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A CASHLESS SOCIETY: PERCEPTION OF MALAYSIAN CONSUMERS TOWARD THE USAGE OF DEBIT CARDS

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Abstract: *With the advancement of technology, the acceptance the electronic payment systems among Malaysian consumers has increased from year to year. As technology is rapidly changing, banking institutions in Malaysia are becoming more competitive, expanding their technology, giving more opportunities for their customers to compete with others. Now, the ATM card has been changed to a debit card that can purchase goods and services. The adoption of a debit card as an alternative of payment system has provided a great deal of convenience and security in managing bank savings accounts in terms of a cashless transaction when making any payment. The purpose of this paper is to identify the perception of Malaysian consumers towards the usage of debit cards in their daily transactions. Four (4) determinants related to the perceptions of consumers towards the usage of debit cards were derived from the literature review; security, trust, convenience, and technology readiness. Ten (10) participants were involved in the in-depth interview sessions based on semi-structured interviews. The result of this study showed that convenience was the most influential factor leading to the usage of debit cards among consumers in their daily transactions. The study has several limitations that should be addressed in future research. The main limitation lies in a small sampling size. In the future, a replication of the study could be conducted to cross-validate the results obtained using a bigger sampling frame; such as across Malaysia.*

Keywords: *Cashless Society, Consumers, Debit Card, Perception, Technology*

Introduction

Malaysia payment systems have evolved from currency notes and coins first issued in 1897 to the increasingly cashless and paperless payment systems of the digital era, and significant progress has been achieved mainly in the electronic payment (e-payment) infrastructure in Malaysia (Mohammed, 2008). The evolution of e-payments in Malaysia began with the deployment of the card-based payment systems in late of 1970s, followed by the implementation of network or Internet-based payment systems in the late 1990s, followed by the introduction of mobile-based payment systems in mid-2000s (Mohammed, 2008). The use of available banking technology has helped to improve efficiency in payment systems significantly. Currently, efforts are being made to reduce the use of cash and cheques in daily

consumer spending due to the increased convenience that non-cash or cheques handling affords (Hamidun, 2012). The growth of the Internet has facilitated the popularity of e-payment instrument, aligned with the new dimension of electronic commerce (e-commerce) which required new financial needs and facilities rather than traditional payment systems (Sumanjeet, 2009).

A Department of Statistic Malaysia report (2018) showed that in 2017, the percentage of individuals in Malaysia aged 15 years and above using the Internet was 80.1%, which had increased by 9% compared to 71.1% in 2015. The percentage of individuals using computer also rose from 68.7% in 2015 to 69.8% in 2017 (Department of Statistic Malaysia, 2018). These developments portray the growth of the Internet and mobile banking services by telecommunications companies and banking institutions respectively. A survey finding by Malaysia Communication and Multimedia Commission (2017) revealed that in 2016 48.8% had made purchases via online platforms, as compared to only 35.3% in 2015. This is supported by Statisca (2018), which showed that total transaction value in the digital payments for Malaysia amounted to US$5,018m in 2018.

E-payments enable consumers to benefit in term of convenience and lower transaction costs (Ming-Yen Teoh et al., 2013). The other contributing factor that has encouraged consumers to use e-payments utilising the debit cards is the confidence conferred inspired by security measures of e-payment instruments implemented by all card issuers (banks) that provide protection against theft and fraud (Hamidun, 2012).

In December 2016, the Central Bank of Malaysia conveyed a message in a press release regarding the replacement of existing signature-based payment cards with the new PIN-based card for further enhancement in term of security particularly in the use of payment cards at the point-of-sale (POS) terminals in merchant outlets (Central Bank of Malaysia, 2016). The debit cards also been introduced with the PayWave functions in which consumers do not have to enter a pin to make any payments. Nevertheless, many instances occurred in which merchants, upon getting hold of a customer's credit or debit card, used the "paywave" function without the permission of the cardholder (*The Star Online*, 2017). The Association of Banks in Malaysia (ABM) also stated that retailers need to be trained not to request or accept a customer's card but to offer the PIN pad to a customer to give him/her a choice as whether to use a PIN or the contactless payment method (*The Star Online*, 2017).

This paper will focus on the perception of Malaysian consumers towards the usage of debit cards in their daily transactions. The article explores the most influential factors for Malaysian consumers in using debit cards – security, trust, convenience, and technology readiness. First, the paper provides a literature review on the e-payment methods and the influential factors. The, it then describes and analyses the influential factors with semi-structured interviews with identified participants. The study provides new insights to the literature particularly concerning e-payments and consumer perceptions.

Literature Review

Technological changes move faster than the media that consumers that traditionally rely on to inform of and influence their choices (Sun et al., 2019). Due to that, most business and manufacturing sectors must keep pace with technological changes to remain competitive in the market. For example, the banking sector has implemented a large scale technology adoption in Internet banking, mobile banking, and self -service technologies (SSTs) to increase service efficiency (Naidu & Sainy, 2018). The advancement of SSTs is aggressively overtaking the

traditional banking service model (Kaushik & Rahman, 2015; McPhail & Fogarty, 2004; Shi et al., 2008). A significant number of current studies have explored the effective usage of technology and its determining factors. Technology changes have created a new business environment where it requires the business operators to develop innovative approaches to gain customer trust (Sun et al., 2019). Consumers' acceptance of technology is a vital element that must be considered in the banking sector's adoption of technology usage.

Technology readiness is defined as "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work" (Parasuraman, 2000, p. 38). Parasuraman (2000) introduced four dimensions of technology readiness, which are optimism, innovation, discomfort, and insecurity. Optimism and innovativeness are considered as positive views of technology readiness, whereas discomfort and insecurity are negative views of technology readiness (Parasuraman, 2000). Parasuraman and Colby (2015) emphasized that technology readiness is a measurement of perceptions towards technology and not as a measure of someone's capability or capacity to use technology. Parasuraman and Colby's (2015) study on challenges in delivering new technologies in management indicated that managers must ensure that employees are comfortable and confident with new technologies to avoid any negative impact on employee morale and productivity. Hence, considering technology readiness is critical as readiness is related significantly to technology acceptance by consumers or users.

The banking sector is among the industries that have adopted Internet banking as a part of their delivering and service channel the most rapidly (Laukkanen, 2007). Innovative technologies accelerate how banking services are offered and how customers are being swept up with new trends, particularly in developed and developing countries (Riffai et al., 2012). Several studies have explored the acceptance of Internet banking in various contexts such as trust, usability and perceived quality, which are believed to be the critical drivers in Oman for Internet banking acceptance (Riffai et al., 2012). Online banking offers many advantages, such as faster transaction speeds and lower handling fees (Kalakota & Whinston, 1997). However, a group of customers still refuse to adopt such services due to uncertainty and security concerns (Kuisma et al., 2007; Littler & Melanthiou, 2006).

Kalakota and Whinston (1997) defined 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, disclosure, modification of data, denial of service and/or fraud, waste, and abuse". In the context of online banking, threats can be through computer networks and data transaction attacks or unauthorised access to the accounts. Indeed, Lee (2009) found that security is one of the negative factors in the intention to adopt online banking. Lee (2009) added that providing encryption and strong authentication to prevent fraud and identity theft should be a priority to encourage the trust of customers to adopt online banking. A recent study on customers' attitude towards online banking indicated that the willingness of customers to adopt mobile banking was correlated to the level of customer's perceptions pertaining to security, ease of use and self-efficacy (Singh & Srivastava, 2018).

Trust of the banking systems is one of the factors determining the adoption of online banking (Montazemi & Qahri-Saremi, 2015; Yang et al., 2013). According to Gu et al. (2009) and (Malaquias & Hwang, 2016), mobile applications need to be trustworthy to convince and retain customers in the usage of mobile banking with minimum risk and financial losses. O'Reilly et al.'s (2012) study on potential smartphones and mobile banking noted that consumers' trust in online banking significantly influenced their willingness to make mobile payments. Trust also involves the security provided by the banks (Hanafizadeh et al., 2014) and a lack of trust is a

main reason why customers refused to provide personal information in mobile banking applications (Luarn & Lin, 2005). Sharma and Sharma (2019) supported this notion, highlighting that trust is the most influential predictor of customers' satisfaction with mobile banking.

Service convenience is defined as "time and effort saved by customers while purchasing and using service" (Berry et al., 2002, p. 5). Roy et al. (2018) conceptualized convenience as a second-order construct comprising of five first-order factors, which are decision convenience, access convenience, transaction convenience, benefit convenience, and post-benefit convenience. Online banking systems provide consumers more convenience, reliability and faster responses which is easier for consumers (Hausman & Siekpe, 2009). Convenience is closely linked to customer satisfaction towards Internet banking (Ling et al., 2016). Hence Aliyu et al. (2014) also revealed that security and convenience are the most influential factors of customer service delivery of online banking in Malaysia.

This study applied qualitative research in which semi-structured in-depth interviews were conducted with the selected participants. In this study, purposive sampling of Malaysian consumer was undertaken to recruit participants who were significant users of the debit cards (Shiell et al., 2009). In total, 10 participants were involved in the interview sessions. The participants were selected by these two (2) criteria to be eligible for this study:

- Debit card users; and
- Experience more than three years as a debit card user.

The interview sessions were conducted from the end of April 2018 to early July 2018. The participants were invited for the interview sessions through email, personal messages, the WhatsApp application, and phone calls. An introductory message was sent to all the selected participants to invite them to the interview session, explaining the aims of the study, the estimated duration of the interview session, and how the interview session would be conducted. A total of 25 invitation messages were sent. Of the 25 invitations, 14 invitees responded positively to participate in the interview sessions. However, 4 participants withdrew at the last minute due to several factors. Thus, the actual interview sessions were conducted with only 10 participants. Table 1 presents the summary of responses rate of the participants involved in the interview sessions. For this study, the participants were selected from Klang Valley areas. Table 2 shows the profiles of the participants. The findings were analysed using thematic and content analysis.

Table 1: Summary of Responses Rate

Items	Quantity
Number of invitation	25
Positive responses received	14
No response	7
Refused to participate	4
Actual interview performed	10

Table 2: Profile of Participants

No.	Participant's ID	Gender	Designation
1	M-01	Male	Clerk
2	F-01	Female	Executive
3	F-02	Female	Teacher
4	M-02	Male	Technician
5	F-03	Female	Manager
6	F-04	Female	Manager
7	M-03	Male	Clerk
8	F-05	Female	Teacher
9	M-04	Male	Businessman
10	M-05	Male	Driver

The Findings and Discussion

Technology Readiness

Technologies have dramatically transformed in its usage in business and society, which creates an interest in various aspects of the digital divide and technology readiness. Most participants were aware of the usage and facilities that the debit cards offered. The majority of them used debit cards to purchase groceries, fill up the petrol, and others. A few participants experienced difficulties in using their debit cards at certain business premises as the business operators required a certain minimum transaction amount, and Point-of-Sale (POS) venues had connectivity problems and software errors.

"I normally use debit card particularly to purchase groceries, and for others such as to book hotel or flight tickets, I would prefer to use a credit card."

- Participant M-04

"Sometimes I plan to pay my groceries using debit card, but the POS was not working. I needed to pay for them using a credit card or went to an ATM machine to withdraw the money."

- Participant F-02

Overall, most participants were ready to adopt new technologies. The finding was supported by Ming Ling and Muhammad's (2006) study on the technology readiness of tax officers in Malaysia, which indicated that most respondents were optimistic towards technologies. Kim and Chiu's (2019) study on consumer acceptance of sports wearable technology also supported the findings. They found that positive technology readiness had a positive influence on the perceived of usefulness (PU) and the perceived ease of use (PEOU) towards the technologies.

Security

Most participants were aware of the security and safety that the debit card provided. They believed that the magnetic stripe cards helped in securing the transaction systems. A few participants knew about debit card fraud; however, none of them had experienced this particular issue. They also trusted all the transactions using the debit cards as they managed to receive the updates from the banks.

Participant F-01 was aware with the debit card security and safety, which is an essential feature of the Personal Identification Number (PIN) in every debit card and the tagged of mobile phone number with the account. She claimed that every time after she made any payment using a debit card, the bank would send a Short Message Service (SMS) to inform her of the deduction amount in her savings account. Due to that, she felt secure in using her debit card. She had heard about the debit card fraud, but so far, she had not experienced any.

"A debit card is a secure payment channel because the mobile phone number was tagged, and the card used a PIN number."

- Participant F-01

Participant F-04 felt secure when using here debit card as, at a certain amount, a PIN number had to be entered, and she would be sent a notification when the transaction was completed. She also heard about the debit card fraud, and she suggested the bank should give extra effort and add some securities in their debit card. She felt that a debit card system was a secure payment channel because of its security.

"Yes, because the bank security is high, and the transaction was a success. If the security is low security, then it makes me feel as if it is not secured."

- Participant F-04

Participant M-03 felt secure using his debit card with a Personal Identification Number (PIN) and also the Transaction Authorization Code (TAC) number was sent to his mobile phone. So far, he never experienced any debit card fraud issue. Based on his experiences, he felt that the debit card system was a secure payment channel because every time he completed a banking transaction using debit card, the bank would send a notification to his mobile number.

"Yes, it is secure. Every time we finished our transactions, the bank will send a notification and TAC number."

- Participant M-03

According to Participant M-05, he was aware of the security and safety features of this debit card especially the magnetic stripe and microchip in the debit card. He believed that the banks practiced a secured procedure in enhancing information security and that debit cards have been used all over the world.

"Yes. I'm very confident because it is worldwide."

- Participant M-05

Security and data protection are the primary concern of consumers. Chen and Li's (2017) study on mobile device user's privacy security assurance behaviour indicated that privacy concern and coping appraisal have a significant impact on the intention to adopt defensive security software. According to Das and Khan (2016) the level of security behaviour of smartphone users in Middle East was low as the respondents were worried about malware and data leakage than targeted information theft. In contrast, the findings of this study showed that most debit cardholders were less concerned and felt secure with the usage of debit cards.

Trust

PayWave is a contactless method of payment in which the technology enables the cardholders to "Tap" their cards on the contactless POS to make transactions up to a certain amount, rather than swiping or dipping their cards into POS terminals (Joifin, 2018). According to the interview findings with ten (10) participants, most participants had experienced using the PayWave system. However, they said that they would instead prefer to use the "insert PIN" option rather than to use PayWave. This was because they did not feel secure or trust the PayWave transaction, mainly because of security issues. Surprisingly, most participants chose not to use debit cards while they were overseas. A few of them stated that they did not activate roaming facilities, and they unable to receive any notification when they were outside of Malaysia. Participants agreed that, although they had read through the terms and conditions provided by banks, the level of trust was still moderate instead of full. However, a few participants stated that they trusted the service provided by their bank due to its excellent reputation.

"I read all the terms, but I trust the bank only 50-50."

- Participant M-01

"Yes, I read it and do believe the bank but only 50-50."

- Participant F-02

"I did read all the terms. I my trust in the bank is very high."

- Participant M-03

Mukherjee and Nath's (2003) study on trust in an online relationship banking noted that shared value and relationship commitment significantly influenced the perceived trust in online banking. Sikdar et al. (2015) supported this, finding that trust, usage constraint, ease of use, accessibility and intention were as reliable and valid factors determining Internet banking adoption among customers. Overall the findings of this study show that trust is one of the factors that contribute to the adoption of debit cards usage in Malaysia.

Convenience

All participants agreed that debit card systems offer convenience to all debit cardholders. They also noted that the usage of debit cards for any transaction was able to create a cashless society; where people do not have to carry much cash when they shop or engage in payment transactions. However, they still have to carry a small amount of cash as not all shops or business premises offer POS services like market stalls beside the streets. A few participants agreed that using debit cards minimized potential crimes such as robbery.

"Very useful to the consumer, like I said before, with a single touch or a PIN number, our account has been deducted so that we don't have to queue at an ATM and use cash."

- Participant F-01

"Debit card systems are convenient because I don't have to carry a lot of cash around."

- Participant M-04

"Nowadays in Malaysia, I think that almost all the banks are going towards the cashless method and Internet banking."

- Participant M-05

Overall, most participants claimed that the introduction of debit cards provided convenience and practicality to them. Poon (2007) supports this finding, revealing that convenience was one of the factors that determine users' acceptance of electronic banking services. A study by Jun and Palacios (2016) on key dimension of mobile banking service quality identified mobile convenience, accuracy, diverse mobile application service features, ease of use, and continuous improvement, are considered as the primary sources of customer satisfaction/dissatisfaction.

Conclusion

The primary aim of this study was to identify the perception of Malaysian consumers towards the usage of debit cards in their daily transactions. The findings reveal that technology readiness, security, trust and convenience factors are influential factors towards the usage of debit cards among Malaysians. Malaysians are more confident in using debit cards in their daily transactions. The level of security, particularly in terms of consumers' personal information, should be the main concern of banking institutions to avoid any data theft or fraud. Future study may explore these findings in other contexts and extend the research into broader perspectives; by conducting a quantitative study and larger sampling. This study presented empirical findings of perceptions of debit card users that contribute to body of knowledge to banking institutions in improving better services as well as researchers and debit cards users.

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