

The Factors Influence Retailers' Acceptance towards the Adoption of Information Technology in Retail Sector in Malaysia

Mohammed Hariri Bakri^{a,*}, Carolyn Lai Peh Nee^a

^a*Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 76100, Durian Tunggal, Melaka, Malaysia*

Abstract

There is a significant influence does by information technology on retail sector especially in urban areas in Malaysia. In order to boost sales and revenue, Malaysian retailers are implementing advanced IT solutions in their way to operate their business and transactional system. But the technological gap between the traditional retail sector and the modern technological business of retail sector has been occur due to the technology advancement in Malaysia. Many of companies in Malaysia has improve their information system to adapt for the Goods and Service Tax (GST) starts from April, 2015 to enhance their business operation and efficiency. There are still some factors that need to concern before the retailers acquire to purchase a new information technology to their organization. In the interest to know more details about this, this research will focus on the factors influence the retailers' acceptance towards the adoption of information technology in retail sector in Malaysia. The main objectives of this research to find out the factors of attitude towards the behaviour, subjective norm, perceived behavioral control, perceived usefulness and perceived ease of use to test the relationship between the retailers' acceptance towards the adoption of information technology in their retail business. All of the factors are retrieved from the Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM). This quantitative research has selected 384 of persons engaged in retail sector in Malaysia as the respondents to complete the research and data analysis was done by using SPSS. The result from this study indicates that in overall, respondent agreed that all of the independent variables (attitude towards the behavior, subjective norms, perceived behavioral control, perceived usefulness and perceived ease of use) are shown important factor that have significance influence to the retailers' acceptance towards the adoption of information technology in retail sector while the most significance influence factor is subjective norm.

© 2012 Published by Penerbit UTeM and/or peer-review under responsibility of Journal of Technology Management and Technopreneurship

Keywords: Information Technology; Adoption; Retailers; Technology Acceptance; Behaviour

1. Introduction

Retail is the sale of products and services from individuals or businesses to the end-user while retailer acts as a supply chain in the part of an integrated system (Bishnoi 2014). The retail industry can be said that is the one industry which relies heavily on analyzing and using information to drive its day-to-day activities

* Corresponding author.

E-mail address: hariri@utem.edu.my

(Atherton, 2009). One of the most important external strategy factors and critical factor of success of a retail company are technical and technological development (Segetlija, 2006). It has become clear that the retail industry is in a period of extraordinary interruption and change by technologies nowadays (Deloitte, 2014). There is a significant influence does by information technology on retail property especially in urban areas in Malaysia (Najib Razali et al., 2014). In “IT in Retail: Competing Smartly With IT” from Retail Asia Online points out that local retailers are forced to chase the steps of competition of online retailers and the entry of international brand retailers by improving their information technology convenience for customers. In order to boost sales and revenue, Malaysian retailers are implementing advanced IT solutions in their way to operate their business and transactional system. Some of the retailers that embrace the use of Information Technology systems are the convenience store operators. Many of companies in Malaysia has improve their information system to adapt for the Goods and Service Tax (GST) starts from April, 2015 to enhance their business operation and efficiency (Retail Asia, 2014).

The retail sector in Malaysia has a low acceptance on adoption information technology in their business (Bakri et al 2015). From the point of view of Bishnoi (2014) states that information technology plays a role as the backbone of modern retailing due to the owner or manager of a traditional retailing is more easily to manage their business because of its size, scope and uncompetitive nature. Modern retail owned by large organizations will face a difficulty in management if they without a well-organized and reliable IT system (Bishnoi, 2014). The problem is more significant after the Goods and Service Tax (GST) was started. On 25th of October 2013, the Prime Minister Datuk Seri Najib Razak, who also doubles up as finance minister announced that Goods and Service Tax (GST) will be introduced starts from 1st of April 2015 with a tax rate of 6% (Budget 2014: GST at 6% from april 2015 - nation | the Star Online, 2013). Besides of government regulation, retailers are continually thinking of whether to implement new technologies or not to gain a more competitive advantage while that investments in technologies do not always provide the expected returns (Renko and Druzijanic, 2014).

From all the research above, we can know that information technology has its own characteristics to influence people to accept or reject. The technological gap between traditional retail sector and the modern technological business of retail sector has some interesting factors influence retailers' acceptance to implement information technology in their business will be discussed. This study can be contributed to the retailers who has interested to adopt new information technology in their business and also the result of this study will be used to improve the performance of retail industry. The finding outcomes could also provide the benefits to the systems creators in the world for them to understand the needs of retailers in Malaysia to implement the technological innovations in their business. Lastly, it also can contribute to the tax administration and policy development of the government for assessment the impact towards the retail sector about technological innovations adaption after the implementation of Goods and Service Tax (GST) among retailers

2. Literature Review

According to Pradhan (2009), retail is the last stage of any economic activity which plays a main role in the world economy which also can be termed as any organizations that sell the product to the final consumers. Referring to Mansoor and Mehra (2010), retailing is a term for collective selling from any types of business or types of market and selling the finished products to the end user consumers. A retailer is a persons who ongoing the action of selling products to the final consumers at a margin of profit (Kusuma, Prasad and Rao, 2013). According to Pradhan (2009) defines retailer in the point of view of customers and economic standpoint. From the customer's point of view, retailer is the person who provides the services at the right

time and place with the products that he needs. From the economic standpoint, retailer plays a role of deliver real added value or service to the customers (Sharif et al 2018) . According to Bharat P. Rao (1998), retailers are the persons who regularly deal with a huge amounts of data and information daily in their business process. Therefore, information systems and technologies has grew extensive acceptance in several areas in retail industry. The acceptance of retailers in the modern technology innovations and communication tools in their everyday business process has become the most crucial part in the long-term trend in the business world (Rust 2001). The improvement of technology information systems would be able to maximize the acceptance and emerging value for consumers (Pantano and Di Pietro 2012).

Retail business has been early adapter of Information Technology (Pradhan 2009). Based on the point of view of Bishnoi (2014), information technology plays a big role in the modern retailing. Traditional retail was more easy to manage without IT because of its size, scope and less competitive nature while the modern retail formats are more difficult to manage if without an sufficient and reliable IT system. The fact of retailing technologies are constantly developing, and retailers have to be involved in the implementation of innovative business practices provided by the technological advancement (Renko and Druzijanic, 2014). According Pradhan (2009), information technology function via software, hardware and wireline and wireless communication. The user of IT in retail uses the information technology generally in POS terminals, inventory management software and for interaction at different levels. IT has been applied to many of the facilities to provide good quality of business operation for product identification, fast billing, electronics bills and specialized logistics applications. The most common use of information technology in retail sector is the POS (Point of Sales) and Radio Frequency Identification Technology (RFID). POS is nowadays use in retail stores for the auto total bill amount for the easy payment process. RFID is use to enable quick billing and to track automated stock keeping that profitably being used in retail firms of developed countries (Bishnoi, 2014).

From the previous researches, the effects of IT on business has saturate every aspect of business world and brings a big influence to economic performance (Folarin and Hassan, 2015). This phenomenon has become a hazard to Malaysia economy due to many retailers have not embraced IT on their business and it's hard to be competitive (Zaini et al., 2011). There is only 0.8 percent of retail in Malaysia that involved in the online retail market in 2011 and this result forecast to increase to 1.4 percent in 2016 (Zaini et al., 2011, Bakri et al 2016). In such a way, the adoption rate of IT amongst retail in Malaysia is still considered low (Folarin and Hassan, 2015). Sara (2013) finds that there are no other multinational grocery retailer in Malaysia provides online shopping except Tesco which launched their online services since April 2013. This situation shows the increase of declining retail because till date Malaysia retailers have not been able to make a more convenient platform for grocery shopping (Zaini et al., 2011). In contrast, Najib Razali et al. (2014) stand the point that the business way in retail has been transformed and changed by the emerging of information and communication technology (ICT) in Malaysia The implementation of technology in retail sector depends upon the ability of retailer to provide their benefits from new technologies to customers (Greenhalgh et al., 2004; Tidd and Bessant, 2013). According to Berman and Evans (2010), "Technology is beneficial to retailing relationships if it facilitates a better communication flow between retailers and their customers, as well as between retailers and their suppliers". There are more Malaysian retailers are now also using advanced IT solutions in their operational and transactional systems such as merchandise management to better understand customer buying behavior to boost sales and revenue, while reducing operational costs (Retail Asia Online, 2014). In order to stay competitive, many retail players in Malaysia reconstruct their strategies to fight for the hearts and minds of consumers.

2.1. Technology Acceptance Model

The most common research model to use and acceptance of information systems and technology by individual level is Technology Acceptance Model (Surendran, 2012). TAM was developed by Davis in 1989 and it is an adaption from Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975; Davis, Bagozzi and Warshaw, 1989). According to Davis, Bagozzi and Warshaw (1989), TAM has the purpose of provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intentions. TAM helps to predict an individual's intention to use an information system and can be modified to predict a consumer's intention to use Internet technology for product purchasing (Keen et al., 2004). There are two particular beliefs in TAM which are perceived usefulness (PU) and perceived ease of use (PEOU) that is the primary factors that will affect the attitude of users. From the previous researchers, Awa, Ojiabo and Emecheta (2012) mention that there is a need to expand factors to integrate with other IT acceptance model to enhance the explanatory and predictive utilities of TAM due to narrow information of user's opinion about specific systems and focus only on PU and PEOU.

2.2. Attitude towards the Behavior

According to Lancaster (1966) attitude drives the consumers utility or attributes. Ajzen (1991) defines that attitude towards the behavior is the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. Based on the point of view of Keen et al. (2004), attitude towards the behavior is determined by the individual's evaluations of the outcomes and an assessment as to how likely the outcome is to occur. Other than that, Nui Polatoglu and Ekin (2001) suggest that customer attitude is composed of one's attribute beliefs about the object and perceived importance of that attribute in making the decision to adopt. In the point of view of (Hernandez and Mazzon 2007; Eriksson, Kerem and Nilsson, 2005; Jaruwachirathanakul and Fink, 2005; Bobbitt and Dabholkar, 2001) argue that the attitude of a person can directly effect on the consumers' intentions to actually use the new technology or system.

2.3. Subjective Norm

Subjective norm is a term of a social factor that refers to the perceived of social pressure to perform or not to perform the behavior in Theory of Planned Behavior (TPB). The idea of subjective norm does influence a person's intention to use technology is supported by (Davis, Bagozzi and Warshaw, 1989). In contrary, some research found that subjective norm has no significant influence while some of the research found that subjective norm have a significant result when technology was assigned by the employer at the work environments (Cowen, 2009). From the previous researcher study of subjective norm influence the use of computed, although the result is less than the perceived usefulness and perceived ease of use but subjective norm is truly can be said as an important determinant factor in user acceptance (Cowen, 2009). Referring to AlMamary et al. (2016), positive or negative assessment of the behavior and its expected outcomes and subjective norms are the social pressures applied on an individual resulting from their perceptions of what others think they should do and their appetite to obey with these.

2.4. Perceived Behavioral Control

According to Ajzen (1991), perceived behavioral control refers to people's perception of the ease or difficulty of performing the behavior of interest which plays a major role in the theory of planned behavior (TPB). The added of perceived behavioral control has helped to distinguish between TPB and TAM.

Perceived behavioral control relates to the degree to which the person believes that he has control over personal or external factors that may facilitate or constrain the behavioral performance. According to Eide (2013), behavioral control is initially the consumer's perception on his physical and financial ability to conduct a behavior. From the research study of Mbayo Kabango and Romeo Asa (2015) indicate that perceived usefulness, ease of use, compatibility, interpersonal influence, external influence, self-efficacy, facilitating conditions, attitude, subjective norms, perceived behavioral control, and intention act as the important determinants of user acceptance towards the acceptance of information technology.

2.5. Perceived Usefulness

According to Davis, Bagozzi and Warshaw (1992), perceived usefulness refers to consumers' perceptions regarding the outcome of the experience. Davis (1993) redefines the performance of an individual using the technology will be influenced by the usefulness of the technology which also has a direct relationship with ease of use to determine attitude. There are widespread evidences proving the significance of effect of perceived usefulness on adaptation intention (Jaruwachirathanakul and Fink, 2009; Eriksson, Kerem and Nilsson, 2005, Bakri et al 2018). Following a detailed review of previous literature regarding technology acceptance, one might expect that both perceived ease of use and perceived usefulness would be influencing factors in a person's intention to use technology (Cowen, 2009). Referring to Wang (2012), perceived usefulness of technology influence perceived control and convenience and then affect consumer behavior (Ismail et al, 2017). According to Weijters et al. (2007), perceived usefulness, perceived ease of use, reliability and fun were recognized as key drivers to achieve customers' satisfaction in the self-service technology in retail sector.

2.6. Perceived Ease of Use

Perceived ease of use is proposed in the Technology Acceptance Model (TAM) by Davis in 1986 specifically for tailored the user acceptance of information system in individual level (Davis, Bagozzi and Warshaw, 1989). In the point of view of Davis, Bagozzi and Warshaw (1989), perceived ease of use is the even if potential users believe the application is useful for them or their organization but if the system is too hard to handle or control they may be reject to use it. In another word, perceived ease of use can be said as "the degree to which a person believes that using a particular system would be free of effort," (Davis, Bagozzi and Warshaw, 1989). According to Keen et al. (2004), ease of use brings a big influence over first time trials and then influencing the consumer to use the technology again. Similarly, Zeithaml, Parasuraman and Malhotra (2002) states that perceived ease of use is the degree which an innovation can be easily understand or use. Referring to Consult (2002), the ability of consumers to try a new innovation and evaluate its benefits easily was referred to the perceived ease of use. According to Venkatesh and Davis (2000), there are a positive relationships between perceived ease of use and attitude which shows that it is a key driver that influence users' intention to accept information technology. Clarke (2000) enhances this statement with his survey which proves that ease of use has the highest rank in his research of determine the use of wireless handheld devices. Thus, perceived ease of use is a dynamic determinant of intention to accept innovations.

2.7. Theoretical Framework

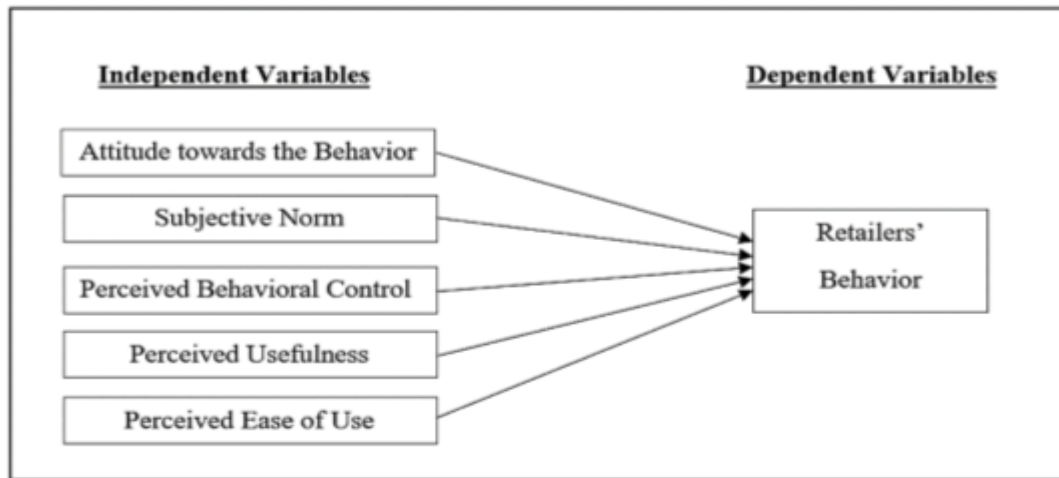


Fig. 1. Research framework

3. Methodology

The aim of this research is to find out the factors influence retailers' acceptance towards the adoption of information technology in retail sector in Malaysia. According to Borges et al. (2016), a research design is the detailed outline for the gathering and analysis of data and information based on the research questions and objectives. The objectives of study will determine the research design that need to choose by the researcher. There are three types of research designs which are exploratory research, descriptive research and explanatory research.

Studies that establish causal relationships between variables may be termed as explanatory studies (Saunders, Lewis and Thornhill, 2007). In this study, explanatory research was chosen as the research design. The researcher try to find out the factors influence retailers' acceptance towards the adoption of information technology in retail sector in Malaysia. In the viewpoint of Zikmund et al. (2012) state that explanatory research is conducted to recognize the extent and nature of cause and effect relationships. The main focus of explanatory research is to explain the patterns of relationship between variables by analyzed a situation or a specific problem. Based on Zikmund et al. (2012), also state that the amount of uncertainty charactering decision situation of explanatory studies is clearly define and use research hypotheses as the key research statement. Besides that, it is being highly structured as the research approach. According to Borges et al. (2016), explanatory tests whether one event causes another and seeks clarifications of the nature of specific connections. The researcher used hypothesis testing in this research which offers an understanding of the connections that exists between variables. The reasons researcher chose explanatory research as the research design is because there is an association between variables; the causal variable produces influence prior to outcome measurement, and there is no exists of third-variable influences (Borges et al., 2016). Lastly, the reasons of explanatory research was used is this study due to systematic selection of subjects of explanatory studies provided an advantage of higher levels of internal validity and offer the benefits of replication if needed (Zikmund et al., 2012).

In this research, the researcher used quantitative research to obtain the objectives. A quantitative data can be said as generating numerical data (Godfred, 2015). In this research, researcher tested the hypothesis in order to achieve the research objectives and the concepts were in the form of distinct variables (Godfred, 2015). The researcher examined the relationship among variables as a way to test the objective theories (Creswell 2014) of Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM). The researcher conducted a survey research to obtain the quantitative or numeric description of trends, attitudes or opinion from the target respondents by questionnaires (Creswell, 2014). All the data collected were analyzed by using statistics, tables or chart and discussing the relationship of variables and hypothesis (Godfred, 2015). In this research, survey was chosen as the research strategy to link with the research philosophy, research approach and purpose to meet the research questions and research objectives.

The researcher decided to conduct a pilot test before the questionnaires were proceed to collect data. The reason of the researcher to conduct a pilot test is to ensure there are no problems in answer and record the data from questionnaires before it proceed to the responders (Saunders, Lewis and Thornhill, 2012). Besides that, Saunders, Lewis and Thornhill (2012) state that pilot test also let researcher to evaluate the validity of the questions and the reliability of the data that will be collected. The researcher has chosen a number of people to conduct the pilot test the questionnaires such as the retailers in Melaka State to ensure the questionnaires have faced the validity and make sense to proceed (Saunders, Lewis and Thornhill, 2012). The researcher make sure that the respondents have well understand about the questions created and can answered questions without ambiguity (Fink, 2009).

The second data analysis tool that was chosen in this research is using Multiple Regression Analysis. Referring to Saunders, Lewis and Thornhill (2012), when there are two or more independent variables and one dependent variables, multiple regression analysis is suggested to calculate the coefficient of multiple determination and regression equation instead of linear regression analysis. The multiple regression analysis in this research is conducted by using SPSS software due to the calculation is relatively complicated. The multiple regression analysis is conducted as below equation:

$$y = a + h \times 1 + c \times 2 + d \times 3 + e \times 4 + f \times 5$$

Where:

y= Value of dependent variables (retailers' acceptance towards the adoption of information technology)

a= Constant

b,c,d,e,f= Coefficient

×1= Independent Variables (Attitude Towards the Behavior)

×2 =Independent Variables (Subjective Norm)

×3 =Independent Variables (Perceived Behavioral Control)

×4 =Independent Variables (Perceived Ease of Use)

×5 =Independent Variables (Perceived Usefulness)

In this study, the researcher explain about method used to how to collect the data and information the research.in the beginning, explanatory study in research design and quantitative method will used in this research. Next, there were two type of data sources to get the additional information, it primary data comes from questionnaire and secondary data from literature review or historical information. Thus, the researcher also use pilot test, multi-language survey questionnaire in the research strategy.

4. Discussion

4.1. Pilot Study

In this study, pilot test were conducted by using distributed the questionnaire to the respondent. A total 30 respondent before the actual questionnaire was distributed. The purpose of doing the pilot test is to ensure whether the respondents can understand about the question asked in the questionnaire. Besides that, the validity and reliability also being tested to ensure the data collected was valid.

Table 1. Validity for Pilot Test

Independent Variables	Pearson Correlation	R Product Moment	Validity
Attitude towards the behavior	0.918	0.361	Valid
Subjective Norms	0.809	0.361	Valid
Perceived Behavioral Control	0.914	0.361	Valid
Perceived Usefulness	0.861	0.361	Valid
Perceived Ease of Use	0.867	0.361	Valid

Based on the table 1 validity test, shows that all item are valid. This is because the Pearson correlation is more than R product moment for N=30 respondent which is 0.361. Thus, according to Sugiono (2010) stated that if the sample is 30, the value of r product moment is 0.361. Thus, N means the quality of indicator for questionnaire in this research 30 respondent are taken to answer the pilot test in early stage of this research. Therefore, all item can be included to further the questionnaire in the next process. Since the reliability and validity are valid. Thus, it shows that these independent variables can be used in the actual survey questionnaire.

4.2. Pearson Correlation

Pearson correlation was appropriate method to test the relationship among the variables. According the Saunders et al (2012) it stated that correlation coefficient represented by r, it used to showed the represented the strength of association between variables. Thus, it used to appropriate the strength between five independent variables with customer satisfaction toward the effectiveness of advertising in digital marketing.

Table 2. Pearson Correlation with the variables

		Attitude towards Behavior	Subjective Norms	Perceived Behavioral Control	Perceived Usefulness	Perceived Ease of Use	Retailers Acceptance
Attitude towards Behavior	Pearson Correlation	1.	.561**	.511**	.478	.512**	.562**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	384	384	384	384	384	384
Subjective Norms	Pearson Correlation	.561**	1	.561**	.433**	.574**	.701**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	384	384	384	384	384	384
Perceived Behavioral	Pearson Correlation	.511**	.561**	1	.428**	.949**	.506**
	Sig. (2-tailed)	.000	.000		.000	.000	.000

Control	N	384	384	384	384	384	384
Perceived Usefulness	Pearson Correlation	.478**	.433**	.428**	1	.449**	.463**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	384	384	384	384	384	384
Perceived Ease of Use	Pearson Correlation	.512**	.574**	.949**	.449**	1	.558**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	384	384	384	384	384	384
Retailers Acceptance	Pearson Correlation	.562**	.701**	.506**	.463**	.558**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	384	384	384	384	384	384

** . Correlation is significant at the 0.01

Table 2 illustrates the correlation of the variables are considered significant (2 tailed) when $p < 0.05$ for significance test. Based on Table 2, the significant level for all independent variables are significant with $p = 0.000$ which is lower than 0.05 level in 2 tailed for significance test. According to Hair et al. (2007), the Rule of Thumb of Pearson Correlation Coefficient, the correlation coefficient, r has a moderate positive relationship of variables when the r is from 0.41 until 0.70. In a conclusion, the strength of association for all independent variables are considered as moderate of positive linear relationship in significant (2 tailed) with the retailers' acceptance towards the adoption of information technology but the highest variable that has the highest Pearson Correlation Coefficient value is Subjective Norms.

4.3. Multiple Regression Analysis

Table 3 illustrate the Coefficients of Multiple Regression. Attitude towards the Behavior, Subjective Norms, Perceived Behavioral Control, Perceived Usefulness and Perceived Ease of Use have been used to test the retailers' acceptance towards the adoption of information technology by using multiple regression method.

Table 3. Coefficients of Multiple Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
1 (Constant)	.782	.181		4.313	.000
Attitude towards Behavior	.330	.048	.178	4.053	.000
Subjective Norms	.446	.042	.478	10.677	.000
Perceived Behavioral Control	.193	.098	.361	3.363	.001
Perceived Usefulness	.114	.043	.107	2.680	.008
Perceived Ease of Use	.444	.099	.486	4.470	.000

According to Table 3, each of the independent variables in this study provide a contribution which is used to predict the retailers' acceptance towards the adoption of information technology. First, the strongest and sole predictor is subjective norms, $\beta = .45$, $t(384) = 10.68$, $p < 0.05$. This is because the unstandardized beta, β of subjective norms is the highest positive value compared with other independent variables. From this result, we

can know that subjective norms has the greatest influence the positive relationship with the retailers' acceptance towards the adoption of information technology in the retail business.

Then, the second strongest predictor is perceived ease of use, $\beta=.44$, $t(384)=4.47$ $p<0.05$. This is because the unstandardized beta, β of perceived ease of use is the second highest positive value compared with other independent variables. From this result, we can know that perceived ease of use has the second greatest influence the positive relationship with the retailers' acceptance towards the adoption of information technology in the retail business.

Next, following by the third strongest predictor is attitude towards the behavior, $\beta=.33$, $t(384)=4.05$, $p<0.05$. This is because the unstandardized beta, β of attitude towards the behavior is the third highest positive value compared with other independent variables. From this result, we can know that attitude towards the behavior has ranked the third highest influence the positive relationship with the retailers' acceptance towards the adoption of information technology in the retail business.

Subsequently, following by the second lowest predictor is perceived behavioral control, $\beta=.19$, $t(384)=3.36$, $p<0.05$. This is because the unstandardized beta, β of perceived behavioral control is the second lowest positive value compared with other independent variables. From this result, we can know that perceived behavioral control has ranked the second lowest influence the positive relationship with the retailers' acceptance towards the adoption of information technology in the retail business.

Lastly, the lowest predictor goes to perceived usefulness, $\beta=.11$, $t(384)=2.68$, $p<0.05$. This is because the unstandardized beta, β of perceived usefulness is the lowest positive value compared with other independent variables. From this result, we can know that perceived usefulness has ranked the lowest influence the positive relationship with the retailers' acceptance towards the adoption of information technology in the retail business.

From above results, although each of the independent variables have different value and rank of influence towards the dependent variable, but each of them has develop different contribution and provide a significantly prediction towards the prediction of retailers' acceptance towards the adoption of information technology in retail business. Based on the result of multiple regression, the relationship between the dependent variable and 5 different independent variables can be determined based on the following multiple regression equation. The multiple regression of this study is shown as below:

$$y = 0.78 + 0.33x_1 + 0.45x_2 + 0.19x_3 + 0.11x_4 + 0.44x_5$$

Where:

y: Value of dependent variable (retailers' acceptance towards adoption of information technology in retail sector)

a: constant

b, c, d, e, f: Coefficient

x1: Independent variable (attitude towards the behavior)

x2: Independent variable (subjective norms)

x3: Independent variable (perceived behavioral control)

x4: Independent variable (perceived usefulness)

x5: Independent variable (perceived ease of use)

In a conclusion, the regression equation is established to predict the retailers' acceptance towards the adoption of information technology in retail business is: Retailers' acceptance= $0.78 + 0.33(\text{attitude towards the behavior}) + 0.45(\text{subjective norm}) + 0.19(\text{perceived behavioral control}) + 0.11(\text{perceived usefulness}) + 0.44(\text{perceived ease of use})$. Thus, the regression equation is established to show how the variables are associated to each other.

5. Conclusion

The result from the from this study indicates that in overall, respondent agreed that all of the independent variables (attitude towards the behavior, subjective norms, perceived behavioral control, perceived usefulness and perceived ease of use) are shown important factor that can influence to the dependent variable (retailers' acceptance towards the adoption of information technology in retail sector). In this study, the researcher has developed a theoretical framework based on two theory which are Theory of Planned Behavior (TPB) by Ajzen (1991) and Technology Acceptance Model (TAM) by Davis, Bagozzi and Warshaw (1989). The main objectives is to find out the significance relationship and the most significance relationship between the determinants and the retailers' acceptance towards the adoption of information technology in retail sector in Malaysia. This research is conducted by a quantitative method with 384 retailers in Malaysia as the respondents. The result shows that all of the independent variables (Attitude towards the behavior, subjective norms, perceived behavioral control, perceived usefulness and perceived ease of use) do give a positive relationship with the dependent variable. (Retailers' acceptance towards the adoption of information technology in retail sector).

In a conclusion, retailers' acceptance in Malaysia is being influenced by those factors and information technology plays a vital role in the prosperity of retail sector (Al-Lamy et al. 2018). The improvement of technical and boom of technology development are influencing the retailers to accept the information technology in their business to follow up the steps from being abandoned in the competitive environment. The combination of Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) are used to study the relationship of each factors towards the retailers' acceptance of information technology in retail sector in Malaysia. From the result of this study, it shows a more confirmation and expansion of the two model combination TPB and TAM that been used in this study would provide an experimental assessment on the retail sector in Malaysia. The combination of both theories is practicable in the retail sector in Malaysia and shows that it can be applied in practice and make it works. All of those factors provide a significance relationship with the retailers' acceptance and subjective norms has the most significant relationship influence on the retailers' acceptance towards the adoption of information technology in retail sector in Malaysia.

Nowadays, retailers are more willing to accept the adoption of information technology in their business operation although many of them are still lack of resources and knowledge. This can be more obviously seen when the government decision of implementing GST since 2016 as a mandatory for the retailers to implement Point of Sales systems to get involved in the world of information technology. From the previous news reporting, the main problem of retailers' acceptance of information technology mostly focused on the senior citizens. By conducting this study, the problem of senior citizens of being lack of knowledge and unable to control of the computer systems is being reduced. Up to now, most of the retailers are being well adapted and already have a good control on those systems comparing to the starting of GST implementation. As a result, the technological gap between the traditional retail sector and the modern technological business of retail sectors has been clearly seen as smaller than before. Thus, the retailers' acceptance is considered high when meet to the adoption of information technology in their retail business.

References

- Ajzen, I. and Fishbein, M., 1980. Understanding attitudes and predicting social behavior: Illustration of applied social research. Englewood Cliffs, NJ: Englewood Cliffs, New Jersey Prentice-Hall c1980.
- Ajzen, I., 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211
- Al-Lamy, H. A., Bakry, M. H., Raad, W., Al-Shami, S. A., Alaraji, Z.J., Alsa-Lihi, M. W., & Al-Tameemi, H. M. (2018). Information technology infrastructure and small medium enterprises' in Iraq. *Opcion*, 34(86), 1711–1724.
- Al-Mamary, Y.H., Al-nashmi, M., Hassan, Y.A.G. and Shamsuddin, A., 2016. A critical review of models and theories in field of individual acceptance of Technology. *International Journal of Hybrid Information Technology*, 9(6), 143–158

- Awa, H.O., Ojiabo, O.U. and Emecheta, B.C., 2012. Integrating TAM, TPB and TOE frameworks and expanding their characteristic constructs for e-commerce adoption by SMEs. *Journal of Science and Technology Policy Management*, 6(1), 76–94.
- Bakri, M. H, Ali, R., & Ismail, S, (2015). The Study of Residential Mortgage Backed Securities During Subprime Mortgage: Malaysian Experience .*Advanced Science Letters*, 21,(5) 1468147
- Bakri, M. H., Ali, R., & Ismail, S. (2016). Developing Primary Market Spread and Measuring Financial Performance of Staff Housing Government Loans. *Proceedings of the 1st AAGBS International Conference on Business Management*, 501-511
- Bakri, M.H., Sufian, F, Baharom, A.H and Ismail, S (2018) Determinant Of Securitization Spread In Malaysia, *International Journal of Business and Society* 19 (3), 904-917
- Berman, B. and Evans, J.R., 2010. *Retail management: A strategic approach*. 11th ed. Boston, MA, United States: Prentice Hall
- Bharat P. Rao, P., 1998. An Overview of Information Technology Applications in Retail Merchandising. A Report to the Harvard-Wharton Project on Retail Merchandising Effectiveness.
- Bishnoi, V., 2014. Role of Information Technology and ECRM in 21 st Century Retail Organisations. *International Journal of Emerging Technonology and Advanced Engineering*, 4(1), 433–440.
- Bobbitt, L.M. and Dabholkar, P.A., 2001. Integrating attitudinal theories to understand and predict use of technology-based self-service. *International Journal of Service Industry Management*, 12(5), 423 – 450.
- Borges, W.G."b., Ng, S.I., Chew, B.C., Lau, T.C., Ong, D., Devika, N., Lee, C., Goi, M.T., Law, K.A. and Bin Mamat, M.N., 2016. *Business Research Method*. Malaysia: SJ Learning
- Budget 2014: GST at 6% from april 2015 - nation | the Star Online, 2013. 26 October. [15 October 2016].
- Clarke, C., 2000. Coming Attraction. *Wireless Review*, 17(12), 12–16
- Cowen, J.B., 2009. The Influence of Perceived Usefulness, Perceived Ease of Use, and Subjective Norm on the Use of Computed Radiography Systems: A Pilot Study. *Radiologic Sciences and Therapy Division*, 1–20.
- Consult, 2002. *China Online Banking Study*. [14 November 2016].
- Creswell, J.W., 2014. *Research design: Qualitative, quantitative, and mixed methods approaches*. 4th ed. Thousand Oaks: SAGE Publications: SAGE Publications
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R., 1989. User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982– 1003.
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R., 1992. Extrinsic and intrinsic motivation to use computers in the workplace1. *Journal of Applied Social Psychology*, 22(14), 1111–1132.
- Davis, F.D., 1993. User acceptance of information technology: System characteristics, user perceptions and behavioral impacts. *International Journal of ManMachine Studies*, 38(3), 475–487
- Deloitte, 2014. *Global Powers of Retailing 2014 Retail Beyond begins*. Deloitte Global Services Limited. [14 October 2016].
- Eide, B., 2013. *Consumer Behavior Theories – Purchasing Organic Food*. Thesis Submitted to Aarhus University, 45
- Eriksson, K., Kerem, K. and Nilsson, D., 2005. Customer acceptance of internet banking in Estonia. *International Journal of Bank Marketing*, 23(2), 200–216
- Fink, A., 2009. *How to Conduct Surveys: A Step-by-step Guide*. 4th edition ed. Thousand Oaks: SAGE.
- Fishbein, M. and Ajzen, I., 1975. *Belief, attitude, intention, and behavior: An introduction to theory and research*. 4th ed. Reading, MA: Longman Higher Education.
- Folarin, T.O. and Hassan, Z., 2015. Effects of technology on customer retention: A study on Tesco Malaysia. *International Journal of Accounting, Business and Management*, 1(1), 28_49
- Godfred, D., 2015. *Research Methods*1, 86–91
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. and Kyriakidou, O., 2004. Diffusion of innovations in service organizations: Systematic review and recommendations. *The Milbank Quarterly*, 82(4), 581–629
- Hair, J.F., Money, A.H., Samouel, P. and Page, M., 2007. *Research methods for business*. Chichester, England: Wiley, John & Sons.
- Hernandez, J.M.C. and Mazzon, J.A., 2007. Adoption of internet banking: Proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*, 25(2), 72–88.
- Ismail S, Faique FA, Bakri MH, Zain ZM, Idris NH, Yazid ZA (2017) The Role of Financial Self-Efficacy Scale in Predicting Financial Behavior. *Advanced Science Letters*.23(5):4635-9
- Jaruwachirathanakul, B. and Fink, D., 2005. Internet banking adoption strategies for a developing country: The case of Thailand. *Internet Research*, 15(3), 295–311.
- Keen, C., Wetzels, M., de Ruyter, K. and Feinberg, R., 2004. E-tailers versus retailers. *Journal of Business Research*, 57(7), 685–695.
- Kusuma, B., Prasad, D.N. and Rao, S.M., 2013. A Study on Organized Retailing and Its Challenges and Retail Customer Services. *Innovative Journal and Business Management*,2(5)
- Lancaster, K.J., 1966. A New Approach to Consumer Theory. *The Journal of Political Economy*, 74(2), 132–157
- Mansoor, K. and Mehra, P., 2010. Retail Industry Developments and Impact of Technology. *Retail Industry Development*, 1–12.
- Mbayo Kabango, C. and Romeo Asa, A., 2015. Factors influencing e-commerce development: Implications for the developing countries. *International Journal Of Innovation And Economic Development*, 1(1), 59–66.

- Najib Razali, M., Abdul Rahman, R., Mohd Adnan, Y. and Mohd. Yassin, A., 2014. The impact of information and communication technology on retail property in Malaysia. *Property Management*, 32(3), 193–212.
- Nui Polatoglu, V. and Ekin, S., 2001. An empirical investigation of the Turkish consumers' acceptance of Internet banking services. *International Journal of Bank Marketing*, 19(4), 156–165
- Pantano, E. & Di Pietro, L., 2012. Understanding consumer's acceptance of technology-based innovations in retailing. *Journal of Technology Management and Innovation*, 7(4), 1–19
- Pradhan, S., 2009. *Retailing management: Text and cases*. 3rd ed. New Delhi, India: Tata Mcgraw-Hill Education Pvt
- Renko, S. and Druzijanic, M., 2014. Perceived usefulness of innovative technology in retailing: Consumers' and retailers' point of view. *Journal of Retailing and Consumer Services*, 21(5), 836–843.
- Retail Asia Online, 2014. IT in retail: Competing smartly with IT. Retail Asia Publishing Pte. [13 December 2016].
- Rust, Roland T. (2001), "The Rise of E-Service," *Journal of Service Research*, 3 (4), 283-85
- Sara, 2013. How we bought groceries online from TESCO? 6 steps. JewelPie | Home. Health. Happiness
- Saunders, M.N.K., Lewis, P. and Thornhill, A., 2007. *Research methods for business students*. 4th ed. Harlow, England: Financial Times/Prentice Hall
- Saunders, M.N.K., Lewis, P. and Thornhill, A., 2012. *Research methods for business students* (6th edition). 6th ed. Harlow, England: Financial Times Prentice Hall.
- Sugiono, 2010. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta
- Tidd, J. and Bessant, J.R., 2013. *Managing innovation: Integrating technological, market and organizational change*. 5th ed. United States: Not Avail.
- Venkatesh, V. and Davis, F.D., 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204
- Wang M. C. H., 2012. Determinants and consequences of consumer satisfaction with self-service technology in a retail setting. *Managing Service Quality: An International Journal*, 22(2), 128 - 144
- Weijters, B., Rangarajan, D., Falk, T. and Schillewaert, N., 2007. Determinants and outcomes of customers' use of self-service technology in a retail setting. *Journal of Service Research*, 10(1), 3–21
- Segetlija, Z., 2006. Information Technology in the Strategy of a Retail Company. *Interdisciplinary Management Research*, 866–876.
- Sharif, S.M. Nizam, N.Z., Rashid, N.A., Masrom, N.R. & Bakri, M.H., 2018. Role of Values and Competencies in University Intellectual Property Commercialization: A Critical Review. "The Turkish Online Journal of Design, Art and Communication", Special ed., 887-904.
- Surendran, P., 2012. Technology acceptance model: A survey of literature. *International Journal of Business and Social Research*, 2(4), 175–178.
- Zaini, Z.M.M., Ramli, N., Abd Ghani, F., Samsudin, A., Hamid, M., Jusoff, K., Ngali, N., Rahmat, N., Khalid, K. and Musa, M., 2011. Online grocery shopping: The affect of time availability on Malaysian consumer preferences. *World Applied Sciences Journal* 12 (Special Issue on Service Transform the Economy), 12, 60–67.
- Zeithaml, V.A., Parasuraman, A. and Malhotra, A., 2002. Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362–375.
- Zikmund, W.G., Babin, B.J., Griffin, M. and Carr, J., 2012. *Business research methods* (with Qualtrics printed access card). 9th ed. Boston, MA, United States: SouthWestern College Publishing