2014), the appropriate sample

size must be more than 30 persons and less than 500 persons. This study reached 200 respondents to deliver reliable and valid results. Screening of data after receiving 200 respondents is required to screen eligible and ineligible samples. As a result, only 100 respondents from eligible samples will be used for this analysis.

In addition, a self-administrative questionnaire is adopted for the study. The respondents must complete the questionnaire on their own without the participation of interviewer. It helps to eliminate interviewer's bias as well as saves time on administration (World Health Organization, 2008). The questionnaire that has been designed consists of three sections. The questionnaire is developed in English, Chinese and Malay languages. The use of three languages allowed all respondents to fully understand the questionnaire. Respondents can choose which language they want to read to in order to better understand the questionnaire. The questionnaire is culturally and socially appropriate for the public in Malaysia. Questions are in closed-ended format as they create more precision and simpler analysis than open-ended questions. Section A consists of demographic information including gender, nationality, age, education level and occupation. The filtering question is in forced-choice format with the options of "yes" or "no". Section B addresses the public understanding towards BRI projects in Malaysia which consists of two multiple answers to questions and four response options. Section C consists of six Likert scale questions and one forced-choice format question. It seeks to emphasise the public perception of BRI projects in Malaysia.

A pilot test is used to evaluate the questionnaire on a small sample before it is being tested on a larger sample (Sincero, 2012). The questionnaire was self-administered by using convenience sampling from 21st August 2019 to 26th August 2019. Ten respondents are chosen to test the reliability and validity of the questionnaire. There will be less possibility of inconsistent and invalid results by performing a pilot test. Feedback was also received from the respondents to define ambiguity and potential questionnaire problems (Williams, 2003). This study addressed the problems identified in the questionnaire, and recommendations, as well as corrections obtained from the respondents, have been used to develop the final questionnaire. Furthermore, the actual survey was conducted from 29 August to 3 October 2019. The completed questionnaire is obtained from Google Forms to conduct further study.

DATA ANALYSIS

The objective of this study is to analyse public understanding and perception of BRI projects in Malaysia. Based on the results of BRI awareness among respondents, it indicates that there is an equal number of respondents who have not heard and heard BRI before, which is 50 per cent, respectively. Of the 200 respondents, only 100 had previously heard about BRI. Explanation of why a large proportion of respondents have not heard of BRI because they may not have been exposed to news or projects related to BRI in their own area. This may also be due to insufficient information provided by the authorities. As a result, only 100 respondents participated in later sections of the questionnaire, further analysis is being carried out to discuss public understanding and perception of BRI projects in Malaysia.

Table 1: Source of Information about BRI Projects

Source	Electronic Media (Social Media, Websites, Radio)	Printed News and Magazines	Seminar / Forum / Lecture	Family Members	Friends
Percentage	74	36	26	17	15

Table 1 shows the total number of respondents who responded to the source of information for BRI projects. On the one hand, 74% of the respondents get to know about the BRI projects from electronic media, which include social media, websites and radio channels. It is not surprising as the public can conveniently access to these media platforms, especially with the advancement of the information technology. On the other hand, only 15% of the respondents indicate that they know about the BRI projects from friends.

Figure 1: Effect of Information Source on Perception

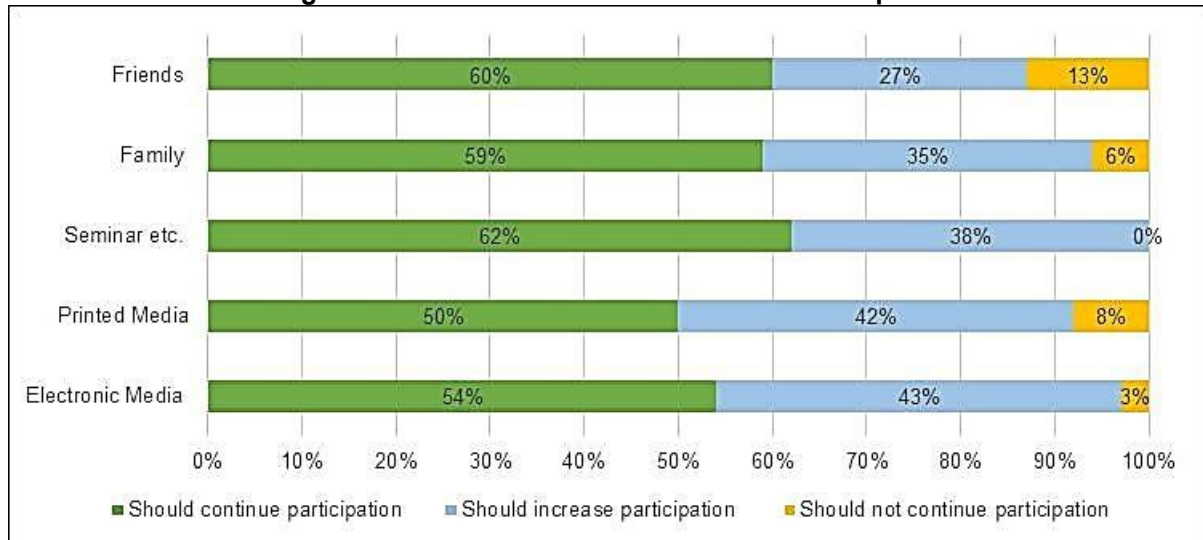


Figure 1 summarises the findings of how information source impacts the public perception towards government participation in BRI projects. 40% of respondents who selected electronic media as the source of information perceived that the government should continue its current projects. In addition, 32% of respondents who selected electronic media as the source of information thought the government should increase its involvement in more BRI-related projects. Electronic media may have both positive feedback and control over BRI projects. Thus, the findings showed that the respondents can see the opportunities in BRI projects. The highest percentage of respondents who perceived that the government should not proceed with current projects were recorded from printed news and magazines was 3%. This is due to the media-published scandals and negative news. There was no record that government should discontinue current projects from information sources such as seminars, forums, and lectures. It may be because discussions are informative and neutral, and no open dialogue. Consequently, those respondents who heard about BRI before would interpret it as positive due to the neutrality of entities or bodies.

Figure 2: Responses to BRI-related Projects

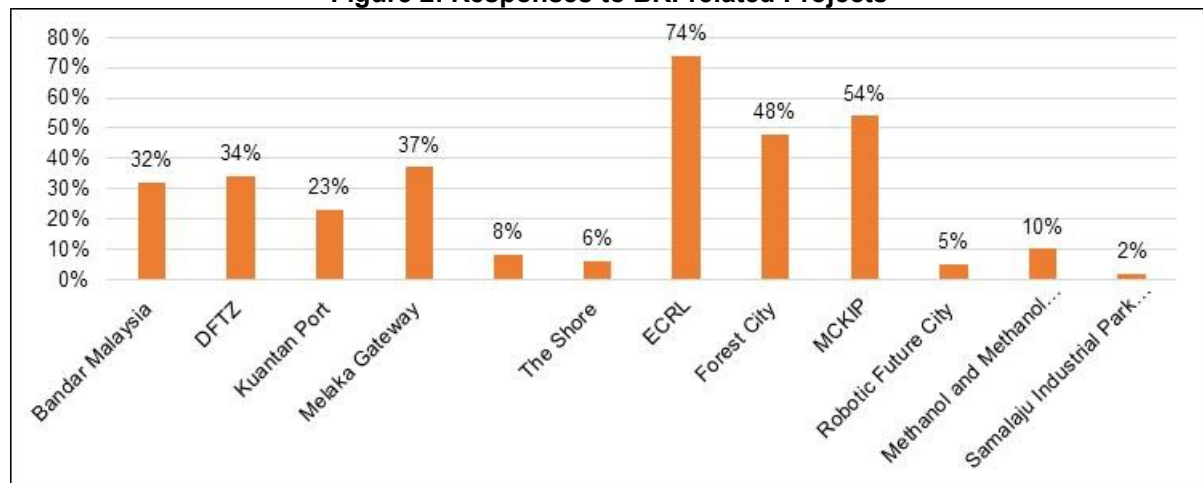


Figure 2 shows the responses of respondents to BRI-related projects they have heard before. Not surprisingly that most of the respondents (74%) heard of East Coast Rail Link (ECRL) before, followed by Malaysia-China Kuantan Industrial Park (MCKIP) and Forest City (54% and 48% respectively). The controversial ECRL project registered the highest percentage could be due to previous government's cancellation and revival reports. In the article "Updated Malaysia Cancelling ECRL Project with CCCC" (2019), former Minister of Economic Affairs Datuk Seri Mohamed Azmin Ali mentioned that Malaysia cannot afford the project's high annual interest of RM500 million. The previous government signed an agreement to revive the ECRL project ("Malaysia's East Coast Rail Link Back on Track," 2019). The contract was signed after months of negotiations and cost reduction

to RM44bn. Meanwhile, MCKIP recorded the second highest (54%) known BRI-related projects. This could be due to Kuantan 's controversial news about 'Great China Wall' that gained attention not only from the policy makers, but also from the public (Yap, 2017; Ong, 2018; "A Look Behind Kuantan's Controversial Great Wall of China", 2018).

Moreover, the controversial Forest City project appears to have unfavourable impacts on local groups. This includes lower fishing income, higher navigational risks, shallower and higher water populations, environmental pollution, and heavy vehicle and speeding contractors' risks (Shalini, 2017). Forest City first caught attention in 2014 when local villagers complained that it affected their livelihood as it is situated very close to the Ramsar site. Singapore, however, was the one with official international rally and power that eventually brought the project to complete halt. Singapore is deeply concerned about any cross-border impact from Johor's development projects involving reclamation works. Both Singapore and Malaysia authorities have international treaties to collaborate on such matters. Thus, the diplomatic controversy attracted considerable international attention and media exposure pressuring both the state and federal governments to take steps. After several diplomatic exchanges, in June 2014, the project must stop temporarily.

In addition, 37% of the respondents have heard of Melaka Gateway before, and the relatively high statistics could be due to the project's legal proceedings (Yatim, 2019). The government had suspended this project. The developer was notified of the cancellation of the port operating licence for Melaka Gateway 's integrated deep-sea and cruise terminal jetty. The developer appealed the government's ruling and claimed damages. The proposal remained unresolved due to disagreements over freehold status and potential environmental effects near the Portuguese settlement (Murali, 2018). On 20 May 2019, Transport Minister issued a letter accepting the letter of appeal dated 14 November 2018 (Yatim, 2019). The developer is therefore entitled to a cruise jetty, deep seaport licence, and project development.

Kuantan Port and MCKIP are connected but the respondents are unclear about the objectives of the Kuantan Port project which led to a lower level of percentage (23 per cent). As an industrial park in Kuantan, MCKIP does have a major competitive advantage (Ho, 2017). It is situated near Kuantan Port, which has been developed into a shipping hub to play an important role in improving trade between Malaysia and China. Kuantan Port is an essential international hub to the east coast for manufacturing and value-adding operations and export of finished products and raw materials. Besides, Kuantan Port provides the fastest route to China's Qinzhou port to investors in MCKIP in about three to four days.

Table 2: Accuracy on the Knowledge of BRI Projects

Responses	Location of DFTZ for Respondents that Have Heard about DFTZ	Revised Route of ECRL for Respondents that Have Heard about ECRL	MCKIP only Allow FDI from China for Respondents that Have Heard about MCKIP
Correct	44	26	37
Incorrect	27	38	31
I do not know	29	36	31

Table 2 depicts the responses to the questions testing the public understanding and knowledge of BRI projects in Malaysia. The table shows 44% of respondents that knew about DFTZ responded correctly towards the location of DFTZ. It also can be seen that some respondents who have heard about DFTZ before do not know about DFTZ's location and respondents who responded incorrectly are 29% and 27% respectively. This may due to the numerous contradict information that confuses the public. The table also shows 26% of respondents that have heard about ECRL responded correctly on the revised route of ECRL. In contrast, 38% of respondents that have heard of ECRL responded incorrectly on the revised route of ECRL and 36% of respondents indicated that they do not know the ECRL revised route. The ECRL route between Kota Baru, Kelantan to Dungun, Terengganu and between Mentakab and Pahang to Port Klang has been realigned (Carvalho et al., 2019). The stations which were cancelled are ITT Gombak, Telaga Papan, Jelawat, Bentong, Gombak Utara, Pengkalan Kubor and Wakaf Bahru. The result implies that public may be confused

by the overflow of the information through various sources due to the debates among the policy makers with different views.

Moreover, 37% of the respondents are aware that MCKIP does not only limit to Chinese foreign direct investment, but also welcomes foreign investors from all over world. On the other hand, an equal number of 31 %of respondents do not know and assume that MCKIP only receives foreign direct investment from China. These findings showed that majority of the respondents have heard about DFTZ, ECRL and MCKIP but do not fully understand and know about these projects.

Figure 3: Perception towards BRI Projects in Malaysia

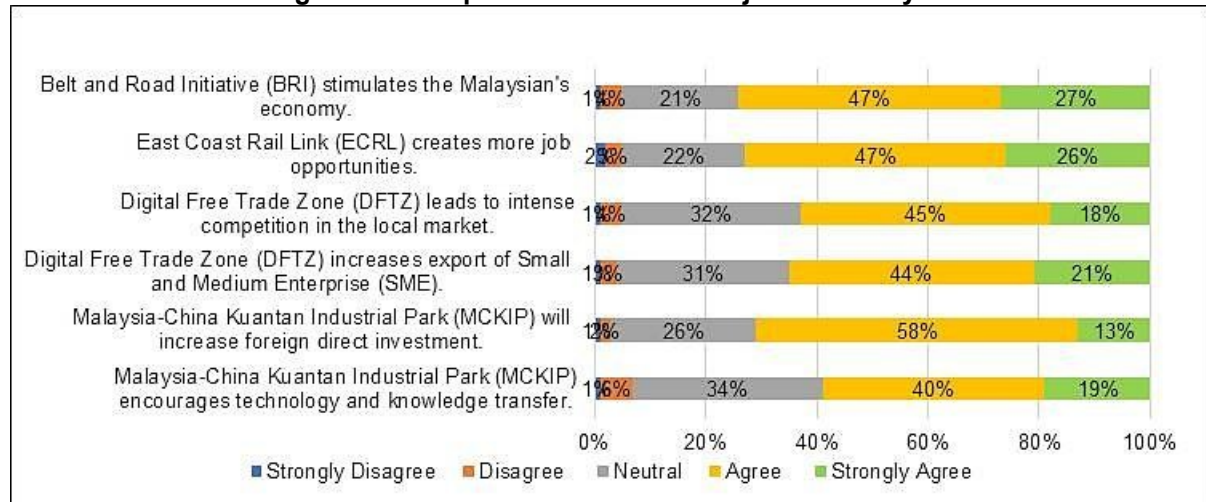


Figure 3 depicts the total number of respondents on their perceptions toward BRI projects in Malaysia. 27% of the respondents strongly agree and 47% agreed that BRI would stimulate the economy of Malaysia. The table also shows the respondents who strongly agree and agree that ECRL will create greater job opportunities for the country recorded 26% and 47% respectively. 18% and 45% of the respondents respectively chose strongly agree and agree that DFTZ will lead to intense competition in the local industry. 21% out of 100 respondents strongly agree and 44% agree that DFTZ will boost small and medium-sized enterprise exports. Also, most respondents strongly agreed (13%) and agreed (58%) that MCKIP will boost foreign direct investment in Malaysia. Respondents in Malaysia are also strongly agreed (19%) and agreed (40%) that MCKIP will promote technology and knowledge transfer.

Out of the 100 respondents, approximately 6% disagree with MCKIP encourages technology and knowledge transfer. There is a conflicting statement as to whether Chinese mega-projects encourage technology and knowledge transfer. According to Todd and Slattery (2018), a common explanation given about not using local companies is that they have little skills required for the project. A similar explanation is that local companies and staffs are not suitable for Chinese contractors work practices, which include working hours and work speed. The Chinese contractors are normally used for more technically demanding elements of the project. It has also been claimed that Malaysian companies lack the skills required to compete with contractors from China. Besides, it has been reported that local companies need Chinese experience in developing super high-rise buildings. The construction industry in Malaysia had reported skills gaps for many years. This problem was particularly serious in the construction industry. They faced problems such as getting the source of labour and retaining skilled workers. They had to rely on foreign workers to meet the high demand for skilled workers due to the fast growth in Malaysia and poor local participation. The President of the Master Builders Association of Malaysia (MBAM), Foo Chek Lee, has alerted the problem of serious labour shortage in the industry (Yunus, 2017). He also contended that local contractors are starting to lose their competitive advantage partly because of labour shortages which include skilled workers in the industry.

Besides, 2% out of the total respondents strongly disagree with ECRL creating more job opportunities. In the article of "East Coast Rail Link Cancellation Will Not Affect Job Opportunities" (2018), the Minister of Rural Development, Rina Harun has raised doubts that the termination of the ECRL project impacts the economic growth and job opportunities in the states in the east coast. The

public is concerned that the uncertainties of the ECRL project will affect job opportunities in the region. It is said that terminating the ECRL project would cause loss of jobs in the three states as early works had already begun. Therefore, it led to 2% of the respondents strongly disagree with ECRL being able to create more job opportunities. However, the ECRL project is expected to create more job opportunities and boost the domestic growth in Malaysia as Malaysia's government decided to revive the project ("ECRL project expected to create jobs and contracts for Malaysians," 2018).

In short, though some of the respondents have little knowledge and understanding on these BRI projects in Malaysia, they still recognize it as a good activity for Malaysia's economy. This can be seen from the results, as there is a high percentage of respondents who strongly agree and agree that BRI projects are good for Malaysia.

Table 3: Responses to the Degree of Government Participation in BRI Projects

Degree of Government Participation in BRI Projects	Total Number of Respondents
The government should continue with the current projects.	57
The government should increase participation in more BRI-related projects.	40
The government should not continue with the current projects.	3
Grand Total	100

Table 3 depicts responses to the degree of government participation in BRI projects. 57 % of the respondents believed that the Malaysian government should continue with the current projects. 40 % of the respondents believed that the Malaysian government should increase its involvement in more BRI-related projects. In contrast, only 3 % of the total respondents had negative perceptions on the BRI projects and believed that the Malaysian government should not continue with the current projects. These results have shown that majority of the respondents felt that the Malaysian government should continue and expand its participation in BRI projects as they portrayed it to be good for Malaysia's economy.

In a nutshell, only 100 respondents have heard about BRI before out of the 200 respondents. Further analysis has been done from the 100 respondents who have heard about BRI before. Although some respondents heard of the BRI projects involved, the responses received from this study are not as they are. It has shown that Malaysian respondents have a low level of understanding of BRI projects in Malaysia. The respondents may have heard about BRI projects, but they do not appear to understand or have the information on it. Despite this, most of the respondents seem to have positive views of the BRI projects in Malaysia. They believed that it is good for the economy of the country.

CONCLUSION AND DISCUSSION

The objectives of this study are to analyse the public understanding towards BRI projects in Malaysia and to evaluate the public perception towards Malaysia's involvement in BRI. This study is carried out via an online survey; and 200 respondents had answered the online questionnaire. Based on the statistical results, most respondents heard of certain BRI-related projects before, but only less than half of the respondents correctly answered on the questions including DFTZ location, revised route of ECRL and whether MCKIP only permits Chinese foreign direct investment. 44 % of the total 100 respondents responded correctly on the DFTZ location and 26 % responded correctly on the revised route of ECRL. Moreover, 37 % of respondents are aware that MCKIP does not only allow Chinese foreign direct investment.

Considering the public perception of BRI projects in Malaysia, most respondents' attitude to that was positive. Majority of the respondents felt that BRI is good for Malaysia's economy. Results indicated that the respondents might not have heard of BRI, but they still viewed it as an activity that will bring benefits to the country. Therefore, it is beneficial for both businesses and the country. These projects will also create more investments and opportunities in the future. Most respondents agree that the government should continue and increase its participation in more BRI-related projects.

Going forward to the implications of this study, a few parties act as main drivers to obtain better understanding and perception of the public in Malaysia regarding BRI projects. Reason for the involvement of different parties is because the target audiences are different. Firstly, the government should have a clear framework and regulations regarding BRI projects. A sound governance mechanism can ensure the accuracy and transparency of information related to BRI projects is conveyed to the public. Besides, for BRI projects in Malaysia, information flows are less effective. There is so much vague and incorrect data regarding the programmes. Then, since they are not sure what the project is about, this would show a vague and hysterical picture and cause public confusion.

More funding for BRI projects in Malaysia should also be provided to organisations, such as private organisations or trade associations. Typical BRI ventures include major companies and businessmen. There is an incentive for private companies to support and invest in BRI ventures. This inevitably helps to create public knowledge and understanding of the BRI. Business associations and chambers of commerce, however, also play a vital role. For example, they can organise more BRI-related talks and seminars. In initiating contacts, organisations might support small and medium-sized businesses.

In addition, the media can also play a major role in growing public awareness and interpretation of BRI projects in Malaysia. The media is undeniably successful in raising public understanding. In the media, actual knowledge flows effectively. The media also provides opportunities to inform the public about BRI ventures in Malaysia. The media therefore offers a neutral outlook that results in positive public perception. Results have shown that respondents who preferred electronic media as the source of information thought that the government of Malaysia should continue and increase its participation in BRI ventures.

Ultimately, in Malaysia, educational institutions or universities should be interested in improving the public awareness and interpretation of BRI initiatives. This will help involve students and BRI researchers with more study being done at universities. In addition, by revealing more BRI research, higher education institutions will cooperate with other foreign universities to build more public knowledge and understanding of BRI. This also allows students, whether they are conscious of it and view it as a positive thing, to benefit from BRI projects.

To sum up, it is undeniable that, while most of the respondents have previously heard of DFTZ, ECRL and MCKIP, they do not completely understand these projects and lack information. This study has shown that the Malaysian community has reasonably strong and optimistic views about BRI projects in Malaysia, based on the public views of BRI projects in Malaysia. They thought that BRI ventures were good for the economy of the country. To sum up, it is undeniable that, while most of the respondents have previously heard of DFTZ, ECRL and MCKIP, they do not completely understand these projects and lack information. This study has shown that the Malaysian community has reasonably strong and optimistic views about BRI projects in Malaysia, based on the public views of BRI projects in Malaysia. They thought that BRI ventures were good for the economy of the country.

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BAFE024: ARTIFICIAL INTELLIGENCE AND SME'S COMPETITIVENESS IN THE GLOBAL ECONOMY: A THEORETICAL PERSPECTIVE

Abdelhak Senadjki^a, Samuel Ogbeibu^b, Saidatulakmal Mohd^c

Au Yong Hui Nee^d, Yip Chee Yin^e

¹ Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: abdelhak@utar.edu.my

² Department of Management/Faculty of Business, Curtin University, Malaysia
Email: samuel.ogbeibu@curtin.edu.my

³ School of Social Sciences, Universiti Sains Malaysia, Pulau Pinang, Malaysia
Email: eiydda@usm.my

⁴ Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: auyonghn@utar.edu.my

⁵ Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: cyyip@utar.edu.my

Corresponding Author: abdelhak@utar.edu.my

Abstract

Digital entrepreneurship has allowed a dynamic transformation of business. A crucial step towards the complete implementation of industry 4.0 is digitization. Digital entrepreneurship makes the worldwide flow of data cheaper and easier. Malaysia digital economy had expanded exponentially, and this is often thanks to the expansion of e-commerce industry. Consistent with the Department of Statistics Malaysia, the digital economy had contributed 18.3% of the GDP in 2016 and it's expected to be increased to twenty by year 2020. Small and Medium Enterprises (SMEs) play a fundamental role for current economies of development countries due to major workforce employment and GDP contribution. AI disseminates in business dynamically. ICT, e-commerce, marketing, human resource (HR), accountants, car, industry, smart house – in almost every branch it can help to realize a competitive advantage supported a fact and efficient analysis of giant amounts of knowledge and rapid deciding. For SMEs it's essential to align its strategy for growth supported on the acceptable management tools. The utilization of software applications obsolete by companies might be the booster for radical changes that SMEs got to face the changing markets and technologies. SMEs and entrepreneurs might achieve considerable improvements in decision-making by leveraging data analytics techniques to extend productivity. However, there are challenges to be overcome, because the lack of digital awareness can cause mistrust in digital technology and to low adoption as risks and benefits aren't clear. Moreover, lack of monetary resources, data management experience and talent, constitute significant barriers. The offer of Business Intelligence solution for SMEs has few alternatives, because the audience of suppliers of business intelligence solution remains to be large companies, thanks to their greater receptiveness to host project of this future, and also due to its financial ability. Most of the previous studies spoke about the role of AI in improving the performance of small and medium companies, and the way to enhance their marketing performance and urged the necessity to maneuver towards employing smart programs for these companies. During this study, to know the role of AI as an intermediate variable and therefore the degree of its contribution to strengthening the role of SMEs in increasing the competitiveness of the worldwide Malaysian economy. Therefore, this study aims to reveal the role of AI in enhancing SME's competitiveness within the global Malaysian economy.

Keywords: Artificial intelligence, SME's competitiveness, global economy

INTRODUCTION

Digital entrepreneurship has allowed a dynamic transformation of business. A crucial step towards the complete implementation of industry 4.0 is digitalization. Digitization is that the process of converting analogue information into a digital format. During a broader societal context, digitization is

defined because the economic and social transformation triggered by the huge adoption of digital technologies to get, process, and share and transact information (Katz, Koutroumpis, & Martin Callorda, 2014). Digital entrepreneurship makes the worldwide flow of data cheaper and easier. Digital technologies also can improve productivity and competitiveness, also as enhance resource and energy efficiency, thereby creating new business and employment opportunities. Digitalization, e-commerce and online marketing can help business to sustain and overcome logistical and geographical challenges and improve their access to plug (Zaki, 2018). The expansion of digital companies in Malaysia altogether their large, medium and little forms has contributed to the event of the Malaysian economy. A study (BMCC, 2017) has shown that Malaysia digital economy had expanded exponentially, and this is thanks to the expansion of e-commerce industry. Consistent with the Department of Statistics Malaysia, the digital economy had contributed 18.3% of the GDP in 2016 and it's expected to be increased to twenty by years 2020. A study (Nuseir, 2018) confirmed on the tiny and Medium Enterprises (SMEs) play a fundamental role for current economies of developing countries due to major workforce employment and GDP contribution.

Digitizing business procedures by SMEs can improve business performance, increase customer base and strengthen communication. The question here is whether SME's can compete with large companies, given that large companies have many advantages such as large capital and the ability to produce in large quantities. The researcher seeks in the study to find a way that enables small companies to increase their competitiveness in the Malaysian market. One of the keys of business strategy for creating competitive advantages is understands the info that firms generate in its own business, information science has gradually become the idea for achieving advantage. The organization has got to believe that have the proper information at the proper time and available to the proper people (Palmer, 2000). Thanks to the increased volume of knowledge within the organization, the BI has become essential for any company, whatever its size, and is important for deciding. A study (European SMEs Survey, 2019) show that the large data, AI, cloud computing – these are just a few of the technologies that immediately come to mind when brooding about digitization. They are not a future matter anymore and, arguably, will continue gaining relevance within the coming years. Consequently, adapting to those realities may be a matter of need instead of a matter of choice.

Artificial intelligence disseminates in business dynamically. ICT, e-commerce, marketing, HR accountants, car industry, smart house – in almost every branch it can help to realize a competitive advantage supported a quick and efficient analysis of giant amount of knowledge and rapid decision-making (Jablonska, 2017). For SMEs it's essential to align its strategy for growth supported on the acceptable management tools. The utilization of software application obsolete by companies might be the booster for radical change that SMEs got to face the changing market and technologies. SMEs and entrepreneurs might achieve considerable improvements in decision-making by leveraging data analytics techniques to increase productivity. However, there are challenges to be overcome, as the lack of digital awareness can lead to mistrust in digital technology and to low adoption as risks and benefits are not clear. Moreover, lack of financial resources, data management experience and talent, constitute significant barriers (GECD, 2019). The offer of Business Intelligence solutions for SMEs has few surrogates, because the audience of suppliers of business intelligence solution remains to be large companies, thanks to their greater receptiveness to host projects of this nature, and also due to its financial ability. Therefore, the researcher aims through this study to reveal the role of AI in enhancing SME's competitiveness in the global Malaysian economy. Most of the previous studies spoke about the role of artificial intelligence in improving the performance of small and medium companies, and how to improve their marketing performance and urged the need to move towards employing smart programs for these companies. In this research work, to understand the role of artificial intelligence as an intermediate variable and the degree of its contribution to strengthening the role of small and medium enterprises In increasing the competitiveness of the global Malaysian economy.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

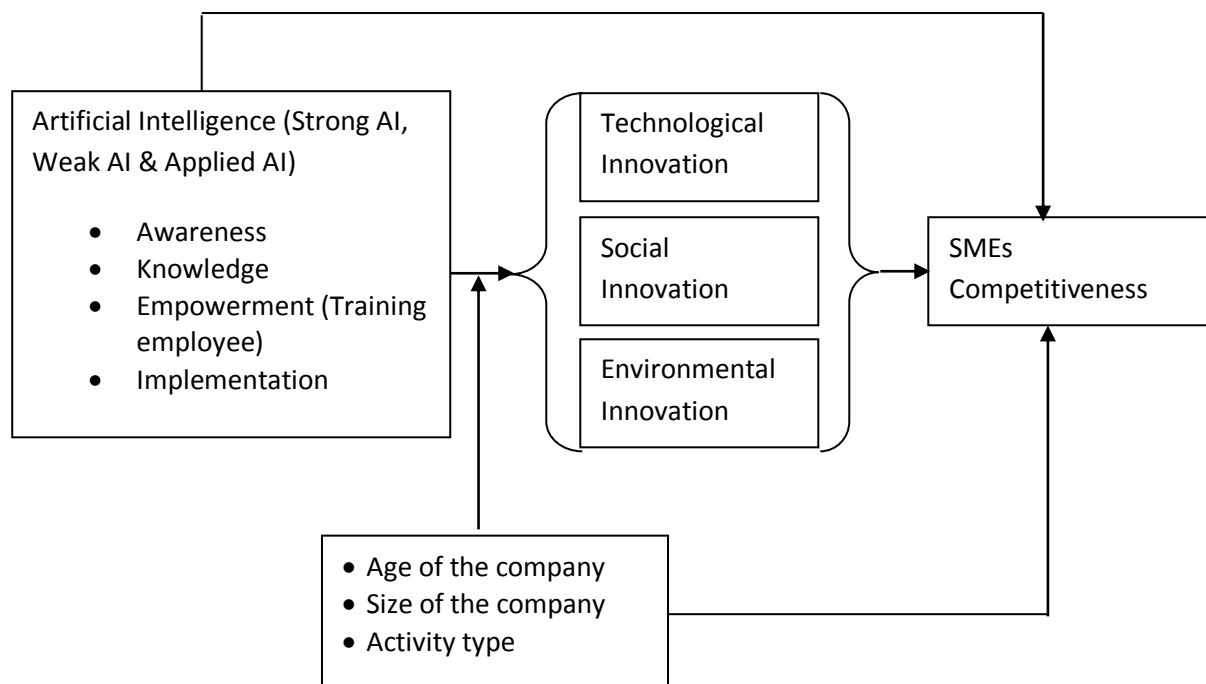
The Fourth Industrial Revolution-commonly mentioned as industry 4.0 with smart manufacturing currently on its fore front-has arrived. The manufacturing industry is evolving and makers of all sizes, worldwide, got to evolve too. So as to not be left behind from early adopters, Small and Medium-sized Enterprises (SMEs) integrate modern Smart Intelligence with their business operations to enable smart manufacturing (Ghobakhloo, 2019). This is often what was recently observed by Douglas (2017) who argues that SMEs in Malaysia are now changing from traditional

entrepreneur into a digital entrepreneur thanks to prominent level of competitiveness and bigger market provide by digital economy. The digital economy is now a serious source of economic process for the planet while that (Laurie McCabe, 2017) confirmed it the business growth will always be a goal of small businesses, but the tools which will help these companies achieve that goal are changing. AI and machines learning solutions offer small business the means to dump mundane work to machines so their people can specialize in more creative, value added activities that help their companies grow.

Now is the time for little businesses to place AI and machine learning on their priority list when making business solution decisions. Studies have recommended that companies evaluate their operations and consider the areas where smart apps can help them improve productivity, deciding and business performance. By getting ahead pf the curve, businesses can reap the benefits that smart apps offer sooner instead of later. And successively confirmed a study (Sreelekha, 2018). The manufacturing sector may be a perfect fit the appliance of AI, albeit the industry 4.0 revolution remains in its early stages, we are already witnessing significant benefits from AI is destined to vary the way we manufacture products and process materials forever. It also a benefit as confirmed by a study (Rekha, 2016) that AI based marketing may boost marketing efficiency by directing the efforts specifically towards the proper customer. During this context, AI marketing derived a sort of marketing which leverages the techniques of database marketing alongside the AI-based concepts and models. As well (GECD,2019) SMEs must also operate in an environment in which the use of machine learning algorithms by large firms is becoming pervasive and cloud-based A.I. services offered by large players might become crucial for their development in business functions as marketing, customer service and sales.

CONCEPTUAL FRAMEWORK

Figure 1: The conceptual framework



Artificial Intelligence (AI), have been explored in various areas such as automation as well as applications such as robotics and the machine learning that could advance invention and solve complex problems (Wisskirchen, et al., 2017). AI Robotics is one of the important elements of AI that have a significant impact on innovation (improved performance). Innovation in this study segregated into 3 sub-categories which are Technological Innovation, Social Innovation and Environmental Innovation (Soni, Sharma, Singh, & Kapoor, 2019). Technological innovation is mostly related to the implementation of new ideas in commerce, management, manufacturing or any other sector in order to create and develop new products and/or services. Studies (Wisskirchen, et al., 2017; Soni,

Sharma, Singh, & Kapoor, 2018) have indicated that, artificial intelligence (AI) has been the fundamental element transforming industrial innovation into technological inventions for the past decades. Due to the rapid impact of AI in business models, companies have successfully developed advanced technological inventions including, photovoltaic cells, solar power, electric vehicles and sensory robots. The rapid demand of these technological inventions accelerates the exploration of AI (Cockburn, Henderson, & Stern, 2018; Lee, Suh, Roy, & Baucus, 2019). Therefore, our study hypothesizes a significant positive relationship between Artificial Intelligence (AI) and technological innovation.

H1: Artificial Intelligence has a positive impact on Technological innovation of SMEs in Malaysia.

According to Lee, Suh, Roy and Baucus (2019) Social innovations are practices that intend to secure the social needs in an innovative ways and contexts. The ideas are developed and invented to extend and strengthen the welfare of the society. Meanwhile, Environmental innovation aims to reduce the negative impact of economic growth and productivity of the environment such as global warming, CO2 emissions and other environmental concerns (Hojageldiyev, 2018; Lee, Suh, Roy, & Baucus 2019). The establishment of artificial intelligent (AI) is necessary to confront the persistent social and environmental issues. Innovative responses as a result of the establishment of AI, has helped tackle several societal problems (Khakurel, et al., 2018; Soni, Sharma, Singh, & Kapoor, 2019). Wisskirchen et al. (2017) emphasized that, the correlation between AI developments and, social and environmental innovation is always significant, and it's necessitated by the amount of resources available. The studies (Bitzer & Hamann, 2015; Cangemi, & Taylor, 2018) have discussed the influence of AI in problem solving strategy, and it's been proven that, more machine and computers have significantly contributed to the organizational transformation. Today, with the aid of AI, the world is experiencing several sophisticated innovation establishments such as, the use of computers for business, automated cars for transport, 4G internet coverage for communication, robotic machines for industrial activities and others (Di Vaio, Palladino, Hassan, & Escobar, 2020). Khakurel et al. (2018) highlighted that the innovation is successfully being used to address challenging problems such as food insecurity, resource degradation and poverty. The influence and contribution of AI innovations have positively impacted on society sustainable development (including recycling materials, preserving ecosystems, avoiding environmental pollution, etc.), which is not only helping to protect the society but also create employment opportunities in order to reduce poverty. Moreover, this reflects the positive influence the AI has on social and environmental innovation (Masocha, 2018; Khakurel, et al., 2018).

H2: Artificial Intelligence has a positive impact on Social innovation of SMEs in Malaysia

H3: Artificial Intelligence has a positive impact on environmental innovation of SMEs in Malaysia

Di Vaio, Palladino, Hassan and Escobar (2020) instigated that, technological innovations (such as Google, electronic vehicles, smart phones, etc.) does not only influence firm's performance, but increase the competitiveness of firm's product performance. The inferences from previous studies (Schallmo, Williams, & Boardman, 2017) outlined that, without technology, SMEs will lose the ability to solve human problems. Thus, the limited ability for SMEs to provide solution will direct relinquish the competitive advantage. Meanwhile, technological innovation initiatives provide SMEs with specific and streamlined products or services that will not only have the potential to solve human problems (including ability to recycle used products) but elevate the firms' ability to compete in the global market (Cenamor, Parida, & Wincent 2019). Therefore, technological innovation has a positive influence on SMEs competitiveness.

H4: Technological innovation has a positive impact on SMEs competitiveness in Malaysia

Findings (Masocha, 2018; Burlea-Schiopoiu, & Mihai, 2019; Cenamor, Parida, & Wincent, 2019) have concluded that, companies whose production is significantly driven by problem-solution strategy have the tendency to be innovative. Hence, to solve societal issues innovation stands as the integrating factor to necessitate organizational competitiveness and development. The attempt for small and medium enterprises (SMEs) to provide a pivotal solution to social and environmental problems. Enterprises and companies accelerate their competitive advantage to dominate the market (Zhou, et al., 2018). According to Burlea-Schiopoiu and Mihai (2019) addressing the human problems

directly initiate strategies to create innovations which significantly becomes relevant in the society. In contrast, Cenamor, Parida and Wincent (2019) argued that, most low capital SMEs face challenges that includes limited resources (human, physical and information), that significantly hinder the innovations relevant for social and environmental development (like solar panel, electric cars, green innovation, etc.). The challenges if address adequately may avert out new opportunities and competitive advantages for businesses (Zhou, et al., 2018; Cenamor, Parida, & Wincent 2019). Based on the above discussions, we hypothesize that social and environmental innovation predict appositve impact on SMEs competitiveness.

H5: Social innovation has a positive impact on SMEs competitiveness in Malaysia

H6: Environmental innovation has a positive impact on SMEs competitiveness in Malaysia

When it comes to competition for innovative products, most SMEs have limited resources to make a significant impact in the competitive market (Masocha, 2018). Despite the innovative ideas, some SMEs do suffer financially to produce relevant social innovation products or services (Burch, 2018). However, large companies like 'Facebook' possess a huge completeive advantage in the market. This is because, 'Facebook' significant contribution (social media impact) in the market has enhanced the social networking between two or more people around the world (Burch, 2018; Cenamor, Parida, & Wincent 2019). In contrast, studies (Masocha, 2018; Ulas, 2019) have argued that, despite the dominance of the large corporations, some SMEs do make significant impacts in the market. And that, most of these huge corporations began as SMEs before successfully breaking through. If adequate resources are provided, SMEs will have the potential to be competitive in the market. Moreover, Cenamor, Parida and Wincent (2019) revealed that, similarly for social innovation, corporations (whether large or SMEs) who are engaged in developing innovative products as part of their innovation plans and goals will have the ability to compete in the market Environmental innovations (such as solar electric, green building, green house farming etc.) have significantly transformed human lives over the years by providing portal water, electricity and food (Aziz & Samad, 2016; Rahman, Yaacob, & Radzi, 2016). Today, several SMEs have established long-term competition against giants MNCs and corporations to provide environmentally innovative products (Di Vaio, Palladino, Hassan, & Escobar, 2020). These competitions could not be achieve unless SMEs engaged in practices that focus more on knowledge creation, advanced technology procession and utilization, creativity and the development of strategies that are able to generate and create innovative ideas that can be translated to unique and practical products and services (Abbing, 2010, Di Vaio, Palladino, Hassan, & Escobar, 2020).

H7: Age of the company, the size of the company and type of the activity positively moderate the relationship between artificial intelligence and technological innovation

H8: Age of the company, the size of the company and type of the activity positively moderate the relationship between artificial intelligence and environmental innovation

H9: Age of the company, size of the company and type of the activity positively moderate the relationship between artificial intelligence and social innovation

It is well agreed that AI has become a crucial innovation factor that enable entrepreneurs and emerging SMEs in the global tech market to create competitive advantage (Dirican, 2015). Ulas (2019) connotes that a guarantee for SMEs to compete in a global market is predetermined by their innovative products and services. Studies (Drucker, 1994; Damanpour, 1987' Freeman and Soete, 1997; Masocha, 2018; Lee, & Trimi, 2018) have concluded that SMEs who mainly focus on the involvement of AI for their development of innovative techniques, ways and ideas that create new enhanced products and services is more likely to be well received by customers stand to compete with big corporations and therefore secure a significant share of the market. As indicated that by Lee and Trimi (2018) the relevancy of innovative technology products relies on its significant contribution towards technological development. This is also because when SMEs tend to be more innovative then its creativeness certainly enables the company to present new or improved products and services to the market even before other big corporation could do so (Masocha, 2018; Burlea-Schiopoiu, & Mihai, 2019). Hence, this study hypothesize that AI positively influences SMEs competitiveness.

H10: Artificial Intelligence has a positive impact on SMEs competitiveness

Literatures have shown that the size and the type of activity of companies determines the quality of their product. Large corporations indicates bigger production units, while small and medium represents limited production units. Companies with bigger production units potentially dominant the market (Mhlanga, 2020; Cenamor, Parida, & Wincent 2019). Several multinational companies and corporations have been successful and dominated the market because of efficient innovation, which creates competitive advantages for them (Goksoy et al., 2013, Lim et al., 2010). A huge technological company such as 'Microsoft' provides technological innovations (software, electronic gages, personal computers and others). The impact of these innovations in society increases the competitive advantage of the company in the global tech market. For decades, 'Microsoft' has positively impacted the technological innovations in the world to solve human problems (Burch, 2018; Cenamor, Parida, & Wincent 2019).

H11: Age of the company, the size of the company and activity type have a positive impact on SMEs competitiveness

CONCLUSION

Based on relevant discussions on investigating the impact of Artificial Intelligence (AI) on the competitiveness of Small and Medium Enterprises (SMEs) in the global market. It is significant to comprehend the importance of AI to the developmental process of SMEs in the sustainability of global technology market. Hence, the above literature has highlighted the significant impact of AI on the SMEs, to enable the growth of their competitive advantage. It is abundantly clear that, without the inclusion of relevant AI in the development strategy, SMEs are less likely to stay relevant in the technological global market. As revealed, the AI plays a positive role in the enhancement of SMEs competitive advantage, with the help of AI, environmental and social innovation are accelerated to consolidate SMEs product development. With the positive correlation between AI and SMEs competitiveness, technology innovation plays a pivotal role in strengthening the relationship between AI and SMEs competitiveness in the market. That is to say that, environmental, social and technological innovation enhances the competitive advantage of SMEs with the help of AI empowerment. Meanwhile, the literature discussions also indicated that, the age, the size and type of the activity of a company should positively predict the impact of AI on environmental, social and technological innovation, which will then elevate not only the competitiveness of SMEs but promote sustainable development. Moreover, other findings revealed low capital SMEs will face challenges that includes limited resources for both human labor and availability of information, that will hinder the progress of innovations which are relevant for social, environmental and technological innovations (like solar panel, electric cars, green innovation, etc.,). The discussions therefore has initiated the development of relevant model for correlation between AI and SMEs competitiveness in the global market.

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BAFE025:
COVID 19: GOVERNMENT RESPONSES TO OIL PRICE

Chia-Guan Keh^a, Yan-Teng Tan^b Siu-Eng Tang^c, and Chuan-Chew Foo^d

^{abcd} Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
^b Corresponding author: tyteng@utar.edu.my

Abstract

Malaysia is a significant oil-exporting country in Southeast Asia. Since the country's revenue depends highly on oil prices, any uncertainty would cause the country to face severe challenges especially during the period of COVID-19 pandemic. Government has imposed a wide range of policy to suspend the spread of COVID-19 and in turn to sustain the growth. How government responses aimed at banning the spread of COVID-19 affect oil prices? To answer this question, this study examines the social distancing policies imposed by government to responses the oil prices in Malaysia. The study emphasizes on the period from the start of January 2020 to July 2020 when the coronavirus began spreading into Malaysia. We empirically investigate the impact of social distancing policies on the both Brent and WTI's oil prices. The findings report that the number of confirmed cases, stay at home requirements and workplace closing negatively affected the both oil prices of Brent and WTI. In contrast, international travel controls, restrictions on gatherings and debt or contract relief for households have positive relationship with both oil prices of Brent and WTI. The results of this study might assist government and investors to understand the impact of government responses to COVID-19 on the oil prices in Malaysia.

Keywords: Government Responses, COVID-19, Oil Prices, Malaysia

BAFE044:
**FINANCIAL SECTOR AND ECONOMIC GROWTH IN MALAYSIA:
DOES DIGITALISATION PLAYS A CRITICAL ROLE IN GROWTH
NEXUS?**

Thurai Murugan Nathan^a, Vikniswari Vija Kumaran^b, T. K. Jayaraman^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: thurai@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: vikniswarivk@utar.edu.my

^cICP Research Professor, Faculty of Business, Accounting, Finance and Economics,
University of Tunku, Abdul Rahman, Malaysia
Email: tkjayaraman@yahoo.com

Abstract

Financial sector development (FSD) is now well recognized as a significant factor in the economic growth of developing countries. The growing literature on the growth and FSD has highlighted the need for promoting the spread of FSD institutions. With further liberalization measures in the late 1990s, allowing entry of a large number of domestic and foreign-owned banks and non-bank FSD has now emerged to be a supportive factor, acting as a shift variable in the growth function, besides the fundamental variables of capital stock and labor. Almost simultaneously rapid strides in the spread of information and communication technology (ICT) during the 1990s have helped the urban-based banking institutions to reach the rural masses for mobilizing savings which would have been frittered on needless consumption. Mobilization of savings resulting in the rise in bank deposits, thereby augmenting the reserves enabled the banks to recycle them credit to rural entrepreneurs, along with the provision of credit to the private sector. This study examines the role of ICT as a contingent factor in Malaysia's FSD and growth nexus for 32 years (1986-2017). The empirical study employs ARDL methodology reveals that digitization has indeed emerged a significant factor in the FSD and growth nexus, by playing a complementary role to FSD.

Keywords: Malaysia, financial sector development, ICT, economic growth, ARDL

BAFE049:
**THE EFFECTS OF RENT-SEEKING ACTIVITIES ON PUBLIC
EXPENDITURE: ARDL APPROACH IN THE CASE OF MALAYSIA**

Wong, Vivien-Zi-Wen^a, Chen, Fanyu^b, Yew, Thian-Hee^c

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: vivienwong@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: chenf@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: yiewth@utar.edu.my

Abstract

This paper investigates the relationship between rent-seeking activities and public expenditure. The Model is empirically tested for Malaysia over 1984-2017 using the Autoregressive Distributed Lag approach. Besides, Corruption Perception Index (CPI) obtained from International Country Risk Guide serves as the proxy for rent-seeking activities. The empirical result shows that the increase in rent-seeking activities will increase public expenditure. This is because higher rent-seeking activities in the economy tend to increase the misallocation of resources from productive to unproductive sector where the self-interest politician or the elite group tries to affect the decision of government procurement and allocate the public spending to their interest sectors. Therefore, reducing rent-seeking activities should be a primary policy goal of governments. Thus, by lowering the rent-seeking activities, the Malaysian public expenditure can be increased, thereby leading to further economic development.

Keywords: Rent-seeking activities, ARDL, public expenditure

BAFE051:
**MALAYSIA'S SUSTAINABLE GIFT: A COMPREHENSIVE ANALYSIS
OF PALM OIL INDUSTRY**

Vikniswari, Vija-Kumaran^a, Chan, Yan-Xin^b, Chee, Kien-Ning^c, Lim, Poh-Yee^d, Tan, Han-Wu^e,
Teo, Jia-Min^f

^aFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: vikniswarivk@utar.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: yanxin325@1utar.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: Alice_KienNing@hotmail.com

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: pohyee207@1utar.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: ivantanhw@1utar.my

^fFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: Tjiamin@1utar.my

Abstract

Until today, Crude Palm Oil (CPO) had become the major contributors to Malaysia's Gross Domestic Product (GDP), employment, and export revenues. Over the past decade, however, the price of CPO has fluctuated which has had a direct negative impact on the economic performance of Malaysia. In order to achieve Malaysia's Sustainable Development Goals (SDGs), more focus should be given to the sustainability of the CPO industry. Therefore, the main objective of this paper is to examine the key elements that affect the CPO price through three main dimensions, namely economy, financial and environment. The factors were CPO production, biodiesel production, crude oil price, export of CPO, exchange rate, stock price and climate change. In addition, this study analyzed the impact of climate change on economy and financial factors in a more detailed manner through interaction term in order to achieve sustainability of the palm oil industry. Moreover, using the data from January 2007 to May 2018, ARDL method was employed to identify the significant factors and the interaction between environment and economy towards CPO. Overall, the policies were recommended to achieve the sustainability of the Malaysia palm oil industry by addressing the current issues and creating long-lasting demand for the economy.

Keywords: CPO, financial, economy, climate change, interaction term and sustainability

INTRODUCTION

Agriculture is the main economic activity in Malaysia by contributing 8.2% or 96 million to the Gross Domestic Product (GDP) and around 835,974 of employment in 2017 (Shaheera Aznam Shah & Rahimi Yunus. 2019). From this contribution, Crude Palm Oil (CPO) has occupied 46.6%, acting as the main contributor to Malaysia in GDP, exports revenue, local consumption and employment opportunities (Department of Statistic Malaysia, 2018). As a member of United Nations Member States (UNMS), Malaysia should take initiative to achieve the 17 Sustainable Development Goals (SDGs). These SDGs were integrated into social, economic and environmental sustainability to create an environment with full of peace and prosperity by 2030. Malaysia performed remarkably well in the CPO industry by achieved the second largest CPO production and exporters in the world market (Balu Nambiappan et al., 2018). From 1960 to 2016, there is a rapid growth in Malaysia CPO's planted area and production where it increases to 5.74 million hectares and 17.32 million tonnes from 55,000 hectares and 100,000 tonnes respectively (Balu Nambiappan et al., 2018). Likewise, export of CPO from solely depending on Europe in the earlier years has now expanded into more than 200 markets worldwide. There was roughly \$8.7 billion export of CPO in 2018, which engaged 29% of the total world CPO export (Daniel, 2019). However, despite the rapid growth in palm oil industry, it is facing severe challenges today. Indonesia as the largest producer and exporter of CPO is one step ahead

Malaysia. Their competitive pricing has threatened Malaysia to expand into a broader market and boost the economy growth. Moreover, CPO is mainly used in variety industries including food, cosmetic, transportation and etc; hence, the price of CPO will in turns lead to the change in the price of these final products and influence the purchasing power of consumers. However, Figure 1 has depicted the CPO price fluctuated over the past decade. The CPO price attained its new high in March 2008 at RM 3680.50, but it has dropped to RM 1516.50 in less than 8 months' timeframe. The main factors caused the volatility of CPO price involves the changing in economic, financial and also environment factors that drive the change in demand and supply of CPO. The fluctuation of CPO price has a substantial effect towards the economic growth of Malaysia (Rafiq & Salim, 2014). Therefore, the first objective of this research is to determine the sustainability of Malaysia's palm oil industry by examining the factors that affect the CPO price in Malaysia via the aspects of economy, financial and environment and partially achieve the SDGs.

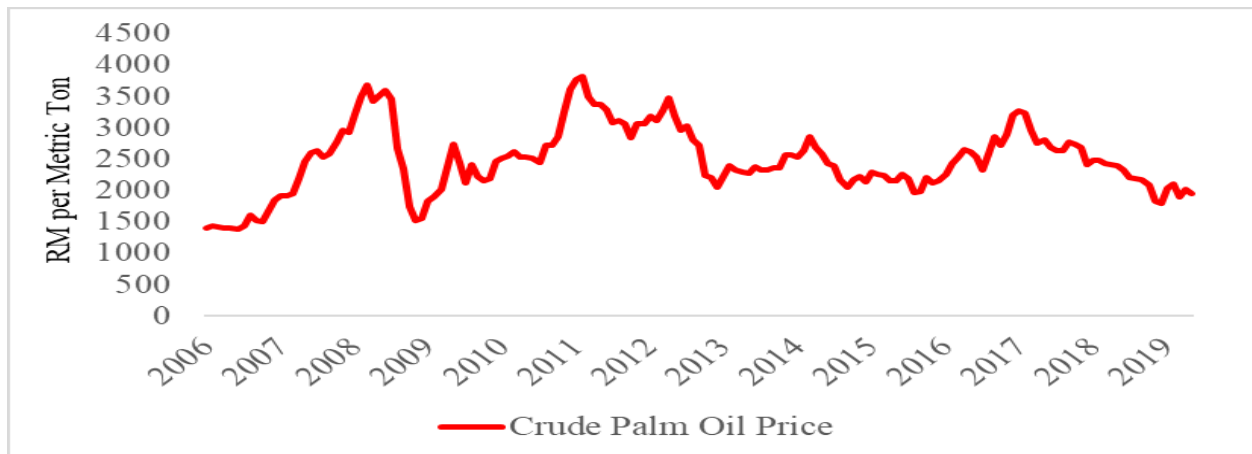


Figure 1: Crude Palm Oil Monthly Price from 2006-2019 (Source: MPOB, 2019)

Apart from CPO price, Crude Oil Price (COP) also entered into their most volatile period in the history starting 2007. The inevitable consumption on crude oil to operate machines has created a high dependency of crude oil in variety industries such as agriculture, construction, manufacturing, transportation and etc (Mohd Shahidan Shaari et al., 2013). Hence, COP was selected as a variable to examine its impact on CPO price. Moreover, Soybean oil (SBO) as a close substitute of CPO was also observed in this study. Despite CPO has more advantages than SBO, but some of the countries and Non-Government Organizations (NGO) with their self-interest persuade the consumers to use CPO's substitute vegetable oils, such as soybean oil to avoid deforestation and haze problem ("Palm Oil Being", 2019). In addition, anti-palm oil campaign by European countries, restricted CPO demand by India and lesser demand from China would highly affect CPO export of Malaysia as they were the major importers of Malaysia ("Govt Has Identified", 2019). This will cause the stock to be piled up on the lower prices due to decrease in demand of CPO (Tan, 2019). Therefore, CPO export requires special attention as the amount of export will affect CPO price and also the economy of Malaysia. Talking about export, it will definitely link with the exchange rate. The recent China-US trade war and Britain leaving European Union (EU) will drive significant impacts to the export quantity of Malaysia such as CPO which comprised 6% or RM 780 billion to the total exports of Malaysia. In terms of CPO production, the oversupplied issues together with the weak export recently have caused the CPO price being driven down by about 14% in 2018 (Hanim Adnan, 2018). Besides, the National Biofuel Policy (NBP) was forced in 2006 to establish Malaysian standard specification for B5 diesel, named biodiesel (International Energy Agency, 2015). That was mean the diesel should consist of 5% of palm methyl ester and 95% of petroleum diesel (Kana, 2019). On 1st February 2019, government increased the blending ratio from B7 to B10, raising the demand of the CPO thereby driving up the CPO price to RM2200 per metric tonne (Ayisy Yusof, 2019). Hence, CPO production and biodiesel production will be investigated as the factor influencing the CPO price. In 2nd dimension (financial), the Kuala Lumpur Composite Index (KLCI) was selected are due to the fluctuation of KLCI has reflected the instability of financial level and also economy in Malaysia (Amir, 2019). Besides, KLCI is reflecting the market return of 30 largest companies which involves few large CPO plantation companies named as Sime Darby, IOI Corporation, Kuala Lumpur Kepong, Genting Plantations, Felda Global Ventures Holdings and United Plantations (Lim, 2017). Hence, it has been taken as the proxy of stock price to investigate its impact towards CPO price. The last dimension (environment) acts as an important

factor in CPO price, as inappropriate climate could adversely affect the crops yield of the CPO (Chandran, 2018). To further clarify, having a temperature around 22°C to 24°C and 29°C to 33°C are considered the best minimum and maximum temperature to produce the highest yield of CPO. However, the severe droughts occurred during episodes of El Nino in 2015 and 2016 have caused the shortage of the CPO stock and its price was rose from RM1800 to RM3200 (Fazlin Ali, 2019). Hence, temperature has been selected as the proxy of climate change in this research. Furthermore, the continuous increment of carbon dioxide (CO₂) emission in Malaysia is expected to raise temperature and may subsequently cause global warming, forest fire, ocean acidification, carbon fertilization and etc. (Chen, Li, Li & Shi, 2014). Natural system such as human, plantation, or even animals are highly affected by these harmful sources even the ecosystem of nationwide. Thus, to make the study more comprehensive, climate change has additionally added into the research as an interactive term due to its indirect relationship among all the variables including economic, financial and also environment and creating the 2nd objective of this research. In short, this paper is to investigate Crude Palm Oil Price (CPOP) in Malaysia with the variables of Crude Oil Price (COP), Soybean Oil Price (SBOP), Production of CPO (PCP), Export of CPO (EPO), Exchange Rate (ER), Biodiesel Production (BP), Stock Price (SP) and also Climate Change (CC) according to monthly data from January 2007 to May 2018. This study could make a well contribution by extending a basic model from previous study which only include SBOP, POP and BP; CC is also expected to give a great contribution to this study due to its limited past studies and also the role of being interaction term in this research; Lastly, this research could minimize the impact of significant CPO price shock on economy of Malaysia and benefit the users of CPO, thereby achieving the sustainability of palm oil industry and also SDGs of Malaysia. The following discussion will include literature review, methodology, outputs and justifications. The overall research with recommendations will be discussed in the last section.

LITERATURE REVIEW

There are various studies that explored on the determinants of CPO price from economy and financial context such as SBO price, CPO production and biodiesel production, crude oil price, export of CPO, exchange rate and stock price. The main economic theory that support this work supply and demand theory.

Based on previous studies, SBO is the main substitute of CPO, thus the price of SOB can affect the CPO price. In the research carried out by a team of researchers, they found that there is a positive relationship between price of CPO and price of SBO by using VECM (Ayat K Ab Rahman et al., 2007). When the SBO price rises by 10%, CPO price will increase by 8% (Sahra Mohammadi et al., 2015). Besides, Santeramo and Searle (2019) proved that the elasticity of CPO supply to price of SBO is positive and above 1 by using the estimation of supply elasticity model. This means that the increment in SBO price is higher than the amount risen in the CPO supply.

Nur Nadia Kamil and Syuhadatul Fatimah Omar (2016) draw a conclusion that CPO production has a negative relationship with its price. This has been proven by the regression analysis shown when the production decrease by 1%, will increase the CPO price by 0.04%. The analysis result was compatible with M Ayatollah Khomeini Ab Rahman et al. (2017), showing the CPO production is found to be negatively related with price of CPO in Malaysia. Palm oil is a source to produce biodiesel. Buyung et al. (2017), Granger causality test has been used to test and shows CPO price and world crude oil price are significant influence. Norlim Khalid et al. (2018) claimed that crude petroleum price is one of the most significant variables. Government has high probability to abolish the NBP if the petroleum price going down, this may cause the demand and price of CPO will be affected in the market.

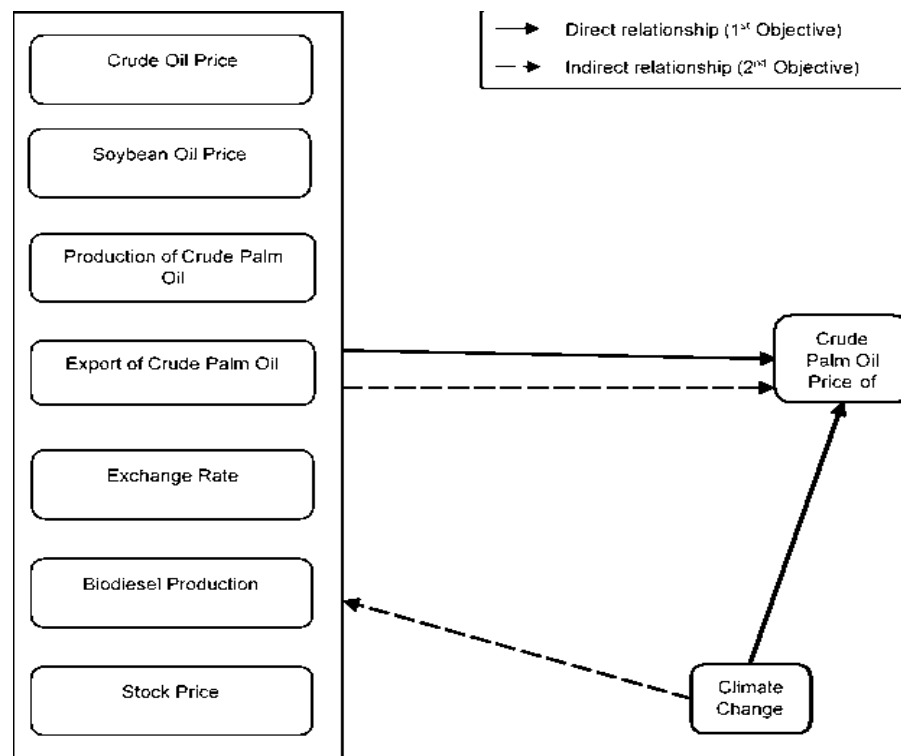
Furthermore, Nur Nadia Kamil and Syuhadatul Fatimah Omar (2016), showed that export of CPO was significantly positive to the changes of selling price of CPO at significance level 1% by using linear regression analysis. This empirical analysis was supported by Buyung et al. (2017) have run an analysis of VAR to test the relationship between exchange rate and CPO price in Indonesia.

According to Creti, Jots, and Mignon (2012), their research result shown that there is an increased of correlation between stock market and commodities price including CPO after financial crisis in 2008. These have been adapted by Liao, Qian and Xu (2018), mentioning that before Global Financial Crisis (GFC), China's stock market is insignificant to all commodities, but it turns positive significant after GFC without including gold.

However, the impact of environment on CPO price is undeniable especially when measuring the towards the sustainable development. Blanco et al. (2017) has proven that the CO₂ emission has positive relationship with the yields of agriculture product and finally reduce the price of agriculture and vice versa. This study has conducted by using bio-economic approach that involve assessing biophysical and socio-economic effects of climate change within EU. The research done by Chatzopoulos, Dominguez, Zampieri and Toreti (2019) showed the result that the regional climate extremes have impact the domestic and global markets of soybean. Furthermore, the research carried out by Gunasekara and Jayasinghe (2019) has proven that climate change will affect the stock price. A positive relationship can be concluded between stock price and climate change by using VAR in the research.

Hence, this study will be more comprehensive and relevant towards the sustainable development of Malaysia palm oil industry due to the identification of the main determinants that affect the CPO price and the effects of climate change through the interaction term on CPO price. Adopting climate change as interaction term is because Malaysia will easily get strong influence by the natural climate change due to Malaysia is located in between two large ocean named Pacific Ocean (East to MY) and Indian Ocean (West to MY) is necessary due to the impact of temperature, flood and carbon emission issues that could drive an unstable crops yield and overall the CPO price. Thus, this has become one of the contributions in this study where it may achieve sustainability in the palm oil industry.

Figure 2: Theoretical Framework for the Sustainability of the Palm Oil Industry



METHODOLOGY

3.1 Basic Model

This research is adopted from Sahra Mohammadi, Fatimah Mohamed Arshad, Bilash Kanti Bala, & Abdulla Ibragimov (2015), the research has conducted the relationship between CPO price and production of CPO, SBO price and biodiesel production and these 3 variables will be the control variables under this research. The research shows SBO price and biodiesel production have positively affect CPO price, however, CPO production negatively affects the CPO price.

Functional form:

$$CPOP = f(POP, SBOP, BP)$$

Econometric model:

$$CPOP = \beta_0 + \beta_1(POP_t) + \beta_2(SBOP_t) + \beta_3(BP_t) + \varepsilon_t$$

Where:

CPOP = Crude palm oil price

SBOP = Soybean oil price

POP = Crude palm oil production

BP = Biodiesel production

3.2 Extension Model

The new model has been extended by adding the conditional variables to study the combined effect of independent variables towards the CPO price. The conditional variables are crude oil price, export of CPO, exchange rate, stock price and climate change. The first model is to achieve the first objective of this research. The Econometric Model 2 is to accommodate the 2nd objective where it has taken interaction term (climate change) into consideration to examine combination effect of all independent variables with interaction term towards CPO price. The purpose of establishing Model 2 is to achieve sustainability by detects the relationship of each variable on CPO price when all the independent variables exist. Lastly, this research will be more emphasis on climate change and stock price as there is the main contribution to this research due to the limited literature review in past studies.

Functional form:

$$CPOP = f(POP, SBOP, BP, X_1)$$

Where CPOP is crude palm oil price, POP is crude palm oil production, SBOP is soybean oil price, BP is biodiesel production and X_1 are conditional variables including crude oil price, export of crude palm oil, exchange rate, stock price and climate change.

Econometric model: Model 1

$$\log CPOP_{t-n} = \beta_0 + \beta_1(\log POP_{t-n}) + \beta_2(\log SBOP_{t-n}) + \beta_3(\log BP_{t-n}) + \beta_4(\log COP_{t-n}) + \beta_5(\log EPO_{t-n}) + \beta_6(\log ER_{t-n}) + \beta_7(\log SP_{t-n}) + \beta_8(\log CC_{t-n}) + \varepsilon_{t-n}$$

Econometric model: Model 2

$$\log CPOP_{t-n} = \beta_0 + \beta_1(\log(POP_{t-n} \times CC_{t-n})) + \beta_2(\log POP_{t-n}) + \beta_3(\log(SBOP_{t-n} \times CC_{t-n})) + \beta_4(\log SBOP_{t-n}) + \beta_5(\log(BP_{t-n} \times CC_{t-n})) + \beta_6(\log BP_{t-n}) + \beta_7(\log(COP_{t-n} \times CC_{t-n})) + \beta_8(\log COP_{t-n}) + \beta_9(\log(EPO_{t-n} \times CC_{t-n})) + \beta_{10}(\log EPO_{t-n}) + \beta_{11}(\log(ER_{t-n} \times CC_{t-n})) + \beta_{12}(\log ER_{t-n}) + \beta_{13}(\log(SP_{t-n} \times CC_{t-n})) + \beta_{14}(\log SP_{t-n}) + \varepsilon_{t-n}$$

Where CPOP is crude palm oil price, POP is crude palm oil production, SBOP is soybean oil price, BP is biodiesel production, COP is crude oil price, EPO is export of crude palm oil, ER is exchange rate, SP is stock price and CC is climate change.

3.3 Model Estimation

3.3.1 Autoregressive Distributed-lag (ARDL) model

Autoregressive Distributed-lag (ARDL) model contains the lagged value(s) of the dependent variable and current values of one or variables and its own lag value (Ghouse, Khan & Rehman, 2018). Begin estimating an ARDL model normally starts from a reasonably general and large dynamic model. Then, the F-test and t-test can be utilized to pare down the model by eliminating unnecessary coefficients (Seddighi, Lawler & Katos, 2000). This model had been used by Davidson et al. in 1978 to form the consumption dynamic model in United Kingdom (UK) (Davidson, Hendry, Srba & Yeo, 1978). ARDL model can be specified if the combination of variables are I(0) and I(1) order of integration without integrated of order 2. I(0) simply means stationary variables and I(1) implies that there are difference stationary variables (Enders, 2010).

As compared to the VAR model, the ARDL model can be designed for endogenous and exogenous variables (Seddighi, Lawler, & Katos, 2000). The development of ARDL approach by

Pesaran et al. (2001) was intended to overcome the limitation of the cointegration approach based on either Engle and Granger (1987) cointegration test or Johansen and Jeselius (1990) maximum likelihood test which not be appropriate to test the model with small sample sizes (Odhiambo, 2009). ARDL model is relatively efficient in examining small and finite size of sample data. It allows to examine the cointegration relationship with the OLS method if the lag order of variables is known.

According to the bounds test result, it specifies only the short-run ARDL model if the variables are not cointegrated. Otherwise, it should specify both the short-run and long-run ARDL model. Through model specification by using ARDL model, many econometric problems able to be tackled includes misspecification and autocorrelation and generate a most appropriate and unbiased long-run interpretable model (Ghouse, Khan & Rehman, 2018).

The generalized ARDL (p,q) model is specified as:

Model without interaction term,

$$\log CPOP_t = \alpha + \sum_{i=1}^p \delta_i \log CPOP_{t-i} + \sum_{i=0}^q \beta'_i \log POP_{t-i} + \sum_{i=0}^q \beta'_i \log SBOP_{t-i} + \sum_{i=0}^q \beta'_i \log BP_{t-i} + \sum_{i=0}^q \beta'_i \log \chi_{t-i} + \varepsilon_t$$

χ named as COP, EPO, ER, SP and CC.

Model with interaction terms,

$$\log CPOP_t = \alpha + \sum_{i=1}^p \delta_i \log CPOP_{t-i} + \sum_{i=0}^q \beta'_i \log (POP_{t-i} \times CC_{t-i}) + \sum_{i=0}^q \beta'_i \log (SBOP_{t-i} \times CC_{t-i}) + \sum_{i=0}^q \beta'_i \log (BP_{t-i} \times CC_{t-i}) + \sum_{i=0}^q \beta'_i \log (\chi_{t-i} \times CC_{t-i}) + \varepsilon_t$$

χ named as COP, EPO, ER and SP.

Where CPOP is crude palm oil price, POP is crude palm oil production, SBOP is soybean oil price, BP is biodiesel production, COP is crude oil price, EPO is export of crude palm oil, ER is exchange rate, SP is stock price and CC is climate change.

Y_t is a vector and the variables in X' are allowed to be purely $I(0)$ or $I(1)$ or cointegrated; β and δ are coefficients; α is the constant, $i = 1, 2, 3, \dots, k$; p and q are optimal lag orders, p lags used for dependent variable and q lags used for independent variables; ε_t is a vector of the error terms.

To perform the bounds test for cointegration, the conditional ARDL (p, q_1, q_2) model is specified as:

Model without interaction term,

$$\log CPOP_t = \alpha_{1,0} + \beta_{1,1} \log CPOP_{t-1} + \beta_{1,2} \log POP + \beta_{1,3} \log SBOP_{t-1} + \beta_{1,4} \log BP_{t-1} + \beta_{1,5} \log \chi_{t-1} + \sum_{i=1}^p \alpha_{1i} \log CPOP_{t-i} + \sum_{i=0}^q \alpha_{2i} \log POP_{t-i} + \sum_{i=0}^q \alpha_{3i} \log SBOP_{t-i} + \sum_{i=0}^q \alpha_{4i} \log BP_{t-i} + \sum_{i=0}^q \alpha_{5i} \log \chi_{t-i} + \varepsilon_{1t}$$

Model with interaction terms,

$$\begin{aligned} \log CPOP_t = & \alpha_{1,0} + \beta_{1,1} \log CPOP_{t-1} + \beta_{1,2} (\log(\text{POP}_{t-1} \times \text{CC}_{t-1})) + \beta_{1,3} (\log(\text{SBOP}_{t-1} \times \text{CC}_{t-1})) \\ & + \beta_{1,4} (\log(\text{BP}_{t-1} \times \text{CC}_{t-1})) + \beta_{1,5} (\log(\chi_{t-1} \times \text{CC}_{t-1})) \\ & + \sum_{i=1}^p \alpha_{1i} \log CPOP_{t-i} \\ & + \sum_{i=0}^q \alpha_{2i} (\log(\text{POP}_{t-i} \times \text{CC}_{t-i})) + \sum_{i=0}^q \alpha_{3i} (\log(\text{SBOP}_{t-i} \times \text{CC}_{t-i})) + \sum_{i=0}^q \alpha_{4i} (\log(\text{BP}_{t-i} \\ & \times \text{CC}_{t-i})) + \sum_{i=0}^q \alpha_{5i} (\log(\chi_{t-i} \times \text{CC}_{t-i})) + \varepsilon_{1t} \end{aligned}$$

Hypothesis of bound test has shown as below:

$H_0: \beta_{1i} = \beta_{2i} = \beta_{3i} = \beta_{4i} = \beta_{5i} = 0$, (where $i = 1, 2, 3$)

H_1 : At least one of the β_i not equal to 0

Bound test can be run by Eview. When the result show the F-statistic is greater than the figure of $I(1)$, reject H_0 and conclude the model is statistically significant.

3.3.2 Error correction model (ECM)

Error correction model (ECM) is following test after testing the cointegration in bound test. Error correction model is standard way to model the cointegrated time series equation. It is a model derived from initially equation by replacing ARDL bound test long-run term with error correlation term (ECM_{t-1}). ECM is to estimate the speed of adjustment to long-run equilibrium after deviation has occurred in the short-run (Gujarati & Porter, 2009). The ECM is specified as following equation:

Model without interaction term,

$$\begin{aligned} \Delta \log CPOP_t = & \alpha_{1,0} \\ & + \sum_{i=1}^p \alpha_{1i} \Delta \log CPOP_{t-i} \\ & + \sum_{i=0}^q \alpha_{2i} \Delta (\log \text{POP}_{t-i}) + \sum_{i=0}^q \alpha_{3i} \Delta (\log \text{SBOP}_{t-i}) + \sum_{i=0}^q \alpha_{4i} \Delta (\log \text{BP}_{t-i}) \\ & + \sum_{i=0}^q \alpha_{5i} \Delta (\log \chi_{t-i}) + \lambda \text{ECM}_{t-1} + e_t \end{aligned}$$

χ named as COP, EPO, ER, SP and CC.

Model with interaction terms,

$$\begin{aligned} \Delta \log CPOP_t = & \alpha_{1,0} \\ & + \sum_{i=1}^p \alpha_{1i} \Delta \log CPOP_{t-i} \\ & + \sum_{i=0}^q \alpha_{2i} \Delta (\log(\text{POP}_{t-i} \times \text{CC}_{t-i})) + \sum_{i=0}^q \alpha_{3i} \Delta (\log(\text{SBOP}_{t-i} \times \text{CC}_{t-i})) \\ & + \sum_{i=0}^q \alpha_{4i} \Delta (\log(\text{BP}_{t-i} \times \text{CC}_{t-i})) + \sum_{i=0}^q \alpha_{5i} \Delta (\log(\chi_{t-i} \times \text{CC}_{t-i})) + \lambda \text{ECM}_{t-1} + e_t \end{aligned}$$

χ named as COP, EPO, ER and SP.

ECM_{t-1} is error correlation term that added into the model to form ECM. It has been used to measure the speed of adjustment (λ) in the direction of long-term equilibrium, which is time taken by the dependent variable to converge to long term equilibrium (Go, Lau, Yii & Lau, 2019). Based on the Eview result of ECM test, it should focus on the coefficient of Coint Eq (-1) to determine the speed of adjustment of model to long-run equilibrium if p-value < 0.1.

DATA ANALYSIS & FINDINGS

4. Data

This study included the monthly data with the collection period from January 2007 to May 2018. Data of BP, EPO, ER, SP (KLIC) and CC (temperature) were extracted from Bloomberg. CPOP data was taken from Malaysian Palm Oil Board (MPOB) and POP data was sourced from Bank Negara Malaysia. COP and SOB were taken from Index Mundi.

4.1 Unit Root Test

Table 4.1 ADF and PP Test for Variables without Interaction

Variables	Augmented Dickey-Fuller (ADF)				Phillips-Perron (PP)			
	Individual Intercept		Individual Intercept and Trend		Individual Intercept		Individual Intercept and Trend	
	Level	1 st Difference	Level	1 st Difference	Level	1 st Difference	Level	1 st Difference
CPOP	-3.6660(1)***	-8.4691(0)***	-3.6963(1)**	-8.4647(0)***	-3.3285(5)**	-8.4615(5)***	-3.3355(5)*	-8.4566(5)***
COP	-2.9606(1)**	-7.6919(0)***	-3.0804(1)	-7.6582(0)***	-2.6877(3)*	-7.7007(4)***	-2.8335(3)	-7.6673(4)***
SBOP	-2.3652(1)	-7.3277(0)***	-2.9864(1)	-7.3899(0)***	-2.4377(7)	-7.5299(5)***	-2.9144(6)	-7.5931(5)***
POP	-2.4347(12)	-4.4086(11)***	-3.2937(12)*	-4.3824(11)***	-3.3644(9)**	-9.7419(16)***	-3.2928(9)*	-9.7539(16)***
EPO	-5.6590(0)***	-14.4239(0)***	-5.8325(0)***	-14.4278(0)***	-5.5618(2)***	-19.6650(14)***	-5.7696(2)***	-19.9076(15)***
ER	-0.9022(0)	-11.3116(0)***	-1.7731(0)	-11.3307(0)***	-0.9216(1)	-11.3115(1)***	-1.7882(1)	-11.3307(1)***
BP	-0.6448(0)	-11.5844(0)***	-1.7641(0)	-11.5896(0)***	-0.6448(0)	-11.5844(1)***	-1.7720(1)	-11.5896(2)***
SP	-1.2980(0)	-9.6648(0)***	-1.8419(1)	-9.6370(0)***	-1.5692(6)	-9.8503(4)***	-2.1204(6)	-9.8282(4)***
CC	-7.3206(0)***	-16.1718(0)***	-7.5448(0)***	-16.1097(0)***	-7.5009(5)***	-27.6724(13)***	-7.7092(4)***	-27.5947(13)***

Table 4.2 ADF and PP Test for Variables with Interaction

Variables	Augmented Dickey-Fuller (ADF)				Phillips-Perron (PP)			
	Individual Intercept		Individual Intercept and Trend		Individual Intercept		Individual Intercept and Trend	
	Level	1 st Difference	Level	1 st Difference	Level	1 st Difference	Level	1 st Difference
CPOP	-3.6424(1)***	-9.4429(0)***	-3.6472(1)**	-9.4342(0)***	-3.5903(5)***	-9.4447(5)***	-3.5739(5)**	-9.4356(5)***
CC*POP	-2.9566(1)**	-8.2019(0)***	-3.0588(1)	-8.1643(0)***	-2.8285(3)*	-8.1579(1)***	-2.9738(3)	-8.1198(1)***
CC*SBOP	-2.7475(2)*	-8.7647(0)***	-3.3439(2)*	-8.8294(0)***	-2.5992(7)*	-9.0657(6)***	-3.0891(6)	-9.1245(6)***
CC*POP	-2.1323(12)	-4.8987(11)***	-3.0317(12)	-4.8694(11)***	-3.4257(10)**	-10.5377(18)***	-3.2853(10)*	-10.7606(19)***
CC*EPO	-5.6149(0)***	-13.9929(0)***	-5.8250(0)***	-14.0011(0)***	-5.4936(3)***	-18.4123(16)***	-5.7409(3)***	-19.3779(17)***
CC*ER	-1.3580(0)	-14.1444(0)***	-2.0371(0)	-14.1320(0)***	-1.1493(4)	-14.2324(4)***	-1.8550(5)	-14.2956(3)***
CC*BP	-0.6998(0)	-12.0190(0)***	-1.7759(0)	-12.0229(0)***	-0.6737(1)	-12.0189(1)***	-1.7640(2)	-12.0229(0)***
CC*SP	-1.5503(0)	-10.3851(0)***	-1.7926(0)	-10.3559(0)***	-1.6973(4)	-10.4068(2)***	-2.1681(4)	-10.3796(2)***

Notes: *, **, *** indicates the rejection of null hypothesis (presence of unit root in variable) at 10%, 5%, 1% of significance level. Number in parentheses is the number of bandwidths identified based on the Newey-West estimator using the Schwartz Criterion (SC) and Default (Barlett Kernel).

As overall, it can make a conclusion that all the variables are stationary under the 1st difference of intercept and intercept and trend at 1% significant level.

4.2 Diagnostic Checking

Table 4.3 Result of Diagnostic Testing for Variables for Without Interaction

	Normality Test ¹		Multicollinearity ³		Breusch-Godfrey LM Test ²	
	Jarque-Bera	Probability	VIF	Low/High	Obs*R-squared	Probability
Model 1	3.2304	0.1989	1 ≤ VIF ≤ 10	Low	0.8502	0.9907
Model 2	3.0530	0.2173	1 ≤ VIF ≤ 10	Low	4.6456	0.4606

¹ H₀: The error term is normally distributed

² H₀: The model has no serial correlation.

³ Multicollinearity does not adopt hypothesis testing.

4.2.1 Normality Test

Model 1 is combined variables without interaction. Model 2 has added interaction term (climate change) into the variables. Both models have generated the results of p-value which are higher than the significant level of 5%, indicating a non-rejection of H₀. Besides, JB statistic is smaller compared to the critical value of 5.991. Thus, the conclusion is both models were normally distributed in the error term.

4.2.2 Multicollinearity

From the result, the VIF for variables in both models are lower than 10. The result shows that multicollinearity does not exist. Therefore, the results are valid and can be trusted.

4.2.3 Breusch–Godfrey LM Test

The result shows the p-value for chi-square for Model 1 and 2 are higher than the significant level of 5%. Thus, it has sufficient evidence to conclude that there is no autocorrelation problem in the error terms for the model.

4.2.4 CUSUM Test

Below shows all the results of CUSUM test in each Model.

Figure 4.1: Output for Model 1

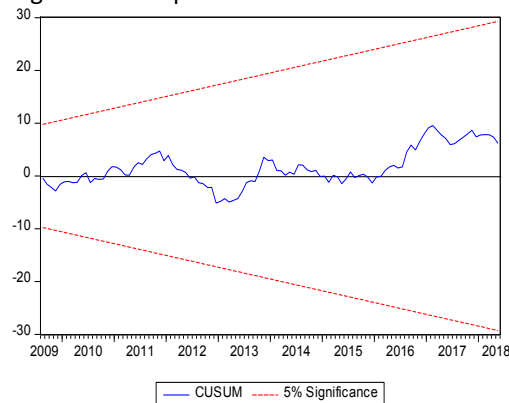
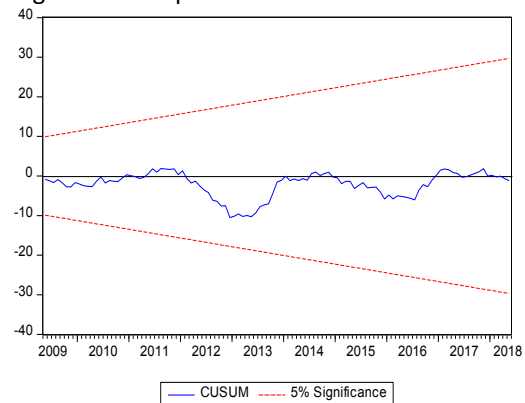


Figure 4.2: Output for Model 2



Note: H_0 : The parameter is stable.

For Model 1 and 2 get a conclusion that the models are constant at the significant level of 5%. The reason is because all the plot of CUSUM statistics are stay in between the upper critical line and lower critical line.

4.3 Model Estimation

Model 1: Control Variables + Conditional Variables (Without Interaction)

Table 4.4: Results of Bound Test for Model 1

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	3.300103**	10%	1.85	2.85
K	8	5%	2.11	3.15
		2.5%	2.33	3.42
		1%	2.62	3.77

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H_0 : There is no long-run relationship in the model.

From the Table 4.4, the F-statistic in Bound Test for model 1 is 3.3001, which is greater than the Critical Value of 3.15 at 5% significance level. Thus, it indicates one of the variables in Model 1 does exist long-run effect on the CPO price.

Table 4.5: Results of Long Run Parameter for all the Conditional Variables in Model 1

Long Run Parameter	COP	Coefficient	0.191781
		T-statistic	1.167883
		P-value	0.2455
	EPO	Coefficient	1.213815
		T-statistic	2.022349**
		P-value	0.0457**
	ER	Coefficient	0.899719
		T-statistic	2.571721**
		P-value	0.0115**
	SP	Coefficient	0.194032
		T-statistic	1.408635
		P-value	0.1619
	CC	Coefficient	-3.481297
		T-statistic	-1.829830*
		P-value	0.0701*

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H₀: The variable X is insignificant to the Crude Palm Oil Price.
(where variable X represents COP, EPO, ER, SP or CC)

Table 4.5 shows that there is a long-run relationship that exist in CPO price and export of CPO, exchange rate and also climate change. The coefficients for the three variables are 1.2138, 0.8997, and -3.4813, which is significant at 10%. For every 1% change in export of CPO, the CPO price will change by 1.21%, ceteris paribus. Nur Nadia Kamil and Syuhadatul Fatimah Omar (2016) claimed that when government reduce the tax charged on import, it will encourage more import goods. Hence, the CPO price will rise due to the boost in demand of CPO. When the exchange rate ($\frac{\text{Malaysian Ringgit}}{\text{US Dollar}}$) rises for 1%, the CPO price will improve by 0.90%, ceteris paribus. Rifin (2010) proven the weaken currency of Rupiah will raise the demand of export of CPO in Indonesia. Thus, it has led the CPO price to rise. For every 1% increase in climate change, on average, CPO price will decrease by 3.48%. This can be supported by Ronnback (2014), who claimed that the increase in temperature will drive down the CPO price due to the poor growth of CPO. The researcher also proved that for every degree Celsius increase in temperature, the CPO price decreased by 60 to 80 percent on average.

Table 4.6: Results of ECM for Model 1

ECM	Coefficient	-0.176959
	T-statistic	-5.983561***
	P-value	0.0000***

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H₀: There is non-cointegration in the model.

Table 4.6 displays that there is cointegration in Model 1. Thus, the coefficient (-0.176959), has indicated the speed of adjustment is 17.70% in one month towards the long-run equilibrium.

Model 2: Control Variables + Conditional Variables (With Interaction)

Table 4.7: Result of Bound Test for Model 2

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	3.843868**	10%	1.92	2.89
K	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H₀: There is no long-run relationship in the model.

Table 4.7, it has sufficient evidence to conclude that there is a long-run effect on the CPO price for Model 2 after all variables have interacted with climate change. This is supported by the result given in the table, in which the F-statistic (3.8439) is greater than the critical value (3.51) in the 2.5% significant level.

Table 4.8: Result of Long Run Parameter for all the Conditional Variables interacted with Climate Change in Model 2

Long Run Parameter	CC*COP	Coefficient	0.206734
		T-statistic	1.324153
		P-value	0.1882
	CC*EPO	Coefficient	0.458692
		T-statistic	1.127813
		P-value	0.2619
	CC*ER	Coefficient	0.949430
		T-statistic	3.203727
		P-value	0.0018***
	CC*SP	Coefficient	0.226984
		T-statistic	1.807215
		P-value	0.0735*

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H₀: The variable X is insignificant to the Crude Palm Oil Price.

(where variable X represents CC*COP, CC*EPO, CC*ER or CC*SP)

From Table 4.8, it shows that Climate Change*Exchange Rate and Climate Change*Stock Price have long-run relationship as the significant level (10%) is higher than the p-value. The coefficient of Climate Change*Exchange Rate and Climate Change*Stock Price are 0.9494 and 0.2270 respectively, showing they can positively affect CPO price. For every 1% increase in exchange rate together with the interaction term, the CPO price will increase by 0.95%, given that other variables are constant. Based on the research done by Ogbuabor and Egwuchukwu (2017) in Nigeria, when the temperature reduced (the problem of climate change decreased), it will strengthen the economics of the domestic country, thus it will show climate change and exchange rate ($\frac{\text{Domestic Currency}}{\text{Foreign Currency}}$) have a positive relationship. When the economy of Malaysia is good, foreigners will tend to reduce their demand for Malaysia's goods due to their currency is now weaker. To further clarify, when the Malaysian Ringgit is more strengthens than the foreign currency, it indicates 1 foreign currency can only exchange for a lesser Malaysia Ringgit. Therefore, this will lead the foreigners to demand lesser from Malaysia and subsequently reduce the CPO price. In short, when the temperature increases it will positively affect the exchange rate and lead to a higher demand for domestic goods from foreigners and lastly increase the CPO price. For every 1% increase in Climate Change*Stock Price, the CPO price will increase 0.23%, ceteris paribus. According to Gunasekara & Jayasinghe (2019) claimed that various weathers such as temperature, wind speed, humidity, sunshine hours and cloud covers will change the mood of the normal investors. When the temperature increase, the production of CPO will increase given the temperature is within the maximum temperature range 29°C to 33°C. When the supply of CPO rise, the sales return of the company will increase and thus this will attract investors to invest in the stock market and subsequently the KLCI will increase. When KLCI is high, this indicates the economic condition is good where the consumer has a higher purchasing power. Hence, people will demand more products, and the CPO price will increase.

Table 4.9: Result of ECM for Model 2

ECM	Coefficient	-0.196643
	T-statistic	-6.093758
	P-value	0.0000***

Note: *, **, *** indicates the rejection of null hypothesis at 10%, 5%, 1% of significant level. Lag selection are based on the lowest AIC.

H₀: There is non-cointegration in the model.

Table 4.9 displays that there is cointegration in Model 2. Thus, the coefficient (-0.1966), has indicated the speed of adjustment of Model 2 to the long-run is 19.66% in one month.

DISCUSSION AND CONCLUSION

This study has examined the determinants that impact Malaysia's CPO price. In order to make this study more comprehensive, climate change has additionally added as an interaction term to assess the overall impacts with other variables towards the CPO price in Malaysia. Fortunately, both of the objectives were achieved in this research. Firstly, the factors affecting the CPO price have been determined which included the control variables: production of CPO, SBO price, biodiesel production and conditional variables: crude oil price, export of CPO, exchange rate, stock price, and also climate change. According to the result, the export of CPO, exchange rate and climate change were significant towards CPO price. In terms of the second objective, the research can conclude that when climate change acts as an interaction term on all the independent variables, it will affect the CPO price in Malaysia. The outcome of the analysis showed both exchange rate and stock price were significant.

This research has determined the sustainability of Malaysia's palm oil industry via the aspects of economy, financial and environment. From all these variables, government can implement the policies suggested to achieve a more sustainable palm oil industry by giving a more stable pricing and also more demand on CPO. For instance, government can impose tax or subsidies and establish Free Trade Agreements (FTAs) with more countries to influence the export of CPO, thereby stabilizing the CPO price. FTA is under international trade policy which is an agreement between two or more countries, agree to get rid of tariff and non-tariff barriers affecting trade among them ("Malaysia Regulations, and Standard", 2019). Therefore, Malaysia may impose either lower import tariff or zero tariff with high CPO importing countries to solve the issue of low export of CPO from European countries and India.

Furthermore, international trade policy is able to manage the terms of trade ($\frac{\text{export price index}}{\text{import price index}}$) in Malaysia by implementing tariffs, subsidy or import quotas and export restraints to eliminate the trade barriers among the world (Hayakawa, Kim & Yoshimi, 2017). Therefore, unstable exchange rate created from China-US trade war and Britain leaving EU issue can be solved by reducing export tax, export restraint or impose import tariff and import quota to increase the quantity of export and discourage the import, which will subsequently reduce the exchange rate ($\frac{\text{Malaysian Ringgit}}{\text{Foreign Currency}}$).

Besides, in order to stabilize the climate change problem in Malaysia, government is getting more cautious with "green environment". This will encourage more demand of CPO as it is one of the renewable energies and also harmless to the environment. The government should carry out National Green Technology Policy (NGTP) to mitigate the climate change problem and then reduce the impact of high temperature on the exchange rate and stock price for controlling the CPO price. The implementation of NGTP has increased the awareness of eco-friendly in public ("Green Technology Master Plan", 2017). With a better quality of environment and lower air pollution, people will remain their usual daily activities. People will have less concern on their purchasing actions when the economy condition is better. As a result, stock price and exchange rate will not be easily interfered by the stabilized climate change.

On the other hand, by implementing NGTP, Malaysia able to partially achieve the SDGs that has been implemented by United Nations Member States in 2015 (Sustainable Development Goals, 2020). This is because from the policies suggested, the country able to enhance its sustainability through reducing the use of natural resources. Furthermore, this will also attract countries who are emphasizing on environmental friendly to invest in or import from our country which boosted the country's economy. Last but not least, a better use of resources will help in stabilizing the climate condition where the production of agriculture products will be stabilized and also the health condition of humans will also turn better.

As overall, there might have more policy that could cope with all these issues stated, however this research has suggested these 2 policies are mainly due to its function and impacts are more useful to the country and also able to achieve the objectives in this research. Besides, these policies will not only boost the economy of Malaysia, but also create a sustainable palm oil industry. In addition, it also heading to the achievement of Sustainable Development Goals.

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BAFE056:
**EFFECT OF MACROECONOMICS FACTORS TOWARDS
INSTITUTIONAL QUALITY**

Shan, Jia-Lyao^a, Har, Wai-Mun^b, Tan, Ai-Lian^c, Tan, Chai-Thing^d, Lim, Chong-Heng^e

^aFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia.

Email: jialyaoshan@1utar.edu.my

^bFaculty of Accountancy and Management, Universiti Tunku Abdul Rahman, Malaysia.

Email: harwm@utar.edu.my

^cFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia.

Email: tanal@utar.edu.my

^dFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia.

Email: tanct@utar.edu.my

^eFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia.

Email: limch@utar.edu.my

Abstract

Impacts of institutional quality on macroeconomy such as growth, foreign direct investment and trade openness attract lots of research interest. Pressure to achieve growth, foreign investment and trade may have force an economy to improve its institutional quality. In contrast, it will be easier to improve institutional quality when the economy is enjoying good growth, healthy level of investment and improving trade openness. These issues have motivated this paper to analyse the effects of growth, foreign investment and trade openness on institutional quality. Results show that random effect model is preferred but the model suffer from heteroskedasticity and autocorrelation but no cross dependency. Thus, Panel Generalized Least Square method with adjustment for heteroskedasticity and autocorrelation is adopted. Growth has inverted-U curve effect on institutional quality but with a high turning point at 27%. Unemployment rate, life expectancy at birth and trade openness have positive relationship with institutional quality. Net foreign direct investment is not significant. The results imply that common belief of institutional quality is determinant of macroeconomy is contestable. Indeed, results show macroeconomic factors such as growth, unemployment rate, life expectancy and trade openness also have impact on institutional quality.

Keywords: Institutional Quality, Growth, Foreign Direct Investment, Trade Openness and Panel Generalized Least Square

BAFE058: FOREIGN EXCHANGE RESERVES IN INDIA- A POLICY PERIOD ANALYSIS

Bhakri, Suman ^a, Verma, Aman ^b

^a Associate Professor, Shri Ram College of Commerce, University of Delhi, India
Email: suman.bharkhi@srcc.du.ac.in

^b Ph.D Research Scholar, Department of Commerce, Delhi School of Economics, University of Delhi, India
Email: amanv46@gmail.com

Abstract

Foreign exchange reserves (forex reserves) received large-scale interest among the developing economies because of rapid increase in globalization, the acceleration of capital flows and the integration of capital markets domestically and globally as well. The expansion in the volume of trade activities and capital inflows in the form of investments and external commercial borrowings (ECBs) has led to the emergence of importance of managing the foreign exchange reserves. According to International Monetary Fund (Balance of Payments Manual, and Guidelines on Foreign Exchange Reserve Management, 2001), which defines reserves as “external assets that are readily available to and controlled by monetary authorities for direct financing of external payments imbalances, for indirectly regulating the magnitudes of such imbalances through intervention in exchange markets to affect the currency exchange rate, and/or for other purposes.” Foreign exchange reserves (FER) are also readily available for meeting contingencies in a country. It is regulated and managed by the various countries' central banks. Regulation and management of foreign exchange reserves have posed various challenges to emerging market economies. The current paper has focused on the trends in foreign exchange reserves in India. The study is divided into four policy periods, namely, Liberalization, Globalization, World Recovery and Global financial crises. It will be using semi log growth equation model with dummy variables to find out the growth rates in foreign exchange reserves for different policy periods. Trends in foreign exchange reserves have been analysed for the period 1991-2017. The paper has attempted to give deep insights into the impacts of different policy periods.

Keywords: Foreign Exchange Reserves (FER), External Commercial Borrowings (ECBs), Liberalization, Globalization, World Recovery.

INTRODUCTION

Foreign exchange reserves (forex reserves) received large-scale interest among the developing economies because of rapid increase in globalization, the acceleration of capital flows and the integration of capital markets domestically and globally as well. This has also posed various challenges to emerging market economies. The debt crises in some developing economies in the nineties have posed several issues and dilemmas to the policy makers on foreign exchange reserves. The policy makers and academicians have started paying considerable attention towards foreign exchange reserves management.

The expansion in the volume of activities related to trade and inflow of capital in the form of investments and commercial borrowing has led to the emergence of importance of managing the foreign exchange reserves. Globally there is no unique definition of foreign exchange reserves because there have been a lot of divergence of views in terms of ownership of assets, liquidity aspects, coverage of items and need for a distinction between owned and non-owned reserves. However, for operational purposes, most countries in the world have adopted the definition suggested by International Monetary Fund (Balance of Payments Manual, and Guidelines on Foreign Exchange Reserve Management, 2001), which defines reserves as “external assets that are readily available to and controlled by monetary authorities for direct financing of external payments imbalances, for indirectly regulating the magnitudes of such imbalances through intervention in exchange markets to

affect the currency exchange rate, and/or for other purposes.” Reserves are held in one or more currencies, mostly in dollar (US\$) and to a less extent in European Union’s euro, the British pound sterling and the Japanese yen.

MANAGEMENT OF FOREIGN EXCHANGE RESERVES

Foreign exchange reserves are classified into two inter-linked areas, namely, the theory of reserves, and the management of reserves. The theory of reserves encompasses issues relating to legal and institutional arrangements for holding reserve assets, definitional and conceptual aspects, and objectives for holding foreign reserve assets, exchange rate, and determining the appropriate level of foreign reserves. In essence, a theoretical framework for reserves provides the basis for holding forex reserves.

On the other hand, reserve management mainly involves the portfolio management of foreign reserves i.e., how best to deploy foreign reserve assets. The portfolio considerations take into account inter alia, liquidity, safety and yield on reserves as the major objectives of reserve management. Foreign exchange reserves are called reserve assets in the balance of payments and are recorded in the capital account. The reserves are regarded as assets under functional category. In terms of financial assets classification, the reserve assets are classified as gold bullion, unallocated gold accounts, currency, special drawing rights, reserve position in the IMF, interbank position, other deposits, other transferable deposits, debt securities, loans, equity (listed and unlisted), financial derivatives, such as forward contracts and options and investment fund shares. There is no corresponding item for reserve assets in liabilities of the international investment position. Usually, when the monetary authority of a country has some kind of liability, this will be included in other categories, such as other investments. In the Central Bank’s Balance Sheet, foreign exchange reserves are assets, along with domestic credit.

The standard approach of measuring foreign exchange reserves takes into account the unencumbered foreign reserve assets held by the respective monetary authorities, however, the foreign currency and securities held by the general public, corporate bodies and the banks are not accounted for in the definition of official holdings of reserves. In India, the Reserve Bank of India Act 1934 contains the provisions for the RBI to act as the custodian of foreign reserves and manage them with the defined objectives. The term ‘reserves’ refer to both foreign securities held by the Issue Department and foreign reserves held in the form gold assets in the Banking Department and domestic reserves in the form of bank reserves. It is the RBI, as custodian of forex reserves lays down the rules and norms regarding such reserves.

The traditional approaches to reserve determination are considered to be pure trade based models comprising mainly measures of import cover, opportunity cost and foreign exchange market intervention. The approach of India for reserve management, until the balance of payments crisis of 1991 was essentially based on this traditional approach, i.e., to maintain an adequate level of import cover defined in terms of number of months of imports equivalent to reserves. The approach to reserve management underwent a paradigm shift when other areas were also noticed and the need for short term debt discharging and medium term debt servicing was felt.

Unlikely, the contemporary reserve demand models incorporate features like free capital mobility, inflation targeting, return-risk trade-off and complications arising from intermediate exchange rate regimes. Earlier studies on optimum reserves mainly identify three primary motives for accumulating reserves, namely, transaction motive, precautionary motive and speculative motive (Reddy, 2002). While transaction motive applies to reserve demand by the commercial banks, precautionary motive dominates the central bank reserve accumulation behaviour. Besides keeping reserves for meeting the balance of payments deficits, countries also keep certain amount of reserves for meeting unforeseen contingencies.

While considering the management of reserves, the costs and benefits associated with holding reserves should constantly be assessed. On the risks and costs side, maintaining high level of foreign reserves to tide over external shocks involves opportunity costs. It is basically the foregone investment because the resources have been used to purchase foreign exchange reserves instead of increasing domestic capital.

On the benefits side, during financial crises, it has been seen that maintaining and holding

sufficient reserves and disclosing adequate information to markets helps a country to prevent itself from external crises, especially those stemming from the capital account, mainly financial institutional investments and external commercial borrowings. The reserve management plays a central role because of its growing importance of reserves in crises prevention and as a buffer to manage exchange market pressures. Therefore, we can say that opportunity cost of holding reserves is the marginal productivity of domestic capital and the reserve management authority seeks to minimize this opportunity costs against the benefits that accrue from holding reserves.

LITERATURE REVIEW

Mohanty and Turner (2006), emphasized on the process of sterilization, wherein it was argued that effective sterilization can bring fine results to a country. Sterilization basically neutralizes the inflationary monetary impact of reserve accumulation by offsetting the corresponding increase in money supply with a domestic money market operation, typically domestic debt issuance (Green and Torgerson, 2007). However, ineffective sterilization may obstruct the growth of the economy and may also bring macroeconomic instability. It was also noted that sterilized intervention is more effective in influencing the exchange rate in developing market economies. The prolonged financing and significant accumulation of foreign exchange reserves has implications for the balance sheets of the central bank, the private sector and, indeed the banking system. Balance sheet effects might reduce the effectiveness of sterilization, with possible inflationary implications. On the basis of the findings, it was also noted that sterilizing reserve accumulation completely, can pose certain challenges for the economy. They have also discussed three possible and unwelcoming implications of sterilization which are the fiscal costs of intervention, future monetary imbalances and financial sector imbalances. On the other hand **Green and Torgerson (2007)** found similar results, wherein the costs of excess reserves were considered. They have analysed the limit and gains from reserve accumulation. Evidence of sterilization costs, opportunity costs, central bank balance sheet risk and other costs were the subject matter of their study.

Sen (2005) has focused on RBI intervention to keep the real effective exchange rate (REER) constant, especially in the initial stages of the inflows when it was viewed as temporary. The purchase of foreign exchange reserves raises the monetary base but RBI neutralizes (sterilizes) through a contractionary open market operations, i.e., via the sale of government bonds. It was also noted that costs associated with this sterilization lied in the government bonds (carrying a high rate of interest compared to that of foreign exchange). Thus, he concluded that as forex reserves rises, so does costs of holding them.

Green and Torgerson (2007) in their paper also examined the motivations of foreign exchange reserve accumulation among the world's largest emerging market holders of reserves. It has been noticed in their study that the top seven emerging market reserve holders (Japan, China, Taiwan, South Korea, Russia, India and Hong Kong) exceeded the standard reserve adequacy measures. The analysis mainly suggested that net marginal return to additional reserves is low but not extremely negative. The proposition that the largest reserve holders were holding foreign exchange reserves exclusively for precautionary purposes and their policy is not about the allocation of existing reserves, but about accumulating reserves further, however, it yielded little support. Apart from holding reserves for precautionary purposes, i.e., for currency crises, economies also hold reserves for day to day operations which are called transaction motives and also for speculative activities, these motives basically aimed at hedging against non-currency crises.

The study of **Sahu (2015)** focused on criteria for determining adequate level of reserves. The paper basically emphasized on determining and maintaining the satisfactory level of reserves and measured the level of India's foreign exchange reserves. The paper noted the level of foreign exchange reserves that India maintained during the period under his study and it was found that import coverage ratio far exceeded the global benchmark of 3 months. The commonly accepted ratio for covering short term external debt is 1, meaning thereby foreign exchange reserves should cover 100% of the country's short term debt and it should not fall below 100%. In India, it was found that this ratio has always been more than 1. India's forex reserves have always been sufficient during his period of study. It was also argued that this could be the reason that India was not much affected by Lehman Crises 2007. It was noted that India not only covered its 100% short term external debt, but also more than 50% of total external debt (TED) as against globally accepted norm of at least 40% coverage.

Kapteyn (2001) suggested 5%-20% of reserves of M2, depending on the exchange rate system, as an appropriate buffer. India maintains market determined exchange rate system and it was found that ratio of foreign exchange reserves to broad money (M2) has always been more than 10%. However, **Worrell's (1976)**, noted certain different criteria for determining adequate level of reserves for a developing country. The study focused on the determination of the level of reserves which is 'best' or 'optimal' in the light of economic goals of the country. His paper exhibits a framework to show a relationship between the stock of reserves and growth rate of the economy by taking the example of Jamaica, which is a small open economy heavily dependent on trade, specializing in a very few raw material exports and tourism, importing a large and diversified range of commodities and manufacturing a narrow range of final products. On one side, it was emphasized that the producing sector needs foreign inputs and capital for the perfect operation and expansion of the business. On the other hand, countries like Jamaica hold substantial amounts of foreign financial assets, which he mainly referred as foreign exchange reserves.

Polterovich and Popov (2003) basically suggested that the accumulation of foreign exchange reserves (FER) contributes to the economic growth of a developing country by increasing both the Investment/GDP ratio and capital productivity. There has been a strong evidence that accumulation of foreign exchange reserves (FER) leads to depreciation of exchange rate, which in turn stimulates demand for exports and countries with rapidly growing FER/GDP ratios, other things being equal, exhibit higher investment/GDP ratios, trade/GDP ratios, capital productivity and thereby higher rates of economic growth. The study concluded that accumulation of foreign exchange reserves is neither a necessary nor a sufficient condition of economic growth, it was found that countries that did not accumulate reserves grew faster than others because of better investment climate, better institutions, greater involvement in international trade achieved through the openness of their economies.

Sen (2005) in his paper, has pointed out two types of inflows- Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII) and volatility due to inflow of foreign capital. He has also noted that FDI add to the productive ability of a country, facilitates the transfer of technology and is not as volatile as FIIs. On the other hand, there are other inflows like FII and NRI deposits, which are considered highly volatile in his study.

Dash and Narayanan (2011) attempt to identify the important determinants of foreign exchange reserves in India by using Johansen (1995) Maximum Likelihood Vector Error Correction Model (VECM) on monthly as well as annual data for reserves, nominal exchange rate and imports. The variables included in their empirical model were rupee-dollar bilateral nominal exchange rate, imports, opportunity cost (call-money rate) and capital flows in levels. It was found that there exist a long run relationship among reserves, imports and exchange rate. The monthly data estimations showed that the exchange rate shock exert an everlasting effect on reserves, both on level and volatility.

Hatase and Ohnuki (2009) invoke the competition among reserve currencies. Their paper basically explores the competition between the British pound sterling and the US dollar for the status of principal reserve currency in Japan during inter war period. Exchange rate appreciation was not significant, although the relative volatility of sterling compared to the dollar shows the expected negative sign. This volatility was significant when regressed against trade flows and interest payments separately but was not significant when trade and finance were lumped together.

Ray (2012) tried to assess the relationship between foreign exchange reserves of India and BSE (Bombay Stock Exchange) stock market capitalization (SMC) on the basis of annual data from 1990-91 to 2010-11. Her study used simple linear regression model, granger causality test and unit root test to measure the relationship between foreign exchange reserves of India and BSE market capitalization. On the basis of the results of the test, it was concluded that Granger Causality test indicates that SMC does not Granger cause FOREXR at all whereas FOREXR granger cause SMC, meaning that foreign exchange reserves of India had a positive impact on BSE Stock market capitalization.

Singh (2005) basically focused on utilizing foreign exchange reserves for financing India's infrastructure. The amount of FER in India was quite modest when compared to some other countries in the region and he hardly found any evidence that any other country has used FER to finance infrastructure. He argued that if the prime objective of accumulating reserves is precautionary with

liquidity as the key element of investment, then it may not be appropriate to use reserves for financing infrastructure activities. He also argued that projects of infrastructure in India yield low or negative proceeds on account of low user charges, inefficient and ineffective technology and archaic labour laws. It was found that at that time many of the companies pursuing infrastructure activities were yielding negative returns.

It is necessary for a country especially, emerging and developing countries to maintain an adequate or optimal level of foreign exchange reserves as it helps a country to use them as a cushion in case of huge outflow of funds or a currency crises situation. It is rightly said that the main motive or purpose for holding foreign exchange reserves are precautionary and transaction. Speculative motives may lead to imbalances in the macroeconomic conditions and policies of a country. Therefore, countries should hold reserves primarily for precautionary purposes as this also ensure liquidity and safety. Also, maintaining adequate or optimal level of reserves ensures avoidance of unnecessary high costs of sterilization and central bank balance sheet risks. Acquiring reserves may look quite attractive, but acquiring such high levels that leads to excess levels may hamper the growth of a country as these resources have very few uses. As reviewed through various studies, we found that the major source of foreign exchange reserves is through Foreign Portfolio Investments (FPI) and Non-Resident Deposits (NRDs). These sources of reserves seem to be the most volatile capital as it is temporary in nature.

DATA, METHODOLOGY AND HYPOTHESES

DATA SOURCES:

The paper has used annual time series data for the period of 1991-2017 for foreign exchange reserves in India. Data in this study has been extensively used from secondary sources. All the figures that are used in this study are collected from the national and international publications. The time period for the study has been divided into four big policy periods or major changes in Indian economy namely, Liberalization, Globalization, World recovery and Global financial crises. This has been done to analyse and understand the impact of policy periods on the growth of foreign exchange reserves in India.

• Liberalization	1991-92 to 1994-95	-	Policy period I
• Globalization	1995-96 to 2001-02	-	Policy period II
• World recovery	2002-03 to 2007-08	-	Policy period III
• Global financial crises	2008-09 to 2016-17	-	Policy period IV

METHODOLOGY:

A regression and graphical analysis are undertaken to determine the growth rates of foreign exchange reserves during the period under consideration. Dummy variables have been incorporated in semi log regression model for finding the impact of policy periods on foreign exchange reserves in India.

Semi log Equation with Dummy Variables (Policy Period Analysis)

For analysing the impact of policy periods in terms of growth of foreign exchange reserves in India, dummy variables have been included in semi log growth regression equation to find out different growth rates for different policy periods. Dummy variable takes the value of 0 and 1.

Following is the regression equation for policy period analysis in which dummies have been incorporated.

$$\text{Log (Y)} = a_1 + b_1t + b_2D_2 + b_3D_3 + b_4D_4 + b_5D_2t + b_6D_3t + b_7D_4t + \mu t$$

Differential Intercept Differential Slope or Growth

Log(Y)- Natural log of dependent variable, foreign exchange reserves

a_1 - intercept of policy period I

b_1 - slope or growth rate of policy period I

b_2 - difference in intercept of policy period I and II

b_3 - difference in intercept of policy period I and III

b_4 - difference in intercept of policy period I and IV

b_5 - difference in slope or growth rate of policy period I and II

b_6 - difference in slope or growth rate of policy period I and III

b_7 - difference in slope or growth rate of policy period I and IV

μ_t - error term

Incorporation of Dummies in Regression Equation:

D_2 - 0 for 1991-92 to 1994-95

1 for 1995-96 to 2001-02

0 for 2002-03 to 2007-08

0 for 2008-09 to 2015-16

D_3 - 0 for 1991-92 to 1994-95

0 for 1995-96 to 2001-02

1 for 2002-03 to 2007-08

0 for 2008-09 to 2015-16

D_4 - 0 for 1991-92 to 1994-95

0 for 1995-96 to 2001-02

0 for 2002-03 to 2007-08

1 for 2008-09 to 2015-16

By using above regression equations for different policy periods, growth rates and intercepts can be computed. These are as follows:

For Intercept:

Policy period I - a_1

Policy period II - $a_1 + b_2$

Policy period III - $a_1 + b_3$

Policy period IV - $a_1 + b_4$

For Slope:

- Policy period I - b_1
- Policy period II - $b_1 + b_5$
- Policy period III - $b_1 + b_6$
- Policy period IV - $b_1 + b_7$

HYPOTHESES:

There are hypotheses which have been tested at 5% level of significance and the null hypotheses are as follows:

- H1₀: There is no difference in the level of foreign exchange reserves between the period of liberalization and globalization
- H2₀: There is no difference in the level of foreign exchange reserves between the period of liberalization and world recovery
- H3₀: There is no difference in the level of foreign exchange reserves between the period of liberalization and global financial crises
- H4₀: There is no growth in the value of foreign exchange reserves during the period of liberalization
- H5₀: There is no growth in the value of foreign exchange reserves during the period of liberalization and globalization
- H6₀: There is no growth in the value of foreign exchange reserves during the period of liberalization and world recovery
- H7₀: There is no growth in the value of foreign exchange reserves during the period of liberalization and global financial crises

REGRESSION AND GRAPHICAL ANALYSIS

The regression statistics, for the growth of different policy periods, explains significant or insignificant levels of different growth rates of foreign exchange reserves in India for different policy periods (Table and Table 2).

Table 1: Regression Statistics of Foreign exchange reserves in India

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	8.303286254	0.12261127	67.72041619	4.02803E-24
Time	0.364631521	0.044771306	8.144312876	1.2838E-07
D2	1.183317379	0.198427604	5.963471579	9.70401E-06
D2T	-0.26161416	0.048604638	-5.382493634	3.40786E-05
D3	-0.32559312	0.370290805	-0.879290332	0.390229351
D3T	-0.11292595	0.050765889	-2.224445528	0.038435206
D4	3.642281105	0.278453833	13.08037699	5.96154E-11
D4T	-0.33373646	0.046108056	-7.238137726	7.16777E-07

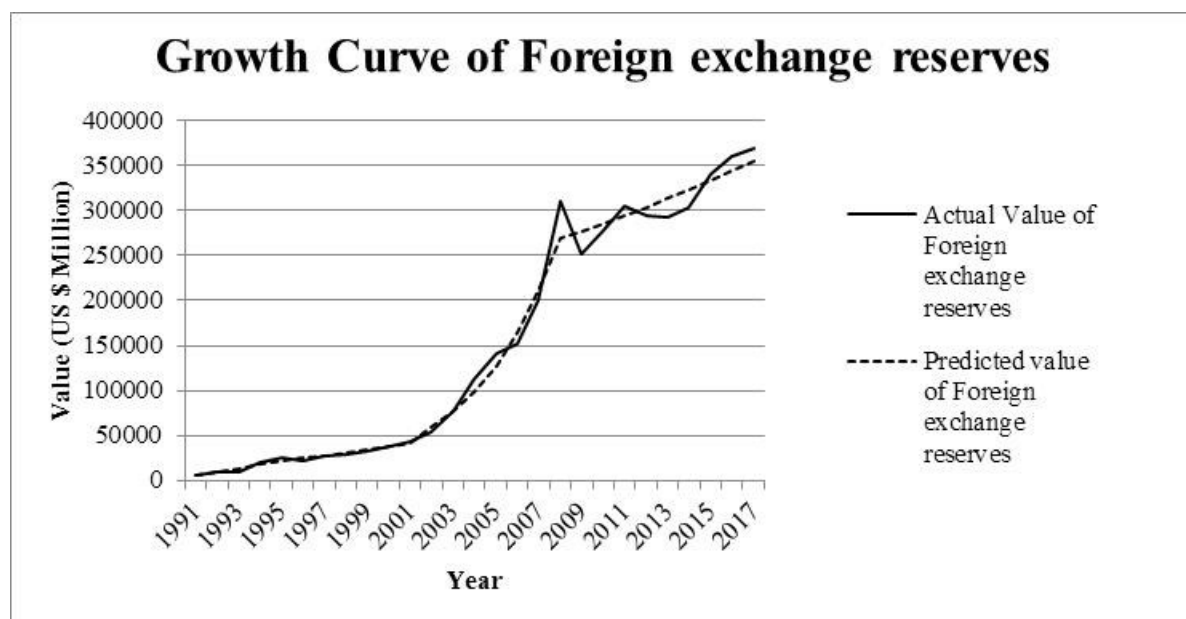
Table 2: Growth rate of Foreign exchange reserves for different policy periods

Policy Period	Intercept	ACGR (%)	About Growth Rate
Liberalization	8.303286254	43.99833074	Significant
Globalization	9.486603633	10.85106592	Significant
World recovery	8.303286254	28.62172766	Significant
Global Financial Crises	11.94556736	3.137726701	Significant

The findings of the study clearly indicates that during the period of liberalization, the initial level of foreign exchange reserves of India was positive and it grew at 43.99%, which is statistically significant also, as P-value is less than 0.05 (5%). During the period of globalization, the level of foreign exchange reserves increased in comparison to liberalization, but the growth rate decreased drastically from 43.99% to 10.85%. This is a situation of “euphoria”. Both the level of foreign exchange reserves and the growth rate are statistically significant. This means that globalization had a significant impact on the foreign exchange reserves of India. As far as the period of world recovery is concerned, it is observed that the level of foreign exchange reserves has not changed as compared to liberalization, as the value of D3 is not statistically significant. But the growth rate has decreased to 28.62% as compared to liberalization, which is statistically significant also. This implies that world recovery period had a significant impact on the growth rate of foreign exchange reserves in India.

The period of global financial crises witnessed large amount of increase in the level of foreign exchange reserves in India in comparison to liberalization (intercept D4) and it is statistically significant also, but the growth rate has decreased drastically as compared to liberalization. This was mainly due to the outward flow of funds from India. India was less affected from the crises, as compared to other countries, due to increased level of foreign exchange reserves during the period of crises as compared to liberalization.

Figure 1: Growth curve of Foreign exchange reserves for different policy periods



The growth curve clearly indicates that during the entire period of study (1991-2017), there was significant growth in the value of foreign exchange reserves in India. The figure 1 basically shows the upward trend in the differential growth of foreign exchange reserves between liberalization and

other policy periods. During liberalization, there was growth in the value of foreign exchange reserves. As far as the globalization period is concerned, there was again significant growth in the value of foreign exchange reserves. This was mainly due to increasing FDI inflows into India. The value of foreign exchange reserves declined during the period 2007-2009, due to global financial crises as can be seen in the figure 1. One of the reasons identified for decline in foreign exchange reserves during the above said period was outflow of FDIs and FII from India. Still, India was less affected from the global financial crises and soon observed rise in the foreign exchange reserves. India witnessed an upward trend in foreign exchange reserves 2009 and thereafter.

CONCLUSION AND DISCUSSION

The paper has analysed the impact of different policy periods on trends in foreign exchange reserves in India. The study has rejected six hypotheses out of a total of 7 hypotheses. The hypotheses H_{20} , is not rejected, because its P-value is not coming out to be significant. The four policy periods, i.e., Liberalization, Globalization, World Recovery and Global Financial Crises are being considered for the analysis.

The above analysis conclude that the level of foreign exchange reserves are statistically significant in all the policy periods except world recovery, and the growth rates are also significant in all the policy periods. The current paper can be of great use for the policy makers as it will help them to analyse the trends in foreign exchange reserves in India not only during various policy periods but also in predicting the future trends of the foreign exchange reserves.

The present study has mainly concentrated on the trends in foreign exchange reserves during various policy periods. However, there are various factors like exports, FDIs, FIIs, ECBs, debt repayment etc. which also influence the level of foreign exchange reserves. Further researches can be undertaken in examining the impact of these factors influencing the level of foreign exchange reserves in India. Though the current paper has focussed only on one country (India) leaving the scope for further research by doing comparative analysis for other emerging economies.

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BAFE061:
URBAN PUBLIC TRANSPORTATION AND ITS IMPACT ON SOCIO-ECONOMIC SUSTAINABILITY: INSIGHTS FROM LITERATURE AND POLICY IN CONTEXT OF MALAYSIA

Maryam Kalhoro^a, Au Yong Hui Nee^b, Charles Ramendran SPR^c

^aDepartment of Business Administration, Sindh University Campus Larkana, Pakistan.
koonjabbasi@gmail.com

^bDepartment of Economics, Faculty of Business & Finance, University Tunku Abdul Rehman,
Malaysia
auyonghn@utar.edu.my

^cDepartment of Business, Faculty of Business & Finance, University Tunku Abdul Rehman,
Malaysia
charlesr@utar.edu.my

Abstract

This research aims to review the academic literature on sustainable urban public transportation system published in international journals. It identifies different government policies, practices and regulatory mechanism seeks to promote public transportation in Malaysian cities. Bibliographic Analysis (systematic review) method is adopted to analyze the literature on public transportation in context of Malaysia. This research also uncovers the implications through international literature specifically about the use of public transport. Moreover, it also provides information about the trends in Malaysia and other countries for usage of public transportation. Result suggests that there are limitations of effective literature on environment, health impacts, use of technology, land, climate change issues, quality services of public transportation and its usage in Malaysia. The weak regulatory mechanism is observed which cannot make corporations (public and private) to adopt effective policies in Malaysia. It is recommended to the government and policy administrations to establish strong regulatory regimes and supportive policies for public transportation to promote the usage of public transportation; also to attract clients by improving transport services of public transport in Malaysia. Hence, this research paper sets and highlights the future research and policy agenda for public transportation in Malaysia.

Keywords: Public Transportation; Sustainable Public Transport; Quality Attributes; Socio-Economic and Environment Factors; Sustainable development; Malaysia

INTRODUCTION

Transportation involves mobility of different products for the community welfare (individual and public). An efficient public transportation is a first step towards socio-economic development in a country (Bayane et al., 2020). Along with the accessibility, an efficient public transportation also provides economic opportunities to reduce environmental hurdles. This is the reason that sustainable public transportation is considered as the backbone of developed country.

Malaysia is the developing country, facing challenges to finance and use the urban public transportation system. Moreover, mobilization almost every day is the most important element for residents of densely populated metropolitan cities like Tokyo, NewYork, Beijing and Malaysia (Shafii, 2010). American Public Transportation Association (2007); Litmon (2008) have revealed that, efficient public transportation in cities would diminishes traffic jam, carbon dioxide emission and utilization of resources, it also creates justified culture in terms of transportation for sustainable development. According to Kim et al, (2020) in general the quality of life (QOL) is considered as well being of an individual and a society as a whole. QOL is defined as the expressions of health and happiness, as a replacement for wealth (Kim et al., 2020). Therefore, an approach to develop a well-integrated public transportation policy and its systematic execution is required to receive clean air, safe roads, and accessibility.

Some researchers argued that policy, which allows personal automobiles significantly increases the demand, as a result it will also negatively affect the environment. The increase in personal automobile usage increases the traffic problem, dirty air and noisy atmosphere, unfriendly social culture and insecurity for people who are already motivated for walking and cycling (Grisé et al., 2018). Brohi et al., (2020) elaborates that, general reasons for the refusal to public transportation are frequently late and withdrawal ticketing, unclean and ugly stations, bad mannered drivers and unfeasible conditions for disable persons.

Therefore, a robust policy is required to attract private vehicle owners towards the public transportation system which can improve economy, air quality and health (Rakesh and Shweta, 2010). The economic, social and environmental benefits can be generated, if the country is adopting the policies for sustainable urban public transportation system. This review paper examines the different policies and its implications for the urban public transportation in context of Malaysia. This research aims to identify recent aspects in literature about public transportation of Malaysia. The current policies and issues for public transportation are also highlighted to recommend new and improved urban public transportation system.

LITERATURE REVIEW

In this section during qualitative synthesis most related research studies are selected from the previous year i.e. from 2016-2020. The most recent and relative studies are selected then analyzed to find out the research novelty, gaps and new insights. Only science direct, Elsevier publishers journals' papers are selected to identify recent and new issues regarding public transportation. From the 31 related research articles mentioned in Table No. 1, the series of the studies on different aspects of public transportation in different countries (refer Table No. 2) are selected for discussion and results of this study.

To Increase the efficiency of public transportation in Peninsular, Malaysia, Ustidia and Shopi (2016) has observed in their study that public transportation hub is the demand of the public in northern region of Malaysia. The students and employees have responded through questionnaires that they are facing the traffic congestion problem. Researchers suggested that solution to reduce the traffic jam issue is to develop the public transportation hub at the central Peninsular, Malaysia. Shokoohi and Nikitas (2017) have also argued that, there is weak transport policy, private vehicles are more on road and this is the main cause of traffic congestion, environment and health issues in Malaysia. It is recommended in their study that public transportation should be adopted along with cycling and walking near the stations.

Boulange et al., (2017) have explored the association among quality attributes and choice for cycling, public transport and private vehicles during trips in Melbourne, Australia. About 16,890 residents of Victoria have participated above the age of 18 years. They have found the positive relationship between the provision of public transport with quality services i.e. (safety, comfort, time saving, ticket booking and cost effective etc) and its usage. Further they have argued that there is also positive relation between the gross private residence growth with transportation mode i.e. cycling, public transport and private cars. Inclusive policies for urban infrastructure development and land use policy is prerequisite for sustainable development. Irtema et al., (2018) has also argued that the provision of service attributes (i.e. safety, cleanliness and grievance management) is positively and significantly related with behavioral perceptions of passengers for using public transport in Malaysia. So, it is confirmed that quality services can enhance the usage of public transportation. Ingvardson (2018) investigated about 48 densely populated metropolitan areas of Europe, to find the influence of socio- economic factors on public transportation. They have identified four factors: first, metro network coverage and connectivity, urban population density, second, town rail coverage, third, unjustified economy and forth is coverage of light rail. The cities having more unjustified economy have higher un-employment which ultimately reduces per capita income and results in lower public transport ridership. Network connectivity and coverage are considered as the most important variable for sustainable public transportation. Other determinants are mode, comfort, safety. Moreover Mugion et al., (2018) have also explored the user perceptions for service quality in urban public transport systems. They proposed that quality of services is positively and significantly related to the intention to use more public transport. This relationship also has impact on decrease of intention to use one's own car. Mugion and others further recommended that whether government should encourage people to adopt the usage for public transport or reduce the supply/ demand of personal cars in market can

makes cities' environment more eco- friendly. Additionally Chen et al., (2018) also found the gaps in supply and demand of urban public transport services and their role for sustainability in case of Edmonton, Canada. Furthermore they have finalized that more provision of transport services to the senior citizens can also positively increases the behavior for usage of the public transportation.

In Germany, May (2018) studied about the relationship between usage of public transportation and its impact on environment of the cities. They surveyed that only 2 out of 28 electric buses provide quality services to the customers and people are using these two more. Further they advised that more use of electric buses, results in less carbon dioxide emission and more eco-friendly the environment. It is observed that technology adoption and vigorous economical decisions should be taken to increase the sustainability, but also must consider the environment conditions. For sustainability, State must adopt new technology but only when it have fewer side effects on the natural eco-system and more environment friendly. Additionally Brock (2019) has empirically analyzed the public transportation and pollution in urban regions of Germany. While testing through simulation modeling technique it is observed that, total pollution reduces by 0.4% if there is decrease in the emission from transportation also partially reduces the rising residential pollution by 1.7%. Moreover Mayo and Taboada (2020) have revealed that age; gender; income and travel intention; safety is ranked on the top over accessibility; travel cost; comfort and environmental concern. Regardless of the traffic conditions and high travel cost, personal and semi-private automobile hired are ranked on the top over various other transport factors. Sustainable public transportation is to provide safe, inclusive, accessible and affordable public transportation. It is observed that public transport is privately-operated. So, the government should intervene to provide efficient policy for public transport workers and clients. Government must also provide subsidy and financial support to the stakeholders of public transportation.

Wangsness et al., (2020) also identified that possible consequence of transport policy about the traffic congestion, carbon dioxide emissions and other external forces like crowd, tax collection, revenue generation and comfort. A finding reveals that toll tax, fares, revenue generation policies of public transport are positively and significantly related with the outcomes of the public transport in markets. While, different studies has observed that the policy to control the emission of poisonous gases like Carbon dioxide, Nitric oxide is still not resolved by the states even in developed countries.

Fitzova and Matulova (2020) elaborated the comparison of factors of public transport policy and their impact on sustainability in countries of similar conditions i.e. Czech Republic and Slovakia. Different analysis techniques are used but results found were not positive as expected by the authors. Results show that higher the fares and network coverage, the lower the efficiency. Increase in capital investment, different mode choices and increase in availability of drivers for employment increases efficiency. From the different studies it is observed that metropolitan cities prefer public transportation to reduce traffic congestion and environmental issues. Authorities should also efficiently utilize the public financial resources.

Another most important aspect of public transport is accessibility. The study of Ceccato et al., (2020), has confirmed that traveler's perception and scheduled services of public transport network is required to establish the accessibility of the public transport. So, accessibility is the vital tool for sustainability of the cities. Effective connectivity of different zones in the cities can experience smooth transit and efficient use of public and private transport mode.

It is confirmed from the bulk of literature that provision of public transport with quality services can enhance the use of public transport. Recently few of the studies have shown that developed countries are motivating and satisfying their customers through adoptability of technology and devices in the public transport system. Ferreira et al., (2020) conducted the feasibility test of BLE device (Bluetooth Low Energy) for mobile ticketing prototype among the passengers of public transport in Portugal. BLE beacons also help to track the passengers' itinerary. The findings reveals that BLE device is feasible for booking a ticket through low energy application can enhance the service quality of public transport in AMP city of Portugal.

According to Wołek et al., (2021), the new technology IMC (In Motion Charging) trolleybus is being developed in Gdynia and Sopot (Poland). Through cost and benefit analysis results suggested that this new framework of electric trolleybus is more eco-friendly as compare to diesel bus.

It is recommended that, different technologies should be developed and adopted like as Bluetooth Low energy device (BLE) and In Motion Charging trolleybus (IMC) both are effective and efficient for socio-economic development.

METHODOLOGY

Bibliographic method is used to analyze the literature review. This method is also considered as the systematic literature review of a focused research domain. It is the systematic presentation of related publications through quantitative analysis technique. According to Ellegaard and Wallin (2015) bibliographic (bibliometric) analysis is the method to explore the writer's research domain, citation, contents and keywords of the related publications to find the research gaps and novelty. It is an influential technique for integrating research findings across a number of studies to reveal the biases, strengths, and weaknesses of existing studies.

The reason behind reviewing research output through systematic literature review on urban public transport is to ascertain the backdrop of established link between the public transportation system and sustainable development of country. Furthermore, pertinent policies and corresponding practices of the government of Malaysia are also reviewed in order to know the extent of the government priority given to increase the demand of using public transportation in densely populated cities.

The method is based on three stages, at first stage; extensive amount of literature is collected from databases i.e. Science direct and IEEE. At initial level 80 research papers are also downloaded from the Google scholar for public transportation only in context of Malaysia and 41 related were selected for analysis. In Google scholar it is not efficient to go through and search the relevant papers from millions of articles and researchers face difficulty to gain outcomes. So in second stage, the scrutinized literature searched from Science direct and IEEE is analyzed by using the inclusion and exclusion methods. Keywords, abstracts, full body papers and even the headings are also read and analyzed. Third and last stage of this method is qualitative separation of related literature. In order to evaluate the selected literature different search items are divided in to five main concepts: Public transport, sustainable development, sustainable public transportation, public transport and sustainability, environment and public transport, quality attributes of public transport.

BIBLIOGRAPHIC ANALYSIS

This bibliographic analysis is the systematic analysis of the available related literature. This analysis is done by locating filter in search engine for the research papers published in the past five years i.e. from year 2016 to year 2020. Various papers explored from different research journals through two database search engines, in particular, the Science Direct, IEEE. Thousands and hundreds of the papers are found when related keywords are entered in science direct and IEEE search engine as shown in table 1. Result of database search identifies only 37 journal papers exclusively dealing with impact of present public transportation policies and issues on environment, climate change, technological adaptation, transport services and quality attributes of public transportation and sustainability. The search is done by using the following key words: 'urban public transport', 'sustainable public transportation', 'quality attributes of public transport' and public transport', 'environment and public transport' 'sustainability and usage of public transport' all of which are used for, or overlap with, our prime focus i.e. sustainable urban public transportation in developed and developing countries.

Table No. 1 Bibliography (Source: Created by author)

REVIEW OF LITERATURE

The sequential related studies are framed in the (Table. No. 2) given below along with their keywords, title, authors, year, country, methodology used findings and brief summary.

First column is based on the database, in which acronym SD stands for (Science Direct) search engine. The related research papers are downloaded from Science direct database.

Second column is based on keywords extracted from 15 research papers on recent public transport issues and domains. Most of the keywords are: public transport, sustainable public transportation, travel, environment and urban policy, quality attributes, Structural Equation Modeling, Bluetooth Low Energy, electric buses, Analysis Hierarchy Process and so on.

Third column is based on the titles of the related article based on public transportation. Forth column is about authors who have contributed in the above said field i.e. public transportation. In fifth column previous five years are mentioned i.e. from year 2016 to year 2021. It is observed that most of the researches are performed in European countries i.e. France, Italy, Norway, Germany, Portugal, Czech Republic and others are from Malaysia, Australia and Canada.

Seventh column is based on methods adopted by different scholars for data analysis. Eighth column is about the findings and results of the studies. Summary is the researcher's own extraction from the different studies given below:

2016-2021 YEAR								
Data base	Keyword	Title of the article	Author (s)	Year	Country	Methodology	Findings	Summary
SD	Public Transport Hub	A study towards the efficiency of public transportation Hub characteristics: A case study of Northern region, Peninsular, Malaysia.	Ustadia and Shopi	2016	Malaysia	Quantitative study. Data collection from the clients (students and workers).	Public transportation hub will be useful to reduce the congestion problem.	This study deals with the congestion problem in central Penang. Suggestion is to develop a hub public transportation which can reduce congestions.
SD	Sustainable public transportation	Urban growth and transportation in Kuala Lumpur: Can cycling be incorporated in to Kuala Lumpur's Transportation system?	Shokoohi and Nikitas	2017	Malaysia	Exploratory study. Interviews were conducted from residents.	Private vehicles users are more. This is the cause of environment and health issues. People are not fond of cycling	To analyze the transportation and its impact on growth. Public transportation policy adopted along with cycling and walking.

2016-2021 YEAR								
Data base	Keyword	Title of the article	Author (s)	Year	Country	Methodology	Findings	Summary
SD	Urban planning Transport modes Environment	Examining associations between urban design attributes and transport mode choice for walking, cycling, public transport and private motor vehicle trips.	Boulange	2017	Australia	Quantitative study. The data was analyzed by Adjusted model of multilevel logistic regression.	Positive relationship between the quality services for public transport and its usage. A private residence growth is positively related with transportation mode.	Inclusive policies for urban infrastructure development, land use policy is prerequisite for sustainable public transport development.
SD	Travel policy Urban travel planning	Creating and applying public transport indicators to test pathways of behaviors and health through an urban transport framework.	Badland et al.,	2017	Australia	The public transport policy analysis. About 9495 adults have participated. It applies context-specific policy-relevant indicators to assess policy.	More personal vehicles significantly positive with time duration to reach, commuters' time is positively associated with more waiting which results in health problems.	75% respondents who are driving personal car are not well and rests are using trains and effects on them are very low.
SD	Public transportation and service quality attributes	Case study of behavioral intentions of public transportation passengers in Kuala Lumpur.	Irtan et al.,	2018	Malaysia	Quantitative method is used. About 412 closed ended Questionnaires were distributed among the passengers. SEM modeling is used for analysis.	Service attributes i.e. safety, cleanliness, and grievance management positive relationship with the passengers' perception of public transport.	This case study evaluates the behaviors of passengers for public transport in Malaysia. It is finalized that quality services can enhance the usage of public transport.

2016-2021 YEAR								
Data base	Keywo rd	Title of the article	Auth or (s)	Year	Countr y	Methodolo gy	Findings	Summary
SD	Public transpo rt network Factor analysi s Urban density	How urban density, network topology and socio-economy influence public transport ridership? Empirical evidence from 48 European metropolitan areas	Ingva rdson	2018	Italy	Cross-sectional study. (Meta level) data is collected. Factor analysis technique is used.	The more unjustified economy have higher un-employment. It reduces per capita income and results in lower public transport ridership.	From 48 European areas, socio-economic factors are identified: network connectivity and coverage public transport i.e. mode, comfort, and safety are also identified.
SD	Service quality Sustain able Urban public transpo rt and mobility	Does the service quality of urban public transport enhance sustainable mobility?	Mugi on	2018	Italy	Mixed method study used. Smart PLS-PM is used for data analysis.	Service quality is positively related with intention to use public transport. Also affects the intention to use one's own car less.	Study encourages the behaviors for public transport and reduces user perception for private mode of transportation.
SD	Partial least square s (PLS) PLS, Public transpo rt, Social equity, seniors , sustainability, transpo rt supply	Spatial gaps in urban public transport supply and demand from the perspective of sustainability	Chen et al.,	2018	Canada	Systematic methodolog y with the support of GIS (geographic information system) in context of old age people used.	More Public transport supply and demand index are different among census tracts in different geographic al locations.	This study has found the gaps in supply and demand index of public transport in seniors and their role for sustainability in case of Edmonton, Canada with the help of GIS.

2016-2021 YEAR								
Data base	Keywo rd	Title of the article	Auth or (s)	Year	Countr y	Methodolo gy	Findings	Summary
SD	Environ mental advantage, electric buses, local emissions, cluster analysis, environment plannin g	Local environment impact assessment as decision support for the introduction of electro mobility in urban public transport system.	May	2018	German y	Statistical and spatial analysis techniques to test benefits of electric buses usage.	There positive is relationship between usage of urban public transportation and environme nt.	Technological and economic variables are required to make decision about introducing electric bus lines and services.
SD	Public transpo rt Pollution Discret e choice	Public transport and urban pollution	Borck	2019	German y	This study is quantitative. Simulation modeling technique and quantitative equilibrium model was used.	Public transport reduces total pollution by 0.4% also partially reduces residential pollution by 1.7%.	This comparative study is based on public transport policies and its impact on urban pollution.
SD	Public transpo rtation, Analytic hierarchy proces s, Transp ort mode choice	Ranking factors affecting public transport mode choice of commuters in an urban city of a developing country using analytic hierarchy process: The case of Metro Cebu, Philippines.	Mayo and Tabo ada	2020	Philippi nes	Hierarchy analysis was adopted to determine the categorical results.	Findings reveal that age, gender, income and travel intention; safety is ranked on the top over accessibility, travel cost, comfort and environme ntal concern.	The government should provide subsidy and financial support.

2016-2021 YEAR								
Data base	Keyword	Title of the article	Author (s)	Year	Country	Methodology	Findings	Summary
SD	Two stage efficiency analysis, Urban public transport, Bootstrap	Comparison of urban public transport systems in Czech Republic and Slovakia: Factors underpinning efficiency.	Fitzova and Matulova	2020	Czech Republic	The comparative study on policy analysis between two countries is used.	Result shows that higher the fares and network coverage, the lower the efficiency. Results were not found positive as expected.	Mega cities prefer public transport to reduce traffic congestion and environmental issues. Funds should be reserved.
SD	Mobile ticketing Bluetooth Low Energy (BLE) Urban passenger transport	Is Bluetooth low energy feasible for mobile ticketing in urban passenger transport?	Ferreira et al.,	2020	Portugal	Test the feasibility of the prototype BLE (Bluetooth Low Energy)	The findings reveal that BLE device is feasible. Service quality also increased.	BLE is effective technology to improve service of ticket booking service.
SD	Urban accessibility transport services mobility	Measure of urban accessibility provided by transport services in Turin: a traveler perspective through a mobility survey	Ceccato et al.,	2020	Italy	Survey is conducted through the availability of residents' mobility collected in three waves i.e. in year 2016 and 2017.	Traveler's perception and scheduled services of public transport network is to establish the accessibility.	Connectivity of different zones in cities can make smooth transit and efficient use of public and private transport mode.
SD	Urban public transport policy	Vehicle choices and urban transport externalities. Are Norwegian Policy makers getting it right?	Wangness et al.,	2020	Norway	The policies analysis on traffic jam, and atmosphere pollution, tax and comfort.	Toll tax, fares, revenue policies of public transport are positively related with the outcomes.	Policies for greenhouse gases are still under considerations.

Table No. 2 Literature review on urban public transportation for the year (2016-2021)

2016-2021 YEAR								
Data base	Keywo rd	Title of the article	Auth or (s)	Year	Countr y	Methodolo gy	Findings	Summary
SD	Urban Public transport, Trolleybus system	Ensuring sustainable development of urban public transport: A case study of the trolleybus system in Gdynia and Sopot (Poland).	Wolek et al.,	2021	Poland	Conducted survey to test Trolleybus system Comparative analysis technique is used.	The new technology IMC (In Motion Charging) trolleybus is being developed. this new framework of electric trolleybus is eco-friendly.	Electronic buses are recommended for socio-economic development.

(Source: Created by author) *SD= Science Direct

DISCUSSION

Urbanization is a fundamental aspect for the success by increasing economic opportunities. In the case of Malaysia it is observed that in year 1985, 51% of people were migrated to cities, at present more than 70% public is shifted to the cities (Malaysia Economic Monitor, 2015). Today, due to increase in population, there is increase in the road congestion in Malaysian cities (Shahid, et al., 2014). Rehman (2016) stated that strategic development plan (2030, 2010) provides the master plan for well-organized public transport system and also the policy to decrease the demand for personal vehicles. In the Federal Territory of Kuala Lumpur, it is estimated that each resident has ability to purchase two cars and even 10% of poor households are half owned a car in year 2012. The rate of car owners in Malaysia is nearly doubled from the year 2000 (Malaysia Economic Monitor, 2015). At present, cities are the principal contributor to environmental issues. Borck (2019) also confirmed that more than 70% of all greenhouse gases are emitted due to traffic congestion. A main donor of the carbon dioxide and nitric oxide emission in cities is the transportation sector (Elias and Shiftan, 2012; Borhan et al., 2018). Due to inefficient transportation system, there is increase in the traffic congestion, time and energy is wasted, health and environmental issues are generated which impacted on the GDP of the city estimated as 1.1% to 2.2% of GDP in year 2014 (Malaysia Economic Monitor, 2015). Different studies are reviewed having different objectives and each study has assessed different attributes as a variable (Mugion et al., 2018). Broad standard services for public transportation finalized are: safety, comfort, time and cost effective, care, accessibility, availability and environment (Hansen et al., 2019). The technology usage through innovation is also introduced to satisfy and attract more customers towards the usage of public transport.

Generally policy institutes and government are always have limited consideration on public health issues for public transport. Brohi et al., (2018) have recently found that the accessibility of public transport has impacted the air and health of the residents by increasing the level of Nitric oxide from 4.4 to 7.1% and same is the case for black carbon in atmosphere. Studies suggested that people who are doing walking and cycling from their homes towards the public transport stations have positively improves the eco-friendly and healthy environment. From the literature it is suggested that socio-economic factors may affect decisions on travel behavior. According to the studies, travels differ depends on personal traits, which comprise demographics (i.e. age and gender), socio-economic characteristics (i.e. education and professional status), individual resources (i.e. income and ability to own a car) and attitudinal feature (i.e. environmental beliefs and personal values) (Ponrahono, 2019). This study adds to evident promising approach for partnership of government bodies i.e. Ministry of environment, health and ministry of transport to tackle the constraints of sustainable public transportation i.e. health, environment.

CONCLUSION

The key conclusions drawn are: the previous policies and funds implemented for public transport in cities of Malaysia have been failed to generate an effective model for sustainable public transportation. There are substantial amount of research papers and literature review on 'urban public transportation'. At present researchers are more concerned about the other aspects of public transport like environment issues, climate change, land reforms, cost effective improved services, technology usage, innovative replacement of diesel engines in to electric engines, physical exercises through walk and ride cycle, customer satisfaction and motivation to use public transportation as compare to private owned vehicles.

RECOMMENDATIONS

It is observed that the less concentration has been paid to the services improvement for the clients. This Lack of concentration is due to only government linked cooperation not through the public-private partnership. Public- private partnership is required which helps to improves public transportation services in an efficient manner. In metropolitan regions, regulatory governance for public transport services is recommended, to improve time and cost efficiency, customer satisfaction, useful information, accessibility, available, and friendly environment motivate customers to use public transport.

Besides that, the Government of Malaysia should reserve funds to support and develop public transportation in urban regions. Utilization of financial resources must be efficiently managed by the regulatory bodies/ the third party evaluation should be established. Transport workers must also be satisfied through the provision of handsome amount of salaries/ rewards for their high performance. Beside the establishment of novel regulatory mechanism for public transportation, the state must also plans to construct waiting areas, parks, cycling and riding facilities near public transit stations. The state should also establish integrated terminals for the passengers to access transport more easily. The public transport is the derived demand which is positively and significantly related with the effective utilization of natural (land and people) and financial assets. World Bank (2015) highly recommended resolving the public transport issues at top priority for economic growth agenda and investment policy for sustainable development in Malaysia. Studies suggested that developmental policies have always ignored the focus of environmental pollution and climate change issues. Developed world is now focusing to introduce electric buses and electric trains in every urban zone in order to reduce the carbon dioxide and nitric oxide emissions by diesel engines. The innovative technologies are introduced to improve services of public transportation e.g. blue tooth (BLE) ticket booking device in Portugal.

Malaysia should also implement the policy to restrict the use of private car in order to reduce the traffic congestions and road accidents in the cities. Ministry of environment and health, ministry of finance and ministry of transport should work together to tackle the constraints i.e. health, environment and funds for sustainable public transportation in Malaysia.

Finally, it can be concluded that the spark have been observed with the concerted efforts, sustainable urban public transportation could possibly gain ground in Malaysia.

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BAFE063:
**DIGITALISATION OF THE ECONOMY AND ITS SOCIAL AND
ECONOMIC IMPACTS FOR SUSTAINABLE MALAYSIAN
DEVELOPMENT: A THEORETICAL PERSPECTIVE**

Au Yong Hui Nee^a, Iddrisu Mohammed Awal^b, Abdelhak Senadjki^c,
Thavamalar a/p Ganapathy^d, Phoong Seuk Wai^e

^a Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: auyonghn@utar.edu.my

^b Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: awaaal40@gmail.com

^c Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: abdelhak@utar.edu.my

^d Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: thavamalar@utar.edu.my

^e Faculty of Business and Accountancy, Universiti Malaya,
Email: phoongsw@um.edu.my

Corresponding Author: auyonghn@utar.edu.my

Abstract

The convergence of knowledge and correspondence innovation or ICT into various a part of our lives is referred to as the Industry 4.0 or fourth industrial revolution altogether social and economic endeavors resulting in expanded opportunities. Technological innovation transforms every facet of the economy. China's e-commerce becoming an outside economic sector. While, the computerized economy reflects to 18.5% to Malaysia's economy in 2018. The web business area contributes 43% of the computerized economy's worth. The Malaysian Government enables rural community to involve in cross-border supply chains. E-commerce accelerate significant advantages in many aspects of the society. Aside from bowstring provincial creating and monetary incorporation, E-trade likewise make force for small medium endeavors to reinforce in speeding up business development and make more job opportunities. These transformations aren't only changed the way of human interactions with each other, but it also influences the way of they work. The larger impact of those challenges faced today have implications for the economic conditions of the citizens, and therefore the overall quality of life. It was recommended that digitization must be 'a whole of state agenda'. Therefore, the connection of innovation development has got to be enhanced with an honest governmental framework and business development and make more job opportunities. These transformations aren't only changed the way of human interactions with each other, but it also influences the way of they work. The larger impact of those challenges faced today have implications for the economic conditions of the citizens, and therefore the overall quality of life. The planet Bank recommends that digitization must be 'a whole of state agenda'. This investigation intends to fill within the gaps and provides a diagram of writing compositions identified with 4.0 technological revolution from the economic, social and government-lead perspectives. This study reviews the effect of innovation on economic process. This paper will provide a general overview of the implementation of the digital economy in Malaysia.

Keywords: Digital Economy, Emerging Economy, Fourth Industrial Revolution, Information and Communication Technology, Sustainable Development

INTRODUCTION

Industrial revolution 4.0 is systematically evolving due to the pace at which digital innovation is rising around the globe. Digital transformation as the integration of technological innovation has resulted in fundamental changes in businesses and way of life of human beings (Johnson, 2019). As crucial as may implicate, the digitalization of business functionalities in other developed economies has fundamentally transformed their industrialization process, directly influencing the upgrading process from the traditional standard way of doing business to a new and modern operation

(Peshkova & Samarina, 2018; Sabbagh et al., 2013). Over the years, before the beginning of the globalization, the traditional way of conducting business significantly affected the transaction process of successfully executing a particular operational work. Today, the digital innovation and technological development have significantly improved the micro and macroeconomic level of business operations (Reuschke, & Mason, 2020). The industrial revolution strategies have not only enhanced the structure of technology impact, but has also greatly influenced the working culture, international relation, and the economic growth development (Khan, Khan, & Aftab, 2015).

According to Jehangir, Dominic, Naseebullah and Khan, (2011) digital economy comprise high-level of progressive technologies and innovations, primarily digital and serves to maximize the effectiveness of social production. Without a doubt, digital innovation inevitably transforms the level of business operations in the economy. Digital technology has fostered the significant growth of information and communications technology (ICT), and ICT has enabled the effective communication and networking in the economy (Khan, Khan, & Aftab, 2015; Park & Choi, 2019). Thus, allowing the smooth facilitation process between businesses to maximize production. Besides, the acknowledgment of an effective and efficient business process with the aid of digitization, the quality of social life, job creation and education are also critically influence by a digital economy (Pradhan, et al., 2019; Reuschke, & Mason, 2020). The mass adoption of digital innovations and services by consumers, businesses, corporations, and governments has appeared in recent years as a fundamental element of economic driver that maximizes economic growth and facilitates job creation (Chinoracky & Corejova, 2019). With the purpose of economic growth, digitization has played an important role in assisting governmental policies to stimulate employment and economic development (Johnson, 2019; Reuschke, & Mason, 2020). Unlike the job creation, global digitization is not transforming the structure of an economy, but also the social life. Digitization and social life impact have a significant relationship. Thus, the introduction of digital technology and innovation in education, businesses, transportation, security system and healthcare have without a doubt elevated the social standard of individuals (Pradhan, et al., 2019; Johnson, 2019).

In the global digital economy, Malaysia has embarked on a long run journey from being a rapidly resource-driven economy to knowledge-driven. Significant policies implemented over the years have strategized directions in the aspect of technology and innovation, through effective research and development (R&D). Hence, through research and development, several initiatives have been initiated to transform the nation into an innovative digital economy (Rashid, et al., 2017; Turina, 2020). Under the National Transformation (TN50) plan, Malaysia's economic growth new vision has been strategized to transform the country into a developed economy with the ultimatum to achieve digital economy. Malaysian digital economy initiatives are deployed to build relevant IT infrastructure in all sectors of the economy (Halili, & Sulaiman, 2018; Johnson, 2019). ICT investment remains the primary focused on the government's economic policy initiative. With the development of IT infrastructure, facilitating of the usage and adoption of ICT in E-commerce, health, industry and education have become vital to the progress of human life (Turina, 2020). However, the successful implementation in relation to the adoption and usage of ICT remains the primary challenge for the organizations, not only to facilitate and promote innovations, but to be equipped with updated innovation and invention (Rashid, et al., 2017; Turina, 2020). Even though the country's sustainable development is progressively increasing, the economy is yet to achieve significant digital economy development to compete with top countries. The relatively hinder the progress on sustainable development. For instance, to ensure an effective and efficient implementation of ICT, Malaysian has deep concerns over the deployment of IT infrastructure protocol especially for sustainable development. As a country, rapidly adhering to sustainable development, it remains one of the primary goals for the government to achieve a successful digital economy (Halili, & Sulaiman, 2018). This study will investigate the impact of digitalisation of the economy on social and economic growth for the country's sustainable development.

LITERATURE REVIEW

The on-demand economy remains small in Malaysia, in spite of its rapid climb. This generates various market and regulatory frictions but additionally critical possibilities for employers and employees, as formerly undoable paintings are being achieved and humans previously excluded from the labour marketplace are offered with new opportunities to become lively. ICT improvements and multi-sided platforms are also deeply transforming conventional industries. In terms of organization of labour, both digitalisation and therefore the growth of the on-demand economy will lead into increasing flexibility. This might create advantages for both employers and employees, within the sort

of increased autonomy and productivity, improved work-life balance and reduced costs. In turn, it's going to also bear risks, as an example in terms of income certainty. Flexibility further involve and provides rise to now sorts of management and skills, also because the importance of coaching both managers and employees. Consequently, digitalisation and therefore the development of the on-demand economy requires changes in industrial relations (European Union, 2017).

The indicators in ICT Development Index and Network Readiness Index include high-tech exports, production of products with high R&D Intensity, National Cyber Security as well as in the Share of Households with Internet (Afonasova, Panfilova, Galichkina & Ślusarczyk, 2019). Digital economy relies on its six pillars- affordability, reliability, ability, access, utilization and capabilities, the digitization index became associated with better growth and employment with growing return to scale. The economic payback to be generated by way of seasoned-actively addressing these gaps both in terms of its uneven improvement, however additionally in terms of lags within the regions of infrastructure investment and virtual era usage guarantees to be good sized (Kartz, Koutroumpis and Callorda, 2014). Digitization also can pressure productiveness and employment growth which inclusive rules can also correctly contribute to bridge the space between the foremost favoured and thus the disadvantaged components of the population (Evangelista, Guerrieri & Meliciani, 2014). For the staff of a corporation, AI (AI) will entail short-term disadvantages; within the low and medium qualification sectors primarily, several million jobs worldwide are under threat. At an equivalent time, AI opens new opportunities for companies and individuals. Humans are adaptable and can create new jobs. The utilization of intelligent IT systems helps decrease the time required for the merchandise of the service, and therefore the associated costs also. AI should thus end in a growth of prosperity. Moreover, technical developments will cause a situation during which older employees and employees with disabilities are often better integrated; while machines can perform dangerous work. Innovation is labour-friendly: it destroys, but also creates employment. The race between job-creation by new products and job-destruction from process innovation was won within the past by the job-creation effects of innovation. However, there's an uneven distribution of the prices of digitalization due to the skill-biased nature of technological change: low skilled workers are likely in touch large cost especially, because the danger of displacement of their jobs is higher. Another group in danger are occupations with a high share of routine tasks, particularly in commission industries. Therefore, the challenge of the longer term lies in dealing with rising inequality from technological change (Dachs, 2017).

In the developed countries, only 14% of the European Union small and medium Enterprises were using internet channel and 40% of the businesses still has not adopted any of the new advanced digital technologies in 2015. Study on industry 4.0 and therefore the digital society costs of concepts, dimensions and envisioned benefits (Fonseca, 2018). The event of SMEs would be major source employment and major contributor for internet business. The digitalization would help India to compete with matured companies, generate employment and have a gentle growth in GDP providing socio-economic growth to the state as an entire (Saba Siddiqui & Rakesh Singh, 2018). From 2006 to 2016, BEA estimates that digital economy real value added grew at a mean annual rate of 5.6 percent, outpacing the typical annual rate of growth for the general economy of 1.5 percent. In 2016, the digital economy was a notable contributor to the general economy- it accounted for six .5 percent of current-dollar GDP, 6.2 percent of current-dollar gross output, 3.9 percent of employment, and 6.7 percent of employment compensation (Barefoot, et al., 2018). Bukht and Heeks (2017) suggests unevenness within the digital economy landscape; the worldwide North has the lion's share of the digital economy so far, but growth rates are fastest within the global South.

Advancement of automation technologies might aggravate opportunities for economic process and international society needs the choice principles to unravel the digitalization problem. The international society establish a stewardship which will embody the responsibilities and morality necessary to stop the risks of automation faced (Nagona, 2018). More and more people are involved in unstable labour relations against background of the rapidly formatting digital environment (Popovand & Soloveva, 2019). The sectors projected to ascertain the best rise in demand for brand spanking new workers are wholesale and retail, manufacturing, construction, and transport. In absolute terms, it had been predicted that the most important increase to return in commission and sales occupations. In terms of absolute job losses, it had been predicted that there'll be fewer skilled agriculture workers and fewer elementary workers (such as labourers), across the ASEAN-6 by 2028. But comparing the standard skillsets of workers doing jobs which will become redundant, with the skillsets of job which will be created in other parts of the economy under the new technology scenario, offers a window on the size of the reskilling challenge". Analysis reveals that 41 percent of that cohort

are “acutely lacking” the IT skills; almost 30 percent lack the “interactive skills”; just over 25 percent also lack “foundational skills” that are required to away greater extent in ASEAN’s future labour market, it’ll must work collectively to supply workers with the required tools and skills for the transition (CISCO, 2018). Therefore, the impact of digitalization on the labour market is large include the skill in-demand (Gurkina, 2017). consistent with PWC (2018), new skills are going to be required to take care of current roles or shift into new ones. These hybrid roles work across domains and usually demonstrate competency in three areas, namely (a) Business and science skills, (b) Human or soft skills, and (c) Technology skills. Nubles (2016) suggests that technological change and therefore the way forward for jobs isn’t deterministic, which market and societal learning processes drive endogenously transformative process that cause the generation of latest job. Evangelista, Guerrieri and Meliciani (2014) suggest that the usage of ICT, and mostly digital empowerment, exert the main economic effects, especially on employment also favoring the inclusion of “disadvantaged” groups within the labour market.

In Malaysia, the 2016 GE global innovation Barometer, said that a high percentage of Malaysian executives feel optimistic (76% vs 68% globally), excited (67% vs 61% globally) and assured (72% vs 60% global) about the prospect of entering the fourth technological revolution (Jayaram, 2016). Tsyganov. S and Apalkova. V (2016) found that the rise in other sector of economy includes e-commerce and e-financial services is due the rapid development in of e-commerce in Europe. They divided their findings into four approaches namely macroeconomic, structural, management and technological. Furthermore, the advancement of monetary infrastructure through innovations and therefore the ICT’s diversity also contributes to the event of the knowledge society and digital economy. Digital technologies in ASEAN economies remain as a challenge for the countries to pursue growth and prosperity and it became tougher to boosting Innovation development altogether SMEs especially to make sure individuals to experience best skills to use at the proper place. Furthermore, by initiating adequate policies, ASEAN economies are often more robust in terms of digital retransformation to elevate the economic actions and also social development. The ASEAN economies are going to be brighter if the actions are been taken now (Box. S & Lopez-Gonzalez, J, 2017).

RESEARCH FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Studies (Kim, Kim, Park, & Hwang, 2014; Park & Choi, 2019) have revealed that, a digital economy is crucial to economic growth development. Organizational changes in relation to innovation are driven by the digital revolution. An economy with sufficient technology innovation has the potential to increase economic growth. Dirican (2015) connotes that, the invention of machines has aided to smooth developmental project that has significantly improved economic performance. Computer and software have played an integral part in the changes we see today in business development. Aly (2020) argued that, today, there are more online businesses as compared to a decade ago. Thus, people are efficiently conducting and executing businesses deal or projects via online without hassle. Several findings (Ozili, 2018; Ahmad, & Schreyer, 2016) again have highlighted that, due to digitalization, the financial system has adopted well acquitted technology to enable better financial transaction via online. Meanwhile, Chinoracky and Corejova, (2019) noted that, digitalization of economy comes with consequences that includes cybercrime. However, innovations are being prepared to tackle the problem of cybercrime. Regardless, there is a positive correlation between economic growth and digital economy (Park & Choi, 2019)

According to Ertz and Boily, (2019) digitalization of the economy will transform the daily activities of people but in contrast, it has the potential to affect the job opportunities for people. The technological transformation of the economy due to digitalization has ensured the progressive innovation in the form of automated using existing robotics and machine to complete tasks at work place (Ertz & Boily, 2019; Aly 2020). Chinoracky and Corejova, (2019) emphasized that, the rapid growth of advance technology to transform human lives has consequently led to a significant job lost in most advance nations. Even though such effect is yet to affect developing countries, governments are significantly concern with the rise of unemployment in place of a digital economy (Aly 2020).

The accelerating digitisation process without a doubt includes the well-being of people. The digitalization of the economy has contributed to the influence of living standard of humans (Medvedev, 2018). The rising living condition of human is significant balanced with the digital economy (Dirican 2015; Khazheeva, 2020). Korunka and Hoonakker, (2014) indicated that, humans form part of the digitalization of the economy. Thus, the digital economy and quality of human life is highly correlated,

the significant technological influence on health, education, transportation and working life has improved human lives over the years. For instance, in health, the application of medical scan has successfully aided in the treatment of cancer. Meanwhile, Medvedev (2018) discussed that the introduction of Information and Communication Technology (ICT) is the reservoir for improvement of quality of life. Eliminating barriers in achieving efficient transport have enabled the invention of convenient mode of transport. Hence, the efficiency of the transportation system is then positively related to work performance, which indirectly help improve quality of life (Reuschke, & Mason, 2020; Khazheeva, 2020). Studies (Nistor, 2014; Dufva, & Dufva, 2019; Khazheeva, 2020) have discussed that, due to digitalization, basic human services such as shopping, communication, traveling, financial transactions etc., have seen significant improvement, which enables easier, flexible, faster and convenient human services. This reflects a significant positive correlation between quality of life and digital economy. Berdykulov et al., (2014) however, argued that, even though digitalization has positive impact human life, technology is very expensive to the middle-income. Therefore, poses a financial challenge especially to unemployed individuals (Berdykulov et al., 2014; Van Rensbur, Telukdarie, & Dhamija, 2019).

Bakeeva, Pastukhova and Romanova, (2019) highlighted that due to the rapid technological innovation in ICT, societies are slowly turning into a digital society whereby the use of digital application to perform educational processes has become effective. Bejinaru (2019) noted that the digitization of economy also requires the implementation of technology innovations that are useful for the transformation and change of several aspects of the society, including education (Reis, Amorim, Melão, & Matos, 2018). In education, the application of ICT has been used to effectively process, store and transmit data, for production of educational development. Thus, digitization has provided an efficient transparency in analysing production, exchange of information, and increases the effectiveness of the society development (Finance, 2015; Machekhina, 2017).

Hypothesis

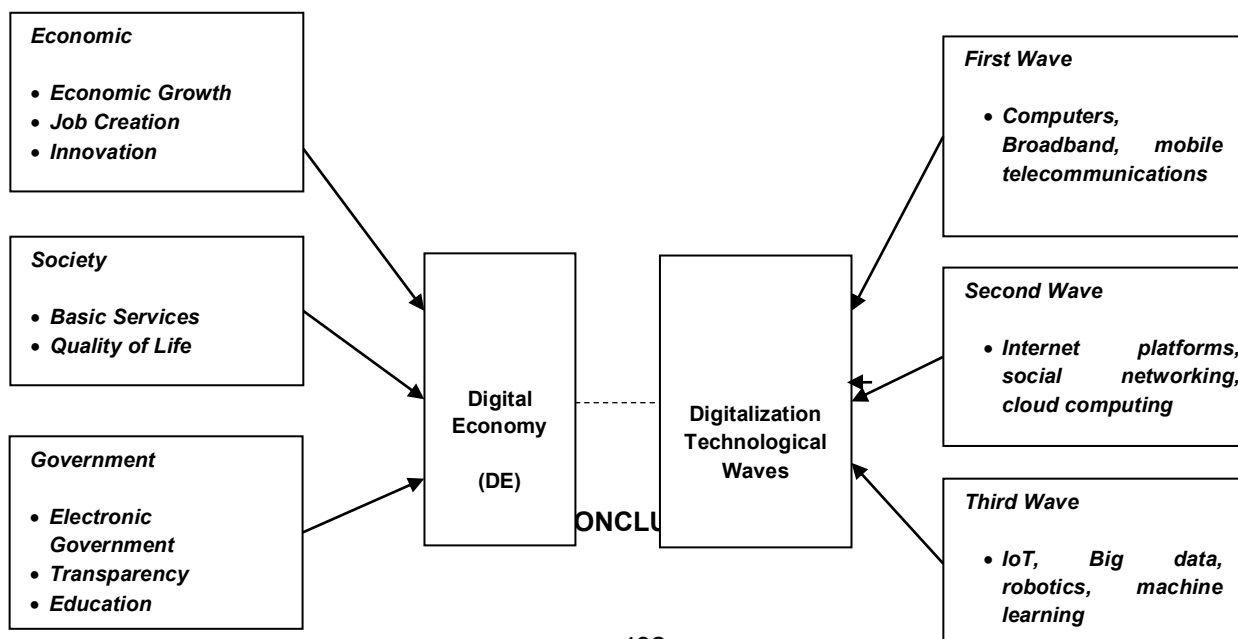
It is expected that the proposed model will remove a barrier in analysis and forecast the economic variables accurately. The proposed model will show a better performance in analysis the economic variables.

H1: Digital economy significantly affects economy in terms of economic growth, job creation and innovation.

H2: Digital economy significantly affects the society in terms of basic services, employability and quality of life.

H3: Digital economy significantly affects the government in terms of electronic government, transparency and education.

Figure 1: Proposed Conceptual Framework



The age of digital is a mega-trend. The increasing ownership of the mobile applications will indirectly accelerate the growth of the digital economics. This is due to the transformation of the software development trends changing from the standalone applications to the mobile applications. In the digital era, technological innovation and digitization are the two pillars for a competitive economy. The review of past literature includes the impacts of the fourth industrial revolution on employment, technological innovation, or economic growth. The transformation is impacting businesses, governments and individual well-being by solving society's problems through digitization. Overall, digitization can accelerate growth as it enables businesses to open new markets, enhance service delivery for the people and strengthens government institutions in innovative ways. The interconnections of stakeholders, that is, the people, private companies, the society and the Government are emphasized. By considering these interconnections that the citizens and the government can prepare in terms of education in knowledge economy, quality of living and economic impacts. In the space of service delivery to citizens, digitization increases the capacity and creates transparency in efficient e-government systems. Consequently, Malaysia has to strategically ensure that the technological innovation is adequate to drive a sustainable and inclusive economy. The paper focuses on the aspects of economy and societal impacts and continue to investigate it in depth. As future works, the components to accelerate the digital economy in Malaysia to be more competitive in the international markets have been proposed.

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BAFE065:
**EXPORT OF TAIWAN'S MANUFACTURED FOOD PRODUCTS WITH
HALAL LOGO INTO MALAYSIAN MARKET**

Nur Sa'adah Muhamad¹, Khairul Akmaliah Adham², Mohd Fuaad Said³, & Nadiah Mahmad Nasir⁴

¹Centre of Value Creation and Well-being Studies, Faculty of Economics and Management, Universiti
Kebangsaan Malaysia

^{2,4}Graduate School of Muamalat, Faculty of Economics and Muamalat, Universiti Sains Islam
Malaysia

³School of Business and Economics, Universiti Putra Malaysia

Abstract

Particularly since the launching of its New Southbound Policy in 2016, Taiwan has put emphasis on both the export of manufactured halal products as well as halal or Muslim-friendly tourism, as its new sources of economic growth. However, thus far, there is a lack of knowledge on either the current state of its halal export manufactured products or its halal tourism. This study intends to address the first knowledge gap by examining the current situation of Taiwan-made halal food products export into one of its targeted Muslim market, which is Malaysia. To achieve the study's objective, this study utilized observation methodology to check on the availability of the Taiwan-made food products with halal logo at selected supermarkets and convenient stores in Klang Valley in Malaysia, as well as on two major online shopping websites. Klang Valley was chosen as the context of study because the region represents the characteristics of Malaysian population in general. The study found that the export strategy of Taiwan manufactured food products with halal logo in Malaysia is characterized by comparatively low-price and product variety. However, the number and range of products with halal logo as well as brand identity of Taiwan seems to be lagged behind those products manufactured in South Korea and Japan, the two Muslim-minority countries that fast becoming emerging players in the global halal market. Implications for knowledge extension and practice in the industry are discussed.

Keywords: Export, Taiwan, Malaysia, halal, food product, observation methodology.

BAFE066:
**THE ANTECEDENTS OF ORGANIC FOOD ACTUAL CONSUMPTION
IN MALAYSIA: THE MODERATING ROLE OF TIME ORIENTATION**

Chekima, Brahim^a, Senadjki, Abdelhak^b, Chekima, Khadidja^c

^aFaculty of Business, Economics & Accountancy, Universiti Malaysia Sabah, Malaysia,
Email: bchekima@ums.edu.my

^bFaculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia,
Email: abdelhak@utar.edu.my

^cSchool of Biosciences, Taylor's University, Malaysia,
Email: khadijachekima@gmail.com

Abstract

Despite organic food being topical research, its consumption and market growth remains a niche in many places, especially in Malaysia. Preceding studies' foci were on examining the intention to purchase as a proxy to consumption which resulted in what is called the green gap or intention-behavior gap. It needs to be considered in this regard that actual consumption and purchases of organic food products are two separate behaviors and may therefore be determined to some extent by different factors. Consumption reflects high involvement with the product; and the barriers and motivations are as real as the product itself, which makes it an ideal moment to examine the motivation. The research model was analyzed using the Partial Least Square Structural Equation Modeling technique with 122 samples. The data was collected throughout Malaysia by employing purposive sampling. The result indicated that the product-specific attitude and willingness to pay had a significant positive influence on individuals' organic food consumption while environmental attitude and subjective norms were not significant. The moderating role of future orientation shows that it exerts a consequent role to strengthen and increase product-specific attitude and willingness to pay respectively. The research provides significant insight and understanding of narrowing the intention-behavior gap concerning the actual consumption behavior of organic food.

Keywords: Green gap, organic food consumption, product-specific attitude, future orientation.
