

## AN OVERVIEW OF E-PAYMENT ADOPTION AMONG MUSLIM MICRO-ENTREPRENEURS IN MALAYSIA

Siti Aishah Mohamad<sup>1</sup>  
Salina Kassim<sup>2</sup>

<sup>1</sup>Phd Candidate, IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia, 53100 Kuala Lumpur, Malaysia  
Email: sitiajengka@gmail.com

<sup>2</sup>Associate Professor, IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia, 53100 Kuala Lumpur, Malaysia  
Email: ksalina@iium.edu.my

**Accepted date:** 29 July 2017

**Published date:** 2 October 2017

### To cite this document:

Mohamad, S. A., & Kassim, S. (2017). An Overview Of E-Payment Adoption Among Muslim Micro-Entrepreneurs In Malaysia. *International Journal of Accounting, Finance and Business*, 2(5), 49-59.

---

**Abstract :** *The electronic payment (e-payment) system has become an increasingly important payment system world-wide. Apart from improving the convenience, e-payment system also increases the efficiency in the delivery of financial services to “un-bankable” community, especially the micro-entrepreneurs. In Malaysia, the number of e-payments made per capita has increased substantially from 14.3 transactions in 2003 to 82 transactions in 2015. Realizing the increasing importance of e-payments, financial institutions including microfinance institutions should play their roles in encouraging high adoption of e-payment among the micro-entrepreneurs. Up to 2011, there are 645,136 small and medium enterprises being established in Malaysia and of this, 77 per cent is categorized as micro-enterprises. By targeting the micro- entrepreneurs, financial inclusion can be enhanced through adoption e-payment system. This study aims to analyze the e-payment services offered to the micro-enterprises by reviewing the adoption of Muslim micro-entrepreneurs and providing suggestions for the e-payment adoption. In achieving these objectives, the study reviews the existing literature on the adoption of e-payments and highlights the related issues relating to its adoption especially by the micro-entrepreneurs. The findings of this study are expected to enrich the knowledge on the adoption of digital financial services, particularly the e-payment and will be useful for the service providers to continuously improve their services.*

**Keywords:** *E-Payment, Microenterprise, Muslim Micro-Entrepreneurs, Financial Inclusion*

---

## Introduction

With more than 60% of its population are Muslims, Islamic microfinance has a huge potential to be developed as a financial product to support entrepreneurial activities in Malaysia. It has also been acknowledged that Information Communication and Technology (ICT) drives the efficiency and effectiveness of Islamic microfinance in various aspects of its product offerings, particularly in collection, offering new products, customer services, processing and use of recipients' data (Ahmed, 2015). Thus, Islamic Microfinance Institutions (IMFIs) have a good prospect in applying technology to their operating system. This technology is adopted for various transactions through e - payment channels such as mobile banking, internet banking, Automated Teller Machines (ATMs) and Point of Sales (POS) terminals. In addition, e - payments can also enhance financial inclusion of micro-entrepreneurs where the majorities of them are considered as un-bankable by the mainstream financial institutions. By doing so, the un-banked communities in rural areas would be able to have better access to the financial services at low cost and in a convenient manner. This is due to better financial services features of e-payment compared to traditional system which are inter-operability and portability, security, anonymity, divisibility, ease of use, and low transaction fees (Worku, 2010). The results from a study conducted by Nandru, Byram & Rentalala (2016) indicate that easy access to financial services product have significant influence on usage frequency of banking services and increasing the financial inclusion. It is concluded that the strong positive correlation between the level of financial inclusion and the stage of development of an economy, whereby a higher degree of financial inclusion will contribute to overall economic development (Demirguc, Beck, & Honohan, 2008).

The significant achievements in bringing the financial product and services to the public in Malaysia can largely be attributed to the government's financial inclusion initiatives. In 2015, Malaysia's financial Inclusion Index (FII) has reached 90 per cent, an impressive level if compared to other neighboring country such as Indonesia (59.7 per cent) in the same year. Generally, it is considered high for developing country, however there is one dimension that not achieve the target which is take up rate. The indicator for take up rate consist of the percentage of adult population that has deposit, financing and insurance account (Refer Table 1). The government with the aid of BNM have set up the strategies to improve this figure. One of the strategies is to provide flexible microfinancing, microsaving and microinsurance. Microfinance institutions will play the important role to implement this strategy.

**Table 1: Financial Inclusion Index – General Population in Malaysia - 2015**

<b>Dimension</b>	<b>Indicators</b>	<b>2011 (%)</b>	<b>2015 (%)</b>	<b>Target (%)</b>	<b>FII (%)</b>
Convenient	% of mukim with at least 2000				
Accessibility	population with at least 1 access point	46	96	90	
	% of population living in mukim with at least one access point.	82	98	95	
Take up rate	% of adult population with deposit accounts.	92	91	95	90

	% of adult population with financing accounts	36	25	50
	% of adult population with life insurance/takaful policies.	18	16	40
Responsible usage	% of customers with active deposits	87	92	90
	% of customers with performing financing accounts	97	98	97
Satisfaction level	% of customers who are satisfied – Overall financial services	61	73	80

Source: BNM 2016

The IMFI is a type of microfinance institutions which operates based on Islamic principles (Ronald & Amy, 2011). Microfinance is important in poverty alleviation because it provides loans and business opportunities to un-banked communities (DFC, S.A., 2007). Besides, microfinance is also a financial services product created to improve access to small deposits and loans for the poor in rural area as they are often neglected by the formal financial institutions (Wrenn, 2005). In Malaysia, the largest IMFI is Amanah Ikhtiar Malaysia (AIM) with total number of borrowers known as *sahabat* is 352, 887. AIM provides group-based lending to poor communities (who are mostly Muslims) based on the Grameen Bank model. Apart from the AIM, the Economic Fund for National Entrepreneurs Group (TEKUN Nasional) also provides fund, but focus for group or individual bumiputra and Indian. Until 2015, the number of borrowers for TEKUN Nasional is 322,474. Yayasan Usaha Maju (YUM), is another MFI was established purposely for people in Sabah. All these MFIs provide funds without collateral and contribute to the creation of micro-entreprises. In addition, commercial banks also provide microfinance to the micro-entrepreneurs. The participating commercial banks are; Alliance Bank, AMBANK, CIMB Bank, EONCAP, Islamic Bank, Maybank, Public Bank and United Overseas Bank Berhad (Bank Negara Malaysia). The size of the funds given by these banking institutions ranges between RM1,000 to RM50,000 without collateral. The development Financial Institutions (DFIs) such as Bank Rakyat, Bank Simpanan Nasional (BSN) and Agro Bank also participate in giving microfinancing in Malaysia. The microfinance products being offered in Malaysia are Shariah-compliant, mainly based on tawarruq. Earlier, these products are offered based on the concepts of Qard Hassan (benevolent loan) and Bai Al-Inah, being practiced by AIM, and other participating financial institutions, respectively (Micro Capital.org, 2009).

Up to 2011, there are 645,136 small and medium enterprises being established and of this, 77 per cent is categorized as micro-enterprises (SME Corp, 2016). A large market of micro-entrepreneurs can give big impact to the migration of paper based to electronic based payment system, directly can contribute to increase Malaysia's GDP. Realizing that, the Small and Medium Enterprise Corporation (SME Corp) initiated the 'Enabling e-payment for SMEs and Microenterprises' program in 2012. SME Corp is a Central Coordinating Agency that has been established under the Ministry of International Trade and Industry (MITI) to stimulate the development of SMEs by providing infrastructure facilities, financial assistance, advisory services, market access and other support programs. This is an initiative project under the Digital Malaysia to increase the adoption of e - payment among SMEs and specifically

microenterprises. The main constraint of the SMEs and microenterprises to acquiring the e-payment is the cost and intricate process. Due to that, this program enabled the SMEs and microenterprises to use e - payment by simplifying the acquisition process and lowering its cost. The affordable POS terminals distributed in this program accelerate the adoption of e-payment. The micro- entrepreneurs can accept payments via debit or credit cards. A tiny card reader will be installed at the bottom of a smartphone or tablet device. A debit card or credit card will be placed in the card reader and the details of the items purchased will be processed in all transactions. Finally, the financial transaction will be transmitted to the smartphone or tablet. Many SMEs, particularly micro enterprises, are still reluctant to acquire the e-payment facility due to budgetary constraints and the tedious process of e-payment (Hafsham, 2013). By 2020, the Project is expected to generate 1.1 million e-payment merchant outlets points through the distribution of POS terminal. Since the program was implemented from 2012, 14 percent of SMEs benefited.

### ***Electronic payment system***

In the early 2000s, e-payment is defined as a system which is classified into cash and cheque like traditional payment system. Both types of payment systems are direct payment systems, which means that a payment requires an interaction between buyer and seller. Agimo (2004) defined e-payment as payment made by electronic transfer of credit card details, direct credit or other electronic means other than payment by cheque and cash. With the advancement of the technology, the definition of e-payment also change. According to Kabir, Saidin, & Ahmi, (2015) e-payment is a collection of components and processes that enables two or more parties to conduct financial transaction and exchange monetary value via electronic means. It means making payments without the use of physical cash, with payments can be made via online transactions, mobile banking, debit and credit cards, cheques, and wire transfer. In other words, financial transactions can be carried out anywhere and anytime via the internet with the use of devices which are computers or mobile phones (Ebeiyamba Oluchukwu, 2014).

E- payment system is able to increase efficiency, reduce fraud and create innovativeness in the payment system industry with the aid of the channels; ATM, internet banking, mobile banking and the POS terminals (Oladeji, 2014). This innovative system allows transferring the amount of money between several financial institutions in a short period of time. The efficiency in the payment system can be seen from the comparison of the traditional banking system with e-payment in terms of the payment method, payment time and features (Victor, 2015). The payment method for e-payment is directly made to the account and can be done anytime. Meanwhile, in the traditional banking system, the payment made manually and the customers have to present to the bank. The e-payment can save time in payment transaction because it can be done in the same day, 365 days a year, but in the traditional system, it takes minimum two working days for the cheque clearing and only can be made on working days. In addition, the special feature of e-payment is, it is ubiquitous.

### ***The rise of E-Payment in Malaysia***

The evolution of e-payment in Malaysia started with the introduction of credit card in late 1970s, followed by the use of Automated Teller Machine (ATM) cards in late 1980s. Subsequently, following the advancement in internet technology, financial institutions came-out with the internet-based payment system in the late 1990s which is internet banking. Customers can access their accounts using computers as long as there is an internet connection. Despite this, the issue of internet network and computer usage became the main barrier which made the internet banking unreachable to certain customers. Consequently, in early of the year 2000, the mobile-based payment system was introduced to fill-in the practical gap left by the internet-based payment system.

Bank Negara Malaysia (BNM) collaborates with payment industries to improve the access to the payment infrastructure. The impact from the collaboration resulted upward trends of e-payment transaction per capita from 2003 to 2015. The transactions per capita of e-payment in 2003 is 14.3 units, increase to 82 units in 2015. This trend shows that it is not impossible to achieve the target of Financial Sector Blueprint 2011-2020 to have 200 transactions via e-payment in 2020. In addition, BNM also put a lot of efforts to remove barriers of adopting the e-payment.

### ***An overview of e-payment for micro – entrepreneurs in Malaysia***

Referring to the new SME definition, micro-enterprise is a form of business which has; sales turnover less than RM300,000 and the number of employees are less than five. Based on Census 2005 report, micro-enterprises are mostly involved in the services and the rest are involved in agriculture and Manufacturing. Under the services sector, majority of micro enterprises are in the retail (49.5per cent) which involve in selling vegetables and open mini market. Another 44 per cent involve in food industries which are restaurant and coffee shop. The balance of 6.5per cent conduct a business related to transportation such as workshop and taxi services. The majority of the micro-entrepreneurs are Muslims. Muslim entrepreneur is a party who has respect to fundamental values of Islamic sharia which are fairness, not exploiting the poor, has moral responsibilities, accountability and equity in financial dealing (Dana, 2010).

Micro-entrepreneurs in Malaysia are financed by AIM, TEKUN Nasional and formal financial institutions. AIM implemented the e-payment system for *sahabat*. At the beginning, AIM used mobile banking which is known as M-ringgit. The M-ringgit is the e-payment system created from collaboration between AIM and Bank Islam Malaysia Berhad (BIMB). This system was used to replace the traditional method where *sahabat* can repay their loan using cash at the specific meeting centres. This system allowed the borrowers to repay their loan via mobile phone. The M-ringgit was firstly implemented in 2011, at Al Insyirah, one of the AIM branches in Selangor. The system then has been implemented in 32 branches of AIM. In the period of January to June 2011 the amount of repayment received via M-ringgit is RM15, 185,928 and increase to RM102, 160,731 for January to June 2012. However, the amount dropped to RM84, 029,457 in July to December 2012 (Maznah, 2012). The cost incurred

became the main problem of the failure of this system. Starting 2015, AIM uses e-pay as their payment system. This system is collaboration between GHL Systems Bhd (GHL) with AIM Solutions Sdn Bhd (AIMSSB), a subsidiary of Amanah Ikhtiar Malaysia Sdn Bhd (AIMSB), in providing cashless collection of loan repayments by borrowers of AIM. E-pay system allowed *sahabat* to repay loan through a debit card and collection point with payment terminals to replace the cash collection and M-ringgit. This system is still in the process to be implemented in all branches of AIM around Malaysia. AIM believe that this system is able to solve the problem particularly cost problem in using M-ringgit.

There is a study conducted to identify the factors that influence the repayment of Tekun Nasional loan. The finding revealed that one of the factors is the distance of Tekun Nasional office with the business premise (Nawai & Mohd Shariff, 2012). Due to that, TEKUN Nasional gives option to the borrowers to use e-payment or paper based system for loan repayment. The borrowers can come to any branch of TEKUN Nasional or visit the participated banks to repay the loan. The participated banks included; RHB bank, Bank Simpanan Nasional (BSN), Bank Rakyat, Agro bank, Muamalat and Maybank. The channels of e-payment provided by TEKUN Nasional is internet banking, POS terminal, and Cash Deposit Machine. The implementation of e-payment by TEKUN Nasional gives opportunity to the borrowers to have wider payment channels choice.

### ***Issues of e-payment adoption***

The e-payment requires cost and expertise to be implemented in the payment system particularly used by users. The electronic payment system change very fast with the changes of technology. Due to these issues, it make difficult for customers and service providers to adopt. It also create anxiety for those who has lack of knowledge and experience (Meuter et al., 2003). The factors that influence the adoption of innovation in technology are different between customers and service providers. Customers will not use the innovation technology system unless they perceived an advantage for using it and feel comfortable with the technology (Moon & Norris, 2005; Titah & Barki, 2006). A study of e-payment adoption among firms in Hawaii revealed that the factors of benefits, costs and risks are very crucial to be considered for the successful diffusion (Sangjo, 2006). The small business owner perceived that cost and lack of easy to use are the barriers to adopt the e-payment in Kenya (Stuart, 2011).

The demographic factors such as education level, age and income level is one of the issues in the e-payment adoption especially to micro-entrepreneurs. According to Md. Saad (2011), most of the AIM borrowers have low level of education. The finding from a study in Malaysia revealed that, the low education level of older generation feel insecure when dealing with something that involves digital equipment. They are also less confident to adopt new technology equipment or system because they have no or too little experience. Due to that, they are normally choosing the new technology with user friendly features to start with. (Sidek, 2015). In Kenya, the poor communities perceived that the lack of experience to use the financial products is the main problem compared to education level (Collins, 2010). The experience can create skills. As suggested by Braun (2012), experience and training is important for competencies. If the human skill is not highlighted, it is difficult to adopt the e-

payment in small and medium business. Tracker (2012) investigated the adoption of e-payment of poor people in Uganda and found that, the poor and semi-literate were exposed to technology risk. The result from the study of SMEs owner in Kenya proved that the majority of respondents who adopted e-payment had basic ICT skill (Ogoti, 2015).

Pooja & Beenu (2013) who were used factor analysis to determine the adoption of e-payment among firms in United Arab Emirate discovered that user friendliness is the most important determinant. Other factors that can influence the adoption of e-payment included compatibility and trust. John (2013), suggested that the initiative to encourage the adoption of e-payment among entrepreneurs that implemented by the central bank of developing country should be different with the developed country. The entrepreneurs must understand their local institutions environment and should not assume that technologies will work in the same way in all countries. Besides, the government should promote clear regulation to encourage the implementation of e-payment system.

### ***Empirical studies on the adoption of e-payment among micro-entrepreneurs***

There are studies conducted on the adoption of e-payment in Malaysia previously. However most of the studies focus on the students, and banks' customers (Lai & Zainal, 2015; Taasim & Ali, 2013; Ming et al, 2013; Aw et al., 2011; Cavosh et al., 2011). The study on the adoption of SME, particularly micro-entrepreneur is very limited. It is very important to access the factors that influenced the adoption of e-payment among SME and micro-entrepreneurs because these are the groups of customers that can contribute to achieve the aims of the Financial Sector Blueprint 2011-2020 to become high income economy. The factors that can influence the adoption of e-payment could be different from banks' individual customers, students or big firms.

In the study conducted among entrepreneurs in Kenya, it is found that the ease of use is the main factors that influenced the adoption of e-payment. Due to that, the researcher recommended training and exposure of e-payment should be given to the entrepreneurs. The affordable e-payment gadgets should also be introduced to stimulate the SMEs owner to adopt the service. In addition, the government intervention is needed for tariff and taxation reduction that will significantly affect the installation and operation cost of the electronic gadgets (Ogoti, 2015).

A study was carried out to investigate the factors that affect the adoption of e-banking among SME in Bangladesh by Al Nahian et al, (2009). The result identified seven variables affecting e-banking adoption by SMEs which are; organizational capabilities, perceived benefits, perceived credibility, perceived regulatory support, ICT industries readiness, lack of financial institutions readiness, and institutional influence. Micro-entrepreneurs in Bangladesh adopted bKash, the e-payment system that use mobile phone. This system is adopted by the micro-entrepreneurs due to the factors which are easy to use, broad acceptance, diverse group of investors, vast availability and supportive regulatory environment (Davidson, 2015).

Tatenda et.al (2013) proposed an ideal model of e-payment for SME in Zimbabwe should have the criteria of anonymity, traceability, security, portability, atomicity, cost effectiveness, standardization and universality. All these criteria are suit with the requirement for the

Zimbabwean market especially the local SME which has lack of ICT knowledge and limited bargaining power with intermediaries. Given the importance of e-payment to the further development of e-commerce and its importance as a payment innovation, one research was examined the adoption of online e-payment by business enterprises using Rogers' relational model of perceived innovation attributes and rate of adoption. The findings indicated that only perceived compatibility has significant influence on online e-payment adoption of Chinese companies (He, 2006). Different countries have different regulatory framework with regard to e-payment system.

## **Conclusion and Recommendations**

The service providers need to consider investing some amount of money to provide the user friendly services to customers especially the micro-entrepreneurs. This initiative will help to solve the demographic barriers. The micro - entrepreneur who has lack skills of ICT, low level of education and old generation need to be exposed to the benefits of e-payment.

The training should be given so that they can have experience to use the e-payment system. The customer who has ICT skill also can avoid technology risk. Since cost of transaction is the big matter to these groups of customers, the service providers also need to pay attention to provide the affordable and modernized procedures to make it compatible with the needs of micro-entrepreneurs. The service providers should provide the e-payment system that has different cost of services for the micro-entrepreneurs to choose. In the meantime, the consistent marketing is required to expose the micro-entrepreneurs to the e-payment. Though trust and securities were perceived by micro-entrepreneurs as less important factors, but it cannot be compromised. E-payment provider should bear in mind that customers' trustworthiness can increase loyalty and reliability in using the e-payment.

In a nutshell, by determining the factors that influenced the micro-entrepreneurs to adopt technology specifically the e-payment, the service providers must take into account who are their customers and know the barriers to adopt with the technology. In addition, it can help the service providers and industry players to improve the standards of this digital financial service, increase the financial inclusions and reduce the poverty.

## **References**

- Agimo (2004). Better Practice Checklist for ePayment. Australia Government Information Management Office [Available online] [http://www.agimo.gov.au/publications/2000/04/better\\_practice\\_checklist\\_for\\_epayment](http://www.agimo.gov.au/publications/2000/04/better_practice_checklist_for_epayment).
- Ahmed A.G. (2015). Vision and strategies for technology enabled Islamic Micro-finance, *Keynote Address III, ADFIMI – FFSA Joint Workshop on Islamic Social Financing: Micro-Finance and Micro-Takaful, Almaty, Kazakhstan*.
- Al Nahian R. M., Akter, S., & Islam, N. (2009). The adoption of e-banking in developing countries: A theoretical model for SMEs. *International Review of Business Research Papers*, 5, 212–230.

- Aw Y., C. Ab Hamid N.R, & EAW H., C. (2011). Risk perception of the e-payment systems: a young adult perspective. *Proceedings of the 10th WSEAS international conference on Artificial intelligence, knowledge engineering and data bases*, 121-127.
- Bank Negara Malaysia.[http://www.bnm.gov.my/payment/0104\\_types.htm](http://www.bnm.gov.my/payment/0104_types.htm)
- Braun G., (2012). Evaluating entrepreneurship education programmes in developing countries: lessons from experience. *Industry & Higher Education*, vol 26, No 3, 193–205.
- Chavosh A., Anahita Bagherzad H.A, & Shahriar Espahbodi S (2011). Comparing the satisfaction with the banks e-payment services between degree holder and non-degree holder customers in penang-malaysia, *International Journal of e-Education, e-Business, e-Management and e-Learning*, Vol. 1, No. 2,102-109.
- CGAP. (2013). What is microfinance? Retrieved September 14, 2016, from <http://www.microfinancegateway.org/p/site/m/template.rc/1.26.12263/#1>.
- Collins D., & J. (2010). Financial capability and the poor ; are we missing the mark? *FSD Insight* , 4.
- Davidson, A., (2015). Lesson from bKash: Bangladesh's leader in p2p mobile money transfer. Retrieved from. [www.mintel.com/blog/finance-market-news/lessons-frombkash-bangladesh-leader-in-p2p-mobile-money-transfer](http://www.mintel.com/blog/finance-market-news/lessons-frombkash-bangladesh-leader-in-p2p-mobile-money-transfer).
- Dana, L.P. (2010) *Entrepreneurship and Religion*, Edward Elgar, Cheltenham, UK.
- Demircuc-Kunt,A., Beck,T. and Honohan, P. (2008), “Finance for All? Policies and Pitfalls in Expanding Access”, Washington, D.C.: The World Bank.
- DFC, S.A., (2007). Vietnam: Developing A comprehensive strategy to expand access [for the poor] to microfinance services. Working Paper, World Bank.
- Ebeiyamba Oluchukwu J. (2014). Effect of cashless economy on micro and small scale businesses in nigeria. *European Journal of Business and Management*, Vol.6, No.1,101-106.
- Hafsham Hashim. Advancing SMEs To E-Payment. January 2013. *BusinessTimes*[http://www.btimes.com.my/Current\\_News/BTIMES/articles/esah/Article/](http://www.btimes.com.my/Current_News/BTIMES/articles/esah/Article/)
- He, Q., Duan, Y., Fu, Z., & Li, D. (2006). An innovation adoption study of online e-payment in chinese companies. *Journal of Electronic Commerce in Organizations (JECO)*, 4(1), 48-69.
- John Effah (2013): Institutional effects on e-payment entrepreneurship in a developing country: enablers and constraints, information technology for development.
- Kabir M.A, Saidin S., & Ahmi A. (2015). Adoption of e-payment systems: a review of literature. *Proceedings of the International Conference on E-commerce 2015*, 112-120.
- Lai P. C., & Zainal Z.A. (2015). Perceived enjoyment and malaysian consumers' intention to use a single platform e-payment. *SHS Web of Conferences*,1-9.
- Maznah Abd Ghani (2012). Mobile phone banking: experience of aim. *Asia Conference and Expo, Kuala Lumpur, Malaysia*.
- Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, 56(11), 899–906.

- MicroCapital.org. (September 24th, 2009). Exclusive interview on the current state of microfinance in malaysia and challenges facing the sector: Observations from the assistant governor of Bank Negara Malaysia. Retrieved 9th July,2016 from <http://www.microcapital.org/microcapitalorg-story-exclusive-interview-on-the-current-state-of-microfinance-in-malaysia-and-challenges-facing-the-sector-observations-from-the-assistant-governor-of-bank-negara-malaysia/>
- Ming Y. T., Siong C. C., Binshan L. & Jiat W. C. (2013). Factors affecting consumers' perception of electronic payment: an empirical analysis. *Internet Research*, Vol. 23 Iss 4, 465 – 485.
- Moon, M. J., & Norris, D. (2005). Does managerial orientation matter? The adoption of reinventing government and e-government at the municipal level. *Information Systems Journal*, 15 (1), 43–60.
- Nawai N., & Mohd Shariff M.N., (2012). Factors affecting repayment performance in microfinance programs in Malaysia. *Procedia - Social and Behavioral Sciences* 62 ,806 – 811.
- SME Corporation Annual report 2016.
- Sidek N. (2015). Determinants of electronic payment adoption in malaysia: the stakeholders' perspectives. thesis, school of agriculture and food sciences ,University of Queensland in 2015.
- Ogoti Elijah Sokobe (2015). Factors influencing adoption of electronic payment by small and medium hotel enterprises in kisii town, kisii county, kenya. *International Journal of Novel Research in Computer Science and Software Engineering* Vol. 2, Issue 2, 5-18.
- Oladeji, K. (2014). Integrated personnel and payroll information systems (ippis) for universities and other higher institutions of learning. A paper presentation at Northwest University, Kano – Nigeria.
- Pooja Trevedi & Beenu Mago (2013). An empirical analysis of factors affecting the adoption of e-payment system from firm's perspective in uae. *International Journal of Engineering Research & Technology (IJERT)*. Vol. 2 Issue 7, 905-912.
- Nandru, P., Byram, A., & Rentala, S. (2016) Factors influencing financial inclusion through banking services. *Journal of Contemporary Research in Management*, North America, 10,. Available at: <<http://www.psgim.ac.in/journals/index.php/jcrm/article/view/448>>.
- Ronald Rulindo & Amy Mardhatillah (2011). Spirituality, religiosity and economic performances of muslim micro-entrepreneurs. *8th International Conference on Islamic Economics and Finance*.1-13.
- Said, A.A., Sachs, S. and Sharify-Funk, M. (2004) 'The islamic view of leadership: the power of the 99 names', Paper presented at the 64th Annual Meeting of the Academy of Management, New Orleans, LA.
- Sangjo Oh (2006). Stakeholder perspective on successful electronic payment systems diffusion. *Proceedings of the 39th Hawaii International Conference on System Sciences*.
- Stuart, M. C. (2011). Cash in , Cash out Kenya ; the Role of M PESA in the lives of low - income people. . College Park: College Park ; The IRIS Center Financial Sector Assessment Project .

- Tatenda D.K., Taurayi R., Benny M. N., Gilford T H., (2013). An electronic payment model for small and medium enterprises in Zimbabwe. *International Journal of Scientific & Engineering Research Volume 4, Issue 1*, 1-8.
- Taasim S. I. & Ali H. (2013). Penerimaan pengguna terhadap kaedah pembayaran elektronik. *Jurnal Ekonomi Malaysia 47(1)*, 3 – 12.
- Titah, R., & Barki, H. (2006). E-government adoption and acceptance. *International Journal of Electronic Government Research, 2*, 23–57 <http://dx.doi.org/10.4018/IJEGR>.
- Urs, B.-A. (2015). Security issues and solutions in e-payment systems. *Fiat Iustitia*, 21–28.
- Victor Khor (2015). Online banking service & benefits to merchants. BNM Payments System Forum 2015.
- Wrenn, E., (2005). Micro-finance: Literature review. Retrieved from [http://www.dochas.ie/Shared Files/2/ MicroFinance\\_literature\\_review.pdf](http://www.dochas.ie/Shared%20Files/2/MicroFinance_literature_review.pdf).
- Worku, Gardachew (2010). Electronic-Banking in Ethiopia- Practices, Opportunities and Challenges. *Journal of Internet Banking and Commerce; Ottawa*15, 1-8.