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Research Article

Influence of Fintech Payment Techniques on Performance of Investment Firms in Kenya

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Abstract

Fintech services which entail the new applications, processes, products or business models have disrupted the traditional finance system by providing faster, secure and reliable methods of doing business. However, the problem of double payment, slowed operations, obscured integrity and inefficiency characterizes most investment firms. The fintech payment technique include peer-to-peer payment model, digital currency supported through block chain technology and mobile wallet. This paper sought to establish the influence of fintech payment techniques on performance of investment firms in Kenya. The study population was 57 investment firms. The study employed mixed method research design by incorporating descriptive and explanatory research designs. Data was collected using questionnaires and an in-depth interview guide. Coefficient of mobile wallet payment system is enhancing business growth, payment services directive (PSD) is making firm payments safer and faster, Fintech is making payment services secure and reliable and Block chain technologies is helping in minimizing cases of double payment in the firm have a positive and significant effect on performance of investment firms. A conclusion is also made that fintech has revolutionized payment services and that fintech payment techniques influences performance of investment firms in Kenya. The study recommends for the expansion of fintech payment services to other investment firms. The payment systems supported by blockchain technologies are guaranteed of security and reliability. The payment methods are safe, secure and faster, however, most investment firms still rely on traditional payment methods in entirety. Traditional methods of payment are slow and at times prone to errors and fraud.

Keywords: *Fintech payment techniques, performance of investment firms, Kenya.*

Introduction

Fintech services have brought rapid changes in payment system services enhancing financial performance of investment firms (Parker, 2016). The fintech payment technique includes peer-to-peer payment model, digital currency and mobile wallet supported through block chain technologies (Coopers, 2016). Peer-to-peer facilitates online payment between and among entities in the absence of

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a third party. As a result of this, the expenses incurred in using these platforms are lower as compared to traditional platforms hence more revenue for the firm (Knewtson, & Rosenbaum, 2020).

Mobile wallet uses electronic signals to enable people do online payments faster and securely (Parker, 2016). The mobile wallet enhances convenience, speed and security of the transactions (Andreessen, 2014). Digital currency is electronic currency that acts as medium of exchange and allows online payments to happen (Maese, Avery & Wink, 2016). Bitcoins enable users to trade products and services with other users who accept Bitcoins in making payments (Carrick, 2016). The users are only required to pay little fee for the transaction with Bit coins (Schwab, 2015). The fees generated add to the overall revenue of the firm.

Financial technologies have created a new breakthrough in the payment transaction when it launched a series of applications and online financial services with many different forms of payment in accordance with the objectives and the needs of consumers (Parker, 2016). With the development of financial technology products, customers can comfortably perform all their payments whenever and wherever they want in a simple and faster way through many online financial services. According to Yao, Di, Zheng and Xu (2018), financial technology payment technique like Peer-to-peer payment model, cryptocurrency supported through block chain technology and mobile wallet have fasten payment operations among business enterprises' and customers. However, Kang (2018) established that fintech payment services must meet and security challenges that future and present mobile fintech payment services will encounter in the perspective of mutual authentication, authorization, integrity, privacy, and availability.

Peer-to-peer payment model can be described briefly as the new form of payment that helps the counterparties transfer money from their bank accounts to others' bank accounts anywhere and anytime through the Internet or the smartphones having the network connection (Broom, 2015). Peer-to-peer (P2P) payment performs all the transaction electronically, which it will automatically connect the buyers and the sellers together without the need of the third party. Therefore the cost of using this kind of payment is much lower than the traditional one (Knewtson, & Rosenbaum, 2020). Furthermore, the biggest benefit this model brings to the consumers is that it minimizes the cumbersome procedures in the process of writing and mailing a check or transferring physical cash via the traditional banks, simultaneously maximize the consumers' benefits such as the speed, convenience, and simplicity (Maese, 2016).

The mobile wallet is a digital wallet which uses technology to store the digitized valuables such as the debit cards or credit cards that allow the customers to make in-store payments quickly and securely (Parker, 2016). The key purposes for inventing this payment method are to completely replace the physical wallets which people always carry in their pockets, enhance the convenience, speed and secure for the users as well as try to build the cashless society in the future (Leong & Sung, 2018). The mobile wallets utilize Near Field Communication (NFC) which is a type of radio frequency identification technology, to transmit the payment information from a mobile device to a payment terminal when they are close together in order to make the payment (Åslund, 2016).

According to Maese (2016), cryptocurrency is a form of electronic money that can be used to perform the financial transactions such as the payment or money transfer between the users through the computers. Bitcoin is a typical example of the digital currency born in 2009, which allows the users to make the trading for goods and services with the vendors who accept Bitcoins as their payments (Carrick, 2016). Bitcoin is not subject to the control or assistance by anyone, and so, all the Bitcoin

transactions will be implemented independently (Lee & Low, 2018). The customers, therefore, only need to pay very little money for the transaction costs or even sometimes, there is no fee for making the transactions with Bitcoin.

Investment firms provide means through which small savers can pool funds to invest in a variety of financial instruments. The resulting economies of scale offer investors the benefits of professional asset portfolio modeling, reduced transaction costs, and the reduced risk exposure within large, diversified portfolios (Lööf & Heshmati, 2008). An investment firm is a firm whose main business is holding and managing securities for investment purposes.

In Kenya, the establishment and licensing of investment firms is done by the Capital Markets Authority (CMA). These firms are registered as Collective Investment Schemes (CIS) each mandated to operate investment based on the license granted (Ruto & Rueben, 2010). The enactment and registration of investment firms is undertaken by Registrar of Companies. The companies are registered under the guidance of Companies act of 2015. Majority of investment firms are licensed by CMA. The study focuses on investment firms that manages asset portfolio for investment purposes (Van Cooten & Blythin-Hammond, 2017). The investment firms engage in analyzing, selecting, maintaining, protecting and evaluating the investment assets including financial assets with the objective of achieving set investment goals (M'ariba, 2018). In this study, the focus is on companies that engage in protecting and managing investment assets that include investment banks. However, some of the investment firms have been experiencing decline in performance (CMA, 2017).

Investment firms provide advice and arrange finance for companies that want to float on the stock market, raise additional finance by issuing further shares or bonds, or carry out mergers and acquisitions. They also provide services for institutional firms that might want to invest in shares and bonds, in particular pension funds and asset managers. This study sought to establish the influence of fintech payment techniques on performance of investment firms in Kenya. The null hypothesis was that; fintech payment techniques have no significant influence on performance of investment firms in Kenya.

Literature and Theoretical Review

This paper is guided by the Information Systems Success Model. Information systems success model was developed by DeLone and McLean (1992). The model has been widely used to gauge success of a new system (Acton, Halonen, Conboy & Golden, 2009). Over time the model has been modified to meet the requirements set by several kinds of information systems, and from different points of view. DeLone and McLean (1992) had argued that Information-Quality, System-Quality, and Service-Quality could stimulate Intention-to-Use and User-Satisfaction. The stimulation would further positively influence net-benefits (Lee, 2012). Figure 2.1 illustrates the updated version of Information Systems Success model.

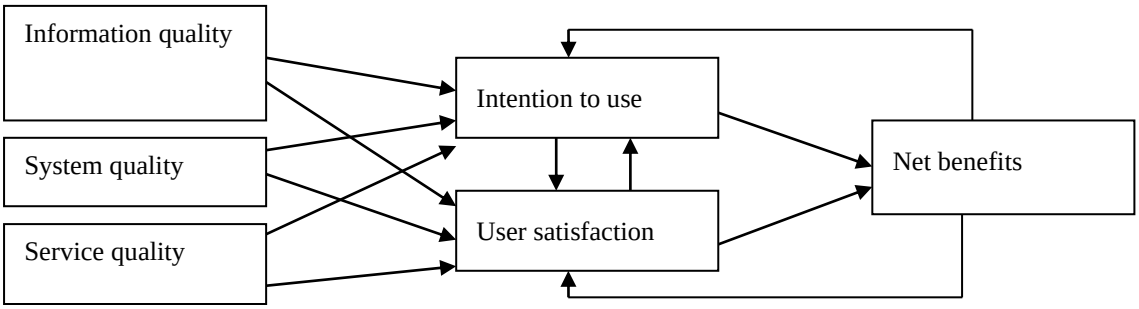

Figure 1. Information Systems Success Model

The information systems success model is applicable to the study as it predicts the intention of the investment firms to adopt and integrate fintech in their operations. The preparedness of investment firms to accept the application of fintech is intended at enhancing firm performance. The theory is thus relevant in gauging the intention of investment firms to use fintech services. This theory anchors objective 3; to establish the influence of fintech payment techniques on performance of investment firms in Kenya and objective 4; to determine the influence of predictive modeling on performance of investment firms in Kenya.

By employing a qualitative approach using interview guide, Gibson (2015) investigated the effect of financial technology on the financial services industry in Ireland and found that financial technology is tremendously impacting on financial services industries through automated payment techniques. The current study wishes to expand the finding of this investigation by mixing qualitative and quantitative methodologies to predict the effect brought about by fintech services on firm's performance. Furthermore, the study did not quantify the level of financial performance attained by the companies. In another study on the effect of block chain technologies on business transactions in the payment industry, Holotiuk, Pisani and Moormann (2017) adopted comparative research design and found that the application of block chain in paying for services led to authentic and secure payments, however there is need to measure firm performance brought by the application of block chain while paying for services.

Using mixed research design, Geranio (2017) conducted a study on the effect of financial technology on financial performance in the exchange industry. The study adopted mixed research design and found that financial technology in currency exchange industry led to reduction in counter party risk and posted trading costs as well as the improvement in transparency. However, the study focused only on currency exchange industry whose operations differ significantly from those of investment firms. Through a qualitative approach, Aslund (2016) found that block chain technologies has led to secure payments through a network. However, both studies did not bring out the aspects of firm performance brought by the new methods of payment.

In a study on block chain technologies, GrauMiró (2016) established that Spanish Banks owe survival to the right use of financial technology in the industry. The study found that block chain has brought changes to the current financial system of Spanish Banks. However, the study relied solely on qualitative data that were obtained from the triangulation of different partners in the banks. The current study used mixed method research design contrasting the study that solely employed qualitative research methodology. In a study on economics of mobile payments through financial technology, Au and Kauffman (2008) found that financial technology influenced mobile payment. However, the study did not link up fintech payment techniques to financial performance.

Misati, Kamau, Kipyegon and Wandaka (2019) conducted a study on the evolution of fintech/digital financial services complementary to bank performance in Kenya. The findings from the secondary data show that digital financial services positively and significantly affect the performance of large banks in both periods but positively and significantly affect medium sized banks only in the interest rate capping period and negatively and insignificantly affect small sized banks in both periods. Analysis from the primary data shows that commercial banks still dominate the financial landscape with digital loan services constituting less than 1 percent of the entire loans in the financial system but the provision of loans from non-bank actors is growing. However the non-bank credit only provide loans at very high interest rates averaging about 70 percent per annum compared to 10-20 percent

offered by commercial banks. Majority of the commercial bank respondents viewed digital financial services as complementary to enhancement of efficiency and scope of financial products and services. The results imply the need for devising strategies that avoid further financial exclusion of the low-income earners who may not afford smart phones, may not have access to internet or may be unfamiliar with smart phone features. However, the study by Misati et al. (2019) only operationalized fintech in terms of digital loans. Fintech services also include payment services, predictive modeling and asset portfolio modeling that are included in this study.

Kiilu (2018) conducted a study on the effect of fintech firms on financial performance of the banking sector in Kenya. The study employed a causal research design. The target population was all the licensed forty four commercial banks in Kenya. The study concluded that that uptake of mobile payments and the bank's financial performance have a significant positive relationship. Thus, increased uptake of mobile payments leads to increased banks financial performance. The study recommended that the regulator, the Central Bank of Kenya, should recognize the role that fintech plays in the economy and try to incorporate it in the financial system and develop a regulatory framework for it. Business operations of a bank may differ from thatof investment firms thus presenting contextual gap.

Research Methodology

The study employed descriptive and explanatory research designs. The target population was 57 investment firms that have integrated fintech in their business operations. A census of all the 57 investment firms was conducted. Primary data were collected using a structured questionnaires and in-depth interview guide. Qualitative data were analyzed using content analysis technique. Content analysis categorizes phrases, describe the logical structure of expressions and ascertain associations, connotations, denotations, elocutionary forces and other interpretations. Quantitative data was analyzed using inferential statistics specifically the structural equation modeling (SEM).

Research Findings and Discussion

Data analysis entailed structural equation modeling. SEM results as shown in Table 1 show that the influence of fintech payment techniques on performance of investment firms was significant (R^2=.738, $p<0.05$), implying that 73.8 percent of variation in performance of investment firms is explained by fintech payment techniques. Model results found that mobile wallet payment system is positively and significantly (β=.195, $P<0.05$). The beta coefficient of.195 suggests that a unit change in the use of mobile wallet payment system is associated with.195 unit change in performance of investment firms. The coefficient of the statement that digital currencies in making payments and performance of investment firms have a negative but insignificant relationship (β=-.066, $P>0.05$).

The coefficient of the statement that payment services directive (PSD) is making firm payments safer and faster is positively and statistically significant with performance of investment firms (β=.218, $P<0.05$) implying that a unit increase payment services directive leads.218 unit increase change in performance of investment firms. The coefficient of the statement that fintech has made payment services secure and reliable is positive and significant with firm performance (β=.259, $P<0.05$). Thus, units increase in the security of payment services results with.259 unit change in performance of investment firms. Further, the coefficient of the statement that block chain technologies is helping in minimizing cases of double payment in the firm has a positive and significant (β=.203, $P<0.05$) relationship with performance of investment firms implying that a unit increase in the use block chain

technologies results with.203 unit change in performance of investment firms. The coefficient of the statement that digital currencies are helping the firm do back office and recording is negatively but statistically insignificantly related to performance of investment firms (β=-.043, P>0.05).

Table 1
Influence of Fintech Payment Techniques on Performance of Investment Firms

			Estimate	**S.E.**	**C.R.**	**P**
Firm performance	<---	FPT1	.195	.059	3.281	.001**
Firm performance	<---	FPT2	-.066	.060	-1.092	.275
Firm performance	<---	FPT3	.218	.066	3.318	000**
Firm performance	<---	FPT4	.259	.087	2.966	.003**
Firm performance	<---	FPT5	.203	.085	2.387	.017**
Firm performance	<---	FPT6	-.043	.046	-.929	.353
		Estimate				
Squared correlation		.738				
**Significant at 0.05						

Where:
FPT1= Mobile wallet payment system is enhancing business growth.
FPT2= Digital currencies in making payments are enhancing business growth.
FPT3= Payment services directive (PSD) is making firm payments safer and faster.
FPT4= Fintech is making payment services secure and reliable.
FPT5= Block chain technologies is helping in minimizing cases of double payment in the firm.
FPT6= Digital currencies are helping the firm do back office and recording.
The null hypothesis was that; fintech payment techniques have no significant influence on performance of investment firms in Kenya. The study concluded that mobile wallet payment system is enhancing business growth, payment services directive (PSD) is making firm payments safer and faster, Fintech is making payment services secure and reliable and Block chain technologies is helping in minimizing cases of double payment in the firm have significant effect on performance of investment firms. Digital currencies in making payments are enhancing business growth and digital currencies are helping the firm do back office and recording had negative and infisignificant effect on performance of investment firms. In an interview session with investment managing director 3, this was quoted;

> *"The use of peer to peer payment and e-mobile wallets has enhanced swift and secure payments. Making online payments proved hard but the introduction of various online payment methods helped make business transactions quickly and safely"* Managing Director 3 [Key Informant, 2019].

Fintech services have brought rapid changes in payment system services enhancing performance of investment firms. The fintech payment technique includes peer-to-peer payment model, digital currency and mobile wallet supported through block chain technologies. Digital financial services expand the delivery of traditional banking services to the customers through innovative technologies like internet banking, mobile-phone-enabled solutions, electronic money models and digital payment platforms. The results of the study concur with Gibson (2015) that financial technology has tremendously impacted on financial services industries by enhancing automated payment techniques.

Peer-to-peer facilitates online payment between and among entities in the absence of a third party. Peer-to-peer (P2P) platforms issue credits without bank interventions to individuals and firms investing in small businesses. These platforms serve borrowers and lenders while others allow lenders to select the borrowers, loans packages and online auctions to issue. As a result of this, the expenses incurred in using these platforms are lower as compared to traditional platforms hence more revenue for the firm. The mobile wallet enhances convenience, speed and security of the transactions. The results of the study concur with Holotiuk, Pisani and Moormann (2017) that the application of block chain in making payments has led to authentic and secure payments. According to Geranio (2017) financial technology in currency exchange industry led to reduction in counter party risk and posted trading costs as well as the improvement in transparency. Moreover, Aslund (2016) noted that block chain technologies have led to secure payments through a network.

Conclusion and Recommendations

A conclusion is also made that fintech has revolutionized payment services and that fintech payment techniques influences performance of investment firms in Kenya. Faster and secure payment techniques have been devised courtesy of financial technology. A well-functioning payment system is indispensable to reduce the costs of exchanging goods and services in the economy. The introduction of fintech payment methods like Paypal, Venmo, Applepay, Alipay and mobile money have enhanced the simplicity of paying for goods and services while replacing credit cards and loan.

The study recommends for the expansion of fintech payment services to other investment firms. The payment systems supported by blockchain technologies are guaranteed of security and reliability. The payment methods are safe, secure and faster, however, most investment firms still rely on traditional payment methods in entirety. Traditional methods of payment are slow and at times prone to errors and fraud.

The use of digital currencies has been facing policies and regulatory challenges related to its use. Central Bank of Kenya (CBK) legalizes only the use of physical tender currencies as medium of exchange. The use of digital currencies received harsh reception by CBK in 2015 as lacking universal acceptance and law supporting its use. Fintech has been considered to infringe clients' data privacy and confidentiality. Two new laws are available concerning the embarkation of Fintech firms, PSD2 and GDPR. The First one is PSD2 (Second Payment Services Directive), which obliges the financial institutions to allow third-party providers such as Fintech firms to access client accounts, hence Fintech firms need bank's client permission not financial institution permission. The second law, the General Data Protection Regulation (GDPR) due to the digitization such, social media and the internet could jeopardize people's private information and need to be adhered to. Thus, PSD2 generates opportunities for Fintech firms, while GDPR leads to more cost for Fintech firms remedying customer data to adapt to the new law.

Nevertheless, the Central Bank of Kenya in conjunction with the Ministry of Treasury and investors have been participating in policy talks on how to spur fintech growth by implementing appropriate policy guidelines. The Business Regulatory Reform Unit, an arm of the ministry of finance is tasked with simplifying business licensing reviewed its business licensing guidelines to be simple and favourable to investors. According to the Monetary Statement of 2016, the CBK will continue to support development of new products and innovations towards enhancing financial access. Appropriate legislation and regulations may be proposed to ensure that such innovations are

operationalized accordingly so as to enhance market confidence among the fintech investment firms. The CBK is seeking advice from external companies about how to legislate around new Fintech. For the Fintech sector, these policies will proof to be beneficial.

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