

# Preliminary study on consumer attitude towards fintech products and services in malaysia

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## Abstract

“FinTech” or a compound term of Financial Technology refers as a newly emerged industry that utilizes IT-centered technologies which aims to boost the efficiency of the financial ecosystem. Since its inception, FinTech has successfully established its presence in the global financial industry due to the benefits and advantages of the system. However, the research studies that highlight the importance of FinTech are scarce. Specifically, the consumers’ attitude towards FinTech products in the context of Malaysia remain unexplored by most of the studies. This preliminary study proposed the extension of Technology Acceptance Model (TAM) as to identify the potential factors that influence consumers’ intention to adopt FinTech products and services in Malaysia. This study reviewed five factors as independent variables, namely the usefulness, ease of use, competitive advantage, perceived risk, and perceived cost; in line with the mediating effect of attitude towards using FinTech products and intention to adopt FinTech products served as the dependent variable. This study attempts to create new knowledge geared towards behaviour to utilize FinTech products in Malaysia.

**Keywords:** *FinTech; Consumers attitude; Technology Acceptance Model; Financial services; Technology*

## 1. Introduction

Financial Technology, or better known as “FinTech”, is an innovative financial services that emerged in line with the new technologies advancement. Mobile-based payment is the most typical service in China, Korea and the UK (Kim, Park, Choi, & Yeon, 2015). The history of FinTech can be traced as early as in 1950s where the usage and services from credit cards aimed to reduce burden in carrying cash. Financial technology has transformed the decades of automated teller machine (ATM) usage and services that aimed to reduce tellers and branches into online banking system in the 1990s. The financial technology further digitized in the 21<sup>st</sup> century via the mobile wallet, payment apps, robo-advisors for wealth and financial planning, crowdfunding platforms for alternative financing opportunities. This scenario can be supported by the increasing number of potential users of FinTech products in Malaysia as illustrated in Figure 1.

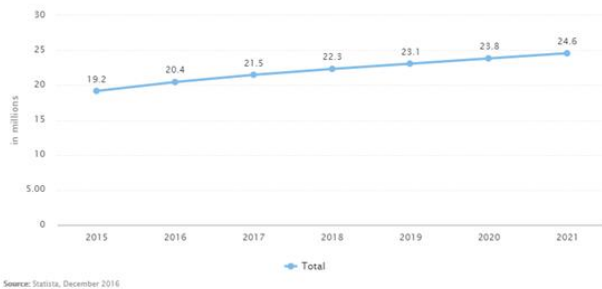
Since its inception, FinTech has greatly influenced the financial market and the way consumers perform their financial transactions. As Information and Communications Technology (ICT) companies can develop simple and easy financial services, hence non-financial companies have started to enter the financial market, becoming a threat for traditional financial services. In Malaysia, many ICT companies have started to emerge in the industry. The top 10 FinTech companies in Malaysia are MyCash online, GHIL, Crowdo, Ethis Kapital, Soft Space, MoneyMatch, Manage Pay Systems Berhad (MPay), iMoney, Neuroware, and Tranglo (Singapore, 2017, Jan 13). There are many challenges for FinTech companies in Malaysia as the central bank of Malaysia has insti-

gated the Financial Technology Sandbox Framework (FTSF) which required the the FinTech companies to fulfilled a set of criteria in order to ensure that all the products and services offered is in line with the laws and regulations.

As FinTech is a new phenomenon in the local financial ecosystem, the extent to which extend FinTech is beneficial to Malaysian consumers and SMEs is still remained unexplored. There are extremely little studies and research being performed on the Malaysian FinTech industry. To the best knowledge of researchers, local business practitioners (new entrants, start-ups, investors, potential venture capitalists) and policy makers, the studies that related to the overall acceptance of FinTech’s products and services by the consumers and SMEs in Malaysia are virtually unknown and scarce. Moreover, there is a lack of studies for the FinTech industry on consumer’s attitude in Malaysia. Hence, this study aims to investigate the acceptance level towards FinTech’s products and services in Malaysia using the Technology Acceptance Model or better known with its abbreviation, TAM. There is a significant urgency to investigate the acceptance, expectation and readiness of Malaysian consumers towards FinTech’s products and services which perceived to be benefiting individual financing needs and business community, eventually can spur the growth of the digital economy as a whole

In addition to above, (Bagozzi & Warshaw, 1989) in their study argued that the TAM explains the acceptances of consumers toward new technology. Hence, TAM will be adopted as the theory to explain the factors affecting consumers’ attitude and intention in adopting FinTech products in Malaysia. Since FinTech is still a new technological paradigm in Malaysia, hence, the primary ob-

jective of this study is to (1) review the existing literature pertaining to FinTech and (2) to highlight and address consumer's attitude towards FinTech products in Malaysia.

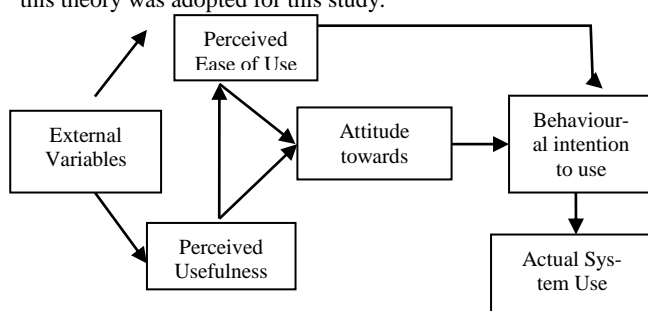


**Fig 1:** Potential users for FinTech's product and services in Malaysia (Statistacom, 2017)

## 2. Literature Review

### 2.1 Technology Acceptance Model (TAM)

**Davis et al. (1989) proposed the Technology Acceptance Model (TAM)** to explain the effects of variables on consumer behaviour and intentions (Bagozzi & Warshaw, 1989). Since its inception, TAM has been widely cited in the research context in various settings (Muk & Chung, 2015; Tarhini, Hassouna, Abbasi, & Orozco, 2015). The model explains that perceived ease of use, perceived usefulness and attitude will affect the user's intentions to use as illustrated in *Figure 2*. According to this model, perceived ease of use explains the level where a user thinks that very less effort is needed to use a particular system or technology. Moreover, perceived usefulness explains the level where a user thinks that the particular system will have a direct influence on his/her performance. It was argued that the attitudes of the users are directly influenced by both perceived ease of use and perceived usefulness, which in turn influence users' intention to use and to adopt. Since TAM has been regularly used to understand the acceptance level of users towards a particular system, hence, this theory was adopted for this study.



**Fig 2:** Technology Acceptance Model (TAM)

### 2.2 Conceptual framework

Since FinTech is a subset of technological products, thus, this research has been designed based on the foundation of the theory of TAM. This study will assess the factors (e.g. perceived ease of use, competitive advantage, perceived usefulness, perceived risk, and perceived cost) that influence users' attitude towards FinTech products which in turn will influence their intention to adopt FinTech's products and services.

**Perceived Ease of Use and Perceived Usefulness** Perceived ease of use is defined as the level where a user thinks that less effort is required to use a system or technology (BAGOZZI & WARSHAW, 1989). Perceived usefulness in this study can be explained as the level where a user thinks that the particular system will have a direct influence on his/her performance (Venkatesh & Davis, 2000). The past studies that have examined the ease of use and perceived usefulness of a system have found to have positive impact on consumer's attitude towards the respective system ((Al-Fahim, 2016); (Chuang, Liu, & Kao, 2016); (S. Lee, 2016); (Venkatesh & Davis, 2000)). This scenario shows that when an individual's experience with FinTech's products and services has found them useful and user-friendly, it will then enhance their attitude toward FinTech. A research study conducted by (Chuang et al., 2016) in Taiwan found that perceived ease of use as well as perceived usefulness were found to be closely associated with the consumers attitude towards the use of FinTech products.

This resulted from the benefits of FinTech, namely usefulness, user-friendliness, time saving and convenience. Moreover, as evidenced by (Al-Fahim, 2016) based on his study on the banking industry in Yemen, the ease of use and the usefulness of a banking system positively influence user's attitude and intention to use internet banking. Referring to the arguments as above, thus, it can be hypothesised that:

H1: Perceived ease of use has a significant positive effect on user's attitude towards FinTech's products and services.

H2: Perceived usefulness has a significant positive effect on user's attitude towards FinTech's products and services.

**Competitive Advantage** Competitive advantage in this study is defined as the level to which an innovation possessed by system is superior than the user's expectation and their idea (Krishanan, Khin, & Teng, 2015). Competitive advantage is an important determinant of technology adoption (Lu, Yang, Chau, & Cao, 2011). In previous studies, competitive advantage shows a positive relationship toward intention to use a product (Tan & Teo, 2000). Moreover, (Shih & Fang, 2004) found that competitive advantage has a positive impact towards user's attitude to internet banking in Taiwan. Similarly, (Lu et al., 2011) argued that competitive advantage was closely related to users' attitude towards mobile payment services. The evidence above clearly shows that the competitive advantage of the technology has a significant impact on users' attitude towards the system. However, to what extent competitive advantage has an impact on consumers' attitude towards FinTech remains uncertain. Thus, the following hypothesis was developed:

H3: Competitive advantage of the system has a significant positive effect on user's attitude towards FinTech's products and services.

**Perceived Risk** Perceived risk is defined as the uncertainty that will be experienced by an individual in their decision making (Cox & Rich, 1964). In the context of information technologies, perceived risk can be explained as a security risk or privacy risk in which personal information can be easily obtained without the consent of the owners (Cox & Rich, 1964); (Yiu, Grant, & Edgar, 2007). According to (M.-C. Lee, 2009), it was found that perceived risk has significant negative effect on an individual's atti-

tude towards using certain technological products or services. Specifically, the higher the perceived risk, the less favorable the attitude towards the particular technological product. (M.-C. Lee, 2009) also found that that security risk has a significant impact on user's attitude and is an important factor toward adoption of technology products (M.-C. Lee, 2009). As for the context of Internet banking, (Martins, Oliveira, & Popovič, 2014) reported that perceived risk has a great impact on consumer's attitude towards the payment system which in turn influences their intention to use the facility. Based on the supporting evidence above, it can be ascertained that perceived risk will determine the attitude of an individual towards FinTech's products and services. Hence, it can be hypothesised that:

H4: Perceived risk has a significant negative effect on user's attitude towards FinTech's products and services.

**Perceived Cost** Perceived cost in this study is defined as the level to which an individual thinks that there will be a cost incurred for using a system (Kleijnen, Wetzels, & De Ruyter, 2004). It was argued in the study by (Kleijnen et al., 2004) that cost has a negative impact on the individual's attitude to use a system. Moreover, Luarn and Lin (2005) in their study reported that perceived cost has a negative influence on the attitude of consumers to use as cost usually becomes a priority when it comes to product selection (Luarn & Lin, 2005). Similarly, (Kuo & Yen, 2009) in their study on the information technologies setting found that perceived cost has a negative impact on the users' attitude towards mobile value-added services usage. Moreover, the study by Wu and Wang (2005) in the mobile commerce setting also found that cost is a factor that potentially affects users' attitude towards the system usage (Wu & Wang, 2005). However, to what extent the costs of using FinTech's products and services will influence users' attitude still remain uncertain. Thus, the following hypothesis is developed:

H5: Perceived cost has a significant negative effect on user's attitude towards FinTech's products and services.

**Linking Attitude and Intention to Use FinTech** The prior studies showed that attitude is positively related to the behavioural intention of individuals (Venkatesh & Davis, 2000). This means that when a person has good experience in using FinTech products and services, it will increase their willingness to use it. This evidence has been supported by (Chuang et al., 2016) as there is a positive relationship between users' attitude and their intentions to use FinTech's products in Taiwan. Similarly, (S. Lee, 2016) also found that the attitude of user's has significant impact on user's intentions to use Mobile Enterprise Applications (MEA). Moreover, (M.-C. Lee, 2009) elucidated that attitude is a positive factor of consumer's intention to use online banking. Hence, the evidence above established that attitude and intentions to use were closely associated. With that, the following hypothesis is developed:

H6: User's attitude has a significant positive effect on the intention to adopt FinTech's products and services.

Based on the discussion above, the research model developed for this study is presented as follows:

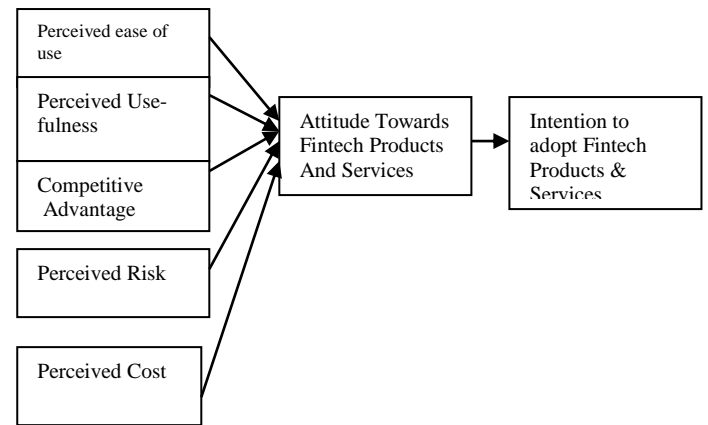


Fig.3 Research Framework

### 3 Methodology

This research is a multidisciplinary study that involves the finance and business sectors and is directly linked to the software technologies, internet of things (IoT) and internet communication technologies (ICT) industry. Hence, empirical research methods will be employed to achieve the objectives of gauging the acceptance, awareness and attitude of Malaysian users toward FinTech.

In the context of measurement, all the constructs in this study will be adapted from the existing literature. The seven-point Likert Scale will be used to check the mean score for each question whereby 1 denotes strong disagreement while 7 denotes strong agreement. A total of 500 questionnaires will be collected via purposive sampling from the selected Malaysians adults who have experience of using FinTech's products or services. The research will also conduct a pilot study prior to the actual survey. The data collected in this study will be analysed using two statistical software: (1) Analysis of Moment Structures (AMOS) and (2) Statistical Package for Social Sciences (SPSS). The statistical techniques that will be used for the purpose of this study are such as reliability analysis, validity analysis, path analysis and independent sample t-test.

### 4 Expected Results

The present research is expected to highlight the importance of the factors (e.g. perceived ease of use, competitive advantage, perceived usefulness, perceived risk, and perceived cost) that potentially influence consumer's attitude towards FinTech's products and services. Moreover, this study could be useful for future researchers and policy makers in the FinTech domain. In the context of managerial implications, this research will highlight the importance area that need to be consider and improve by the Government of Malaysia and FinTech corporations. For example, creation and improvement of the information technologies infrastructures should be emphasised in order to encourage more users to use FinTech products or services. Moreover, the initiative to promote the use of FinTech's products and services among consumers may also induce the making of relevant laws (e.g. security, privacy, etc.) by the policy makers. As for the context of theoretical context, this study will be able to contribute to the existing body of knowledge by creating a knowledge base for FinTech research in the context of Malaysia.

## 5. Conclusion

This preliminary study aims to create an understanding of consumer behaviour towards FinTech products and services by adopting Technology Acceptance Model (TAM). To date, FinTech remains as a new phenomenon in the financial ecosystem which is worth to be explored by many researchers specifically when addressing the consumers' perception towards the FinTech products or services. With the development of financial services, advancement of information technologies and evolution of financial sectors, FinTech has become a new opportunity in financial industry. This platform is expected to attract the interest of regulator body, servicing industry and products services to understand the consumer behaviour in order to gain distinct competitive advantage. Despite of enhancing the comprehension of consumer behaviour towards FinTech products and services, this study will serve a valuable guide and insights for future researches to explore further on this avenue.

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