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Adoption of Electronic Payment System in Islamic Microfinance Institutions

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Abstract: Advancements in technology have affected financial services all over the world including in Malaysia. As the financial service industry is now dealing with the electronic payment (e-payment) system, the paper-based retail payment system is considered costly, time-consuming and inefficient. The e-payment system fills in the gap of the traditional payment system by providing efficient and affordable services. Financial institutions, particularly Islamic micro-finance institutions (IMFIs) are prompted to implement the e-payment system due to the strengths of this system. Micro-enterprises can create huge potential by implementing the system which is able to give a big impact to the financial services industry in Malaysia. However, not many studies have highlighted the adoption of e-payment among IMFIs. This study aims to analyse the e-payment services offered by IMFIs by reviewing and identifying the issues and challenges in adopting the system. It also provides suggestions for the improvement of e-payment adoption by the IMFIs. A critical review of previous studies was conducted to achieve these aims. The result is expected to contribute to the enrichment of knowledge in digital financial services and will be useful for IMFIs to continuously improve their services.

Keywords: E-payment, Islamic Microfinance Institutions, Micro-enterprises

1. INTRODUCTION

Rapid advancements in technology have affected the financial landscape all over the world, including Malaysia. Technology adoption in financial services promotes the use of the electronic payment (e-payment) system which enables fast, efficient and convenient services. Consequently, the paper-based retail payment system is now considered costly, time-consuming and inefficient. The e-payment system provides various channels of payment such as automated teller machine (ATM), the Internet and mobile banking and point of sales (POS) terminals. The implementation of the e-payment system also benefits non-banked communities in the effort to increase access to formal financial services and contribute to financial inclusion (Mokhtar, 2011).

Realising the benefits of technology in financial services, financial institutions are competing against each other to come up with innovative services that are user-friendly and cost-effective for their customers. Micro-finance institutions (MFIs) are also starting to focus on the adoption of innovative solutions to increase their efficiency (Rozzani, Mohamed, & Syed Yusuf, 2016). Micro-finance has been acknowledged as an effective tool to alleviate poverty and create entrepreneurs. Technology-based services are important to enable MFIs to collect client data and apply it to the collection and disbursement of loans through the e-payment channels which are faster and more efficient compared to branch offices (Bada, 2012). With the aid of technology in the operation system, the efficiency and effectiveness of micro-finance can be improved (Ahmed, 2015; Nugroho & Miles, 2009). This technology is applied to transactions through e-payment channels. There are many benefits of technology adoption to MFIs such as reduced transaction and operational costs, less risk of fraud, improved quality of financial information, increased outreach and customer satisfaction and loyalty (Hishigsuren, 2004).

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Despite this, many MFIs are still facing difficulties in utilising the technology. Kulik and Molinari (2004) and Mishra and Chowbwy (2009) found that lack of access to technology is one of the reasons for the poor performance of MFIs. A study conducted by CGAP (2013) identified various issues in implementing technology in MFIs. These include issues of human capacity, suitability of application, changes of processes and procedures, costs, the commitment of management and decision maker, diversity of geography, and language.

2. ISLAMIC MICROFINANCE INSTITUTIONS IN MALAYSIA

The role of micro-finance to the poor cannot be denied but due to certain conflicts with Islamic teaching, not all of its concepts can be accepted by Muslims. Conventional micro-finance fails to satisfy Muslim communities because it is based on the concept of profit-oriented business. Besides, the interest rate charged on the loan provided is strictly prohibited by the principles set forth in the Sharia of Islam. Consequently, Islamic micro-finance is really needed by Muslim communities, especially the extremely poor (Ahmed & Ammar, 2016). Malaysia is a Muslim country, which has a population of 31 million with 60% Muslims and a large market for Islamic micro-finance. Due to that, micro-finance products in Malaysia are already sharia-compliant using the concepts of qard Hassan, Bai al Inah, Al Ujra and many more (Micro Capital.org, 2009).

In Malaysia, micro-finance products are offered by MFIs, cooperatives (credit unions), development financial institutions (DFI) and commercial banks with micro-finance schemes (Global Islamic Finance Report, GIFR 2012). The three dominant Islamic micro-finance institutions (IMFIs) are AmanahIkhtiar Malaysia (AIM), Yayasan Usaha Maju (YUM) and Economic Fund for National Entrepreneurs Group (TEKUN Nasional). AIM is a non-government organisation (NGO), while YUM and TEKUN are under the Ministry of Agriculture and Agro-based Industry Malaysia, respectively. AIM is the largest IMFI in Malaysia, providing group-based lending to the poor community based on the Grameen Bank model.

Micro-entrepreneurs represent 77% of the 645,136 SME establishments in Malaysia in 2011 (SME Corp, 2016). The large market of micro-entrepreneurs can give a big impact on the migration from the paper-based to the electronic-based payment system and could directly contribute to financial inclusion. The government has taken initiatives to improve financial inclusion through access to financing at various stages of business life-cycles for entrepreneurs. For poor and hard-core poor communities, the source of credit is from NGOs, normally AIM, while micro-entrepreneurs can apply for finance from banks and non-bank MFIs such as Bank SimpananNasional (BSN), Bank Rakyat, TEKUN Nasional, AIM, YUM and MARA. Formal MFIs such as BSN and Bank Rakyat require a lot of documents including bank statement to apply for micro-finance assistance. This is the main reason why micro-entrepreneurs borrow funds from AIM, TEKUN Nasional and YUM. On the other hand, banking institutions and DFI provide sources of finance for SMEs.

3. E- PAYMENT SYSTEM IN MALAYSIA

E-payment is one of the nine focus areas under the Financial Sector Blueprint 2011-2020 used to drive Malaysian transition to achieve the status of a high-income economy. By 2020, Bank Negara Malaysia targets to have 200 e-payment transactions per capita and reduce the usage of cheques to only 100 million per year. All parties must play their roles to stimulate the migration of paper based payments to e-payments. The measures taken by the Central Bank include providing the right price and infrastructure such as POS terminals and mobile banking for wider outreach. These efforts showed positive impact when the number of e-payment transactions per capita increased by 47 per cent from 2003 to 2012. E-payment can be defined as a collection of components and processes that enables two or more parties to conduct financial transactions and exchange monetary value via an electronic system (Kabir, Saidin, & Ahmi, 2015). No cash is used in making payments through the e-payment system. Payments can be made via online transactions using channels such as mobile banking, debit and credit cards, cheques, and wire transfer. In addition, financial transactions can be carried out anywhere and anytime via the Internet with the use of computers or mobile phones (Ebeiyamba, 2014).

The evolution of e-payment in Malaysia started in the late 1970s with the introduction of a credit card followed by the use of ATM cards in the late 1980s. Subsequently, following the advancement in the Internet technology, financial institutions came out with the Internet-based payment system in the late 1990s. Customers can access their accounts using computers as long as there is an Internet connection. The issue of the Internet network and computer usage became the main obstacle to the Internet banking. Customers who live in urban areas were still unable to use the services due to the poor Internet network. The barrier to the Internet banking was solved with the introduction of mobile-based payments in early 2000. Mobile-based payments provide convenient services, where certain systems do not need the Internet to conduct transactions. In 2012, POS terminals were brought into the market purposely for SMEs and micro-enterprises. This is because POS terminals bring the bank to the door of the poor communities.

4. E-PAYMENT ADOPTION IN IMFIs

Adopting information technology may improve the performance of IMFIs to become more efficient and effective in terms of cost, time and services offered (Ahmed, 2015). As the largest IMFI in Malaysia, AIM had implemented the e-payment system to support the initiative by the government in encouraging digital transactions. In 2011, AIM adopted mobile banking known as M-ringgit which is a collaborative effort between AIM and Bank Islam Malaysia Berhad. Using M-ringgit, borrowers do not need any the Internet network to pay their loans. This system enables AIM to receive money paid online without having to collect physical cash at any meeting centers. M-ringgit saves time for queuing at meeting centers and it is safer for borrowers and AIM officers instead of handling cash. This system was first implemented at Al-Insyirah, one of the AIM branches in Selangor. After that, it was implemented at 32 branches of AIM. The amount received through M-ringgit from the period of January to June of 2011 was RM15,185,928. This amount increased tremendously to RM102, 160,731 in the period of January to June of 2012. However, in the period of July to December 2012, the amount received dropped to RM84,029,457 (Maznah, 2012). AIM was unable to maintain the use of M-ringgit due to its high cost.

The efficiency of the e-payment system encouraged AIM to find another alternative to implement the electronic system. In 2015, AIM started to use an e-pay system through collaboration between AIM Solutions SdnBhd (AIMSSB), a subsidiary of AmanahIkhtiar Malaysia SdnBhd (AIMSB) and a non-bank organisation which is GHL Systems Bhd (GHL). The e-pay system allowed borrowers to repay their loans using a debit card and collection point with payment terminals. The system is still in progress to be implemented in all AIM branches around Malaysia.

TekunNasional provides both electronic and traditional payment systems to collect loan repayment from their borrowers. For the traditional payment method, borrowers need to go to any branch of TEKUN Nasional and pay by cash or cheque at the counter. Optionally, the borrowers can also visit participating banks which are RHB Bank, Bank SimpananNasional (BSN), Bank Rakyat, Agro Bank, Muamalat or Maybank and make repayments through the bank counters. For e-payment, borrowers can use channels such as the Internet banking, POS terminals or cash deposit machines to repay their loans. In this regard, the payment alternative provided by TEKUN Nasional gives the borrowers wider payment channels to choose. This is in line with the findings of several studies that distance is a major factor influencing the repayment rate of micro-finance (Nawai & Mohd Shariff, 2012). By providing various channels for payment, TEKUN Nasional solved many different problems faced by borrowers in repaying their loan. Meanwhile, YUM still uses the traditional method of payment which is the paper-based system. There are a number of MFIs who have yet or are late in adopting new technologies and prefer to use the traditional system (Campion & Halpern, 2001). This will affect the efficiency of operation and cost of the MFIs (Arun & Hulme, 2008).

In other parts of the world, IMFIs are gradually adopting the e-payment system. In Pakistan, IMFIs are adopting easypaisa; a mobile banking (m-banking) system used to reach customers who stay in remote areas. This e-payment system enables customers to disburse and repay funds at any time as it is a 24-hour operation. Besides, it benefits both clients and IMFIs in reducing the burden of handling cash (Ahmed, 2015). MPESA and WIZIT are the m-banking systems successfully used in Kenya and South Africa, respectively. The introduction of electronic banking, Matapat ATM Savings account in 2012 by an MFI in the Philippines to their clients contributed to reducing the cost of financial services for rural area customers (Card MRI, 2013). Benefits for clients include saving the time and cost of traveling to an MFI branch to make repayment. For the IMFIs' side, the electronic payment system reduces the need for staff and increases efficiency (Ammar & Ahmed, 2016).

5. ISSUES IN THE ADOPTION OF E-PAYMENT

There are many factors influencing the performance of MFIs worldwide. According to Kulik and Molinari (2004), the major reasons for the poor performance of MFIs are due to lack of access to technology, high costs, and limited resources and outreach by the clients. The alternative that can be taken to improve the MFIs' performance is by adopting the technology. The MFIs increase clients' satisfaction and organisational efficiency after adopting the technology for their operations (Dary & Issahaku, 2013). Nevertheless, technology adoption also creates various issues among service providers, particularly the MFIs (Islamic or conventional). Many MFIs find it difficult to avoid the risk and harness the benefits of technology adoption in their operations (EMN IT & Innovation Working group, 2011). Problems can come from external or internal issues. Internal issues consist of human resource capacity and skill, cost, the commitment of management and compatibility of application and changes of procedures in the organisation while external issues are geographical diversity, laws, regulations and infrastructure (CGAP, 2013).

A study conducted by Ahmed and Ammar (2016) on m-banking adoption in Sudan revealed that the poor quality of telecommunication network services is a major constraint to the IMFIs to effectively implement the e-payment system. Another factor that blocks the adoption of e-payment is the absence of specific laws and regulation for the system. It will become a risk to the IMFI if anything goes wrong with the system.

Nabilah, Intan and Sharifah (2016) conducted a study to explore the implementation of technology in one of the IMFIs in Malaysia. The study found that the e-payment system that has been implemented was unable to create a win-win situation. This system only gave benefits to the institution, but not to its clients due to the lack of easiness in conducting the transactions. The e-payment system can save institution officers' time to monitor and handle loan repayments. However, this new system transferred the officers' duties to the representatives of borrowing groups. Borrowers will make payments to the representatives who need to bear the risk of carrying the cash to be deposited to the bank. Another issue raised in this study is that the IMFIs have to outsource the payment system for their clients. They are not directly involved in setting up the system in order to run the system adequately. This issue will create fraud and default payment risk to institutions. The institutions also lack expertise or collaboration with commercial banks or government agencies.

According to Azhari (2015), lack of funds is the main issue in implementing the technology in IMFIs. IMFIs provide interest-free loans through the Qard Hassan contract to groups of borrowers. An effective repayment system is very important to ensure that all loans will be repaid to maintain financial sustainability. Setting up a new payment system that has an ability to connect between systems may have high cost implications. The decision to choose the right technology needs to be made by qualified personnel. In other words, institutions have to hire experts in technology to solve technology failure and technical problems in the new payment system.

Another issue is due to customer illiteracy. Most borrowers have low education levels (Saad, 2011). It is difficult to change their minds, especially when dealing with technology. Clients of IMFIs in Malaysia are technology illiterate, therefore they are hesitant to use the new payment system and prefer to choose a representative to manage their repayment of loans (Nabilah, Intan & Sharifah, 2016).

6. CONCLUSION AND RECOMMENDATIONS

The aim of this study is to review the e-payment services offered by IMFIs and identify the barriers in the adoption of e-payment to provide suggestions for improvement. From the information gathered, it can be concluded that IMFIs are not reluctant to adopt the technology but there are various issues needed to be solved before they decide to do so. Different countries face different issues but it can be highlighted that all the literature mentioned above have stated that infrastructure is one of the barriers. To solve this issue, the government has to play its role in promoting basic infrastructure such as the Internet network and improve the existing wireless network in order for the MFIs to successfully implement e-payment. The issue of law and regulations for e-payment is also related to security risk. The government through the Central Bank should create specific laws and regulations to promote safe, efficient and reliable payment systems, and instruments.

IMFIs should not rush to adopt technology in their operations. They should evaluate and choose the best channel of e-payment for the benefit of both their clients and the organisation. By properly evaluating the options, they can avoid the high disbursement of initial outlay for the implementation of e-payment which is costly for the IMFIs. The agreement between the IMFIs with service providers also needs to be carefully evaluated to create a win-win situation for all parties including clients and avoid ambiguity. Collaboration between IMFIs and banking institutions for technology sharing is a good effort to expose their operations with innovations in technology. Preparation of the management and staff must also be considered to ensure that they are ready to adopt the new system. Training for staff is one of the preparations that must be conducted. In other words, all parties have to play their parts in executing the implementation and improvement of the e-payment system.

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