

DIASPORA REMITTANCES AND THE DEVELOPMENT OF FINANCIAL TECHNOLOGY IN KENYA: A THEORETICAL PERSPECTIVE

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Abstract: The purpose of this study was to examine the relationship between diaspora remittances and the development of FinTechs in Kenya. The study examined individual diaspora remittances, collective diaspora remittances and the influence of regulatory frameworks to the deepening of financial technology in Kenya. The study used secondary data from the Central Bank of Kenya, Financial Sector Deepening Africa, journals and other referenced publications. From the available literature, there is a strong positive relationship between diaspora remittances and the development of FinTechs in Kenya. Additionally, regulatory framework has an impact on the level of development of financial technology in Kenya. There is need to ensure regulatory framework is in place to promote growth of the diaspora remittances and accelerate financial technology.

Keywords: Diaspora Remittances, Financial technology (FinTechs) and Regulatory Framework.

1. INTRODUCTION

The development of Financial Technologies (Fintech) is perhaps one of the most popular fronts for financial inclusion, a positive disruption to the global financial sector, and an increasingly important engine for economic development of Sub Saharan Africa. FSD Africa (2018), defines FinTech (fintech) as the integration of technology into financial service provision by companies that seek to improve financial service use, reach, and delivery to consumers. FSD Africa (2018) adds that FinTechs entail the use of alternative data communication systems (chiefly mobile telecommunications and the internet), peer to peer transaction processing models, and non-conventional technologies to offer financial services. These technologies continue to demonstrate potential in providing access to financial services to households and small firms in emerging and less developed economies (World Bank, 2020).

East Africa has one of the fastest growing fintech markets, with Kenya Having the largest and most robust sector. The Kenyan FinTech ecosystem has a combination of players, including payment remittance service providers (like Mpesa, Airtel Money, pesapal, and jambopay), blockchain service providers (like Bitsoko, BitPesa, Bitcoin.KE, and PesaBase), crowd funding systems (PesaCrowd and M-Changa), Forex service providers (Kwanji and fpesa), InsureTech providers (wazisure, OptiSmart, and Lami), credit scoring/CRB (fristcash, JUMO), business solutions (LipaPlus, popotepay, kopo kopo), systems integrations, healthcare service providers (m-tiba, changmka), lending (all commercial banks via fintech solutions, Mpesa, Kiva, Getbucks, pesapata), and agritech (farmdrive and we farm), among others (Kenya ICT Action Network, 2019). The development of these fintechs can be owed to the widespread possession of mobile phones in the country, the high speed at which information technology solutions like Big Data, Artificial Intelligence, Distributed Ledger Technology, Blockchain, digital-only banking, machine learning, and application programming interfaces are being adopted in the country (Central Bank of Kenya, 2020).

One of the most important drivers to fintech development in Kenya has been their aggressive increased use by Kenyans in the diaspora. According to Gelb et al., (2021), diaspora remittances are inter-personal financial transfers between migrants living and working abroad and their countries of origin. Diaspora remittances are increasingly becoming an important source of foreign exchange revenue in developing and less developed economies, to the extent that sometimes these remittances exceed other traditional sources of foreign revenues like major cash crops, Official Development Assistance (ODA) and Foreign Direct Investment (FDI) (Gelb et al., 2021; Kwesi, Musau, and Wanjohi, 2020). This is also so because a sizeable number of people around the world have emigrated from their countries of origin in such for employment opportunities, political asylum, peaceful existence, a better education, investment and business opportunities, among several other reasons. The United Nations (2019) estimates that there are around an estimated 272 million people in the world, who have emigrated from their country of origin to other countries.

There are over 3 million Kenyans living abroad, mostly spread across North America, Europe, the Far East, Africa, and of late, the Middle East, and immensely contributing to the development of their country through various forms remittances (Wellman and Whitaker, 2021). Kwesi and Musau (2020), citing Misati and Kamau, (2018) report that Kenya is remains one of the top eight highest remittance-receiving African countries, with remittances annually and steadily increasing. Between 2007- 2016 for example, diaspora remittances rose from US \$ 934 million in 2011 to US \$ 1.73 billion in 2016, constituting an average of 2.5 percent of GDP. Even during the height of the Covid 19 crisis, diaspora remittance inflows in Kenya increased to \$315.8 million in May 2021, compared to \$258.2 million in May 2020, which was a 22.3 percent increase, representing the largest source of foreign exchange for the country, defying the economic odds and strains placed on economies by the virus and lockdowns, and overtaking foreign earnings from tea, coffee and tourism (African Business, 2020; Central Bank of Kenya (CBK), 2021; Kalya, 2021).

In December 2020, diaspora remittances reached a historical peak of US\$299 million (Central Bank of Kenya, 2021). One of the reasons why diaspora remittances continue to be of importance in fintech development is the rapid acceleration of digitalization of the financial sector (CBK, 2020), the adoption of technology and integration of mobile financial services, which has lowered the cost of transactions over the last ten years from 15 to 8 per cent- Kenya ranking third in Sub-Saharan Africa (International Fund for Agricultural Development, 2021), all of which facilitating widespread use of financial technology among Kenyan diasporas in sending money home. While diaspora remittances are a major source of foreign revenue in Kenya and indeed other African countries, the cost of sending money home, the multiplicity of channels used to send money, the regulatory and policy hurdles of fintech systems used, and the technological problems of cybercrime and fraud continue to affect their contribution to the development the financial sector and the country in general. There is need to examine the most important factors that affect diaspora remittances and their contribution to the development of fintechs in Kenya.

1.1.1 Development of Fintechs in Kenya

The International Finance Corporation (2017) estimated that over 340 million adults in Sub-Saharan Africa were unbanked; and that the continent's banking sector faced challenges like currency fluctuations and a low supply of products for savings, insurance, credit, and payment transactions. The existence of this has consistently forced players in the sector to create new avenues for delivering financial services. This has led to the exponential development of digital banking financial technologies (fintechs) in the region. In Eastern Africa, Kenya has one of the most highly developed fintech sector, having a combination of telecommunications service provider firms, banks, financial intermediaries, and insurance firms providing a range of services to the economy (Suryono, Budi, and Purwandari, 2020; The Africa Report; 2021).

The Global Business Outlook (2020) estimated over 150 Fintech companies operating in the country in 2019, and this was the highest figure in the region. These include services like mobile money transfer services, agency banking, traditional deposit and withdrawal services, insurance services, saving and credit services, farmer support services, mutual fund management, among other very many products. Perhaps the most popular fintech service has been the Mobile Money Transfer service by Safaricom, Mpesa, which makes Kenya stand out as a hub of innovation and creativity in the financial sector (Kenya ICT Action Network, 2019). In 2017/18, Mpesa had over 22.6 million subscriptions in Kenya, and 380 million transactions out of the grand total of just over 480 million; and a volume of transactions equivalent to over 40% of the country's GDP (Didenko, 2017). There is need to analyse and study the factors that facilitate the development of these fintechs in Kenya, and indeed Sub Saharan Africa. This is because the development of Kenya's fintech sector has forward and backward linkage in other financial sector ecosystem constituents like financial inclusion, benefits management, insurance and banking, diaspora remittance management and investment.

1.1.2 Regulatory Frameworks

The liberalization of the financial and communication sectors in Sub Saharan Africa led to the development of new industries, like mobile telecommunication networks, mobile and digital money service providers, electronic leading institutions, venture capital services providers who operate online, mutual fund management systems, agency banking applications and systems, redefined commercial banks that are more in touch with their customers, constantly churning out new innovative services to remain relevant in the ever evolving market. Governments continue to encourage service providers to create products that push the financial exclusion figures lower than current, and encourage more people to join the formal financial service sectors for easy monitoring of financial transactions and provision of services to the previously unbanked (FSD Africa, 2020). The need to encourage these services though, has not override the pertinence of regulating Fintechs and all financial SMEs providing these services to the public. This is why institutions like the central banks (e.g. Bank of Uganda, Bank of Rwanda, and the Central Bank of Kenya), and telecommunications regulators like Uganda Communications Commission (UCC) have consistently formulated policy and issued statements guiding the use and development of financial technologies, digital money, and of recent, crypto-currency (Bank of Uganda, 2018; Central Bank of Kenya, 2015). The need to ensure the development of the fintech sector has been underlined by the need for proportionate development of regulatory frameworks to ensure safety of money, individuals and businesses that are quickly adopting these services.

Dideko (2017) observes that some of the regulatory challenges have been caused by the high speed at which Fintechs in countries like Kenya and South Africa develop, leaving the regulator to develop policy basing on already existing systems, the ever changing nature of these technologies. The regulators of fintechs in SSA have mostly found themselves behind the scenes and unable to regulate some of the technologies. In EAC for example, a number of fintech service providers operating on social media have been illegally selling fake bitcoins and other crypto-currency, leading to the loss of billions of shillings by nations. In Uganda, MTN Uganda- one of the leading fintech service providers has issued an Initial Public Offer for the sale of shares to the public, even when some critics contend that the company is not a public limited company and cannot issue shares for its fintech businesses like MTN Ayoba, MTN Mobile Money (Momo), and MTN Communications (Republic of Uganda, 2021). The other issues have arisen out of the slow pace at which industry players are integrating their services and ensuring interoperability- in Kenya and Uganda, players in the mobile money sector have tried to interoperate with some commercial banks, however the cost of transfers across networks and banks is still prohibitively high, and some of the existing products like Similarly to South Africa, there is no bespoke crowd-funding regulation in Kenya.

As a result, bespoke crowd funding have no separate regulations and policies issued by institutions like Bank of Uganda, including the Central Bank of Kenya, the Capital Markets Authority and the Communications Authority of Kenya. Where regulations exist, they are scattered and too many to implement, for example in Kenya, there exists the a National Payment Systems Act, Money Remittance Regulations, the Kenya Information and Communications Regulations, the Microfinance Act, the Proceeds of Crime and Anti- Money Laundering Act, the Capital Markets Act, the Banking Act, and the Public Offer Regulations, and the Public Fundraising Appeals Bill, among others (Central Bank of Kenya, 2018). Implementing some of these may become a challenge in such a fluid, flexible sector like fintech, which keeps on evolving and developing.

1.2 Statement of the Problem

Kenya is one of the leading Fintech economies in Sub-Saharan Africa and the World. The Global Business Outlook (2020) indicates that in 2019 there were more than 150 fintech companies in Kenya, and these were able to mobilize over \$198 million in funding. These developments are owed to several factors, including regulatory frameworks, market drivers to fintechs, and the overall development of the financial sector in East Africa. One other factor that drives the development of fintechs in Kenya is the tremendous increase in the use of these technologies and services by Kenyans in the diaspora to send money home. The Business Daily (2021) reported that Kenyans in the diaspora sent over Sh34 billion (\$315.8 million), representing, a 22 percent increase from the 2020 figures. These remittances were mostly from Kenyans working in North America and the Middle East, and a sizeable percentage of them are sent using financial technology solutions. Some of the fintech service providers used by Diasporas to send money include Safaricom (Mpesa), Vodacom Tanzania, Azimo, Equity Direct, Sendwave, MoneyGram, PoaPay, Sendwave, Skrill, Simbapay, Western Union, MTN Uganda and Rwanda, PesaPal, P2P cash, WorldRemit, Xoom, and Xendpay, among several others (International Organization for Migration, 2017).

While these fintechs have greatly thrived in Kenya, they are still facing a lot of challenges, Mwencha, Hussein and Githaiga, (2019) dissect four major challenges facing the development of fintechs in Kenya, including regulatory concerns, customer-faced challenges, technological challenges, and market system concerns. Regulatory challenges stem from the very nature of fintechs- being disruptive technologies. This makes them inconsistent with the existing legal and regulatory frameworks, and quite often necessitates continual changes in the laws governing financial service providers. Their regulation is also made problematic, perhaps by the need to maintain the delicate balance between deregulation/ flexibility and financial sector monitoring. The fintechs also operate across borders, often enabling the transfer of currency and the transacting of services in different countries with divergent jurisdiction- making it difficult to have standard policies and guidelines for doing business. This has often led to overlapping responsibilities between regulatory bodies like the Central Bank of Kenya and the Capital Markets Authority, breeding possible inefficiency and exposing players to the risks of loss. Other issues have been customer-centric, like cyber security concerns, fraud, and the high costs of transacting on some of these service systems. There have been several cases of financial cybercrime through some of these fintechs. The most unpopular scenarios have been in the form of theft of Bitcoins and actual loss of money via fintechs that provide crypto-currency in Kenya.

The regulatory and customer concerns have been exacerbated by technological and market system concerns, like the ever changing information technology landscape, the lack of access among some customers and players to IT infrastructure, and lack of data privacy among some industry players, among other issues (Bowmans, 2017; Central Bank of Kenya, 2020; Suryono, Budi, and Purwandari, 2020; The Africa Report; 2021). For Kenyans in the diaspora, following up on fraudulent fintechs and choosing the best service providers has been a hurdle since hundreds of companies have flooded the market, promising a range of products to customers (FSD Africa, 2018). The challenges that are inherent in the fintech ecosystem have meant that all players in the sector, like customers and service providers face innumerable hurdles that inability industry growth. This is perhaps why most of them are facing non-performing loans, inability of borrowers to pay, inconsistent pricing models of services and fintechs that deduct a lot data from borrowers/ customers mobile accounts (Leon, 2021). This study seeks to examine the relationships between diaspora remittances, regulatory frameworks, digital technology adoption, and the development of fintechs in Kenya.

1.3 General Objective of the Study

The aim of this project is to investigate the relationship between diaspora remittances and the development of FinTechs in Kenya

1.4 Specific Objectives

- a) To determine the effect of individual diaspora remittances on the development of FinTechs in Kenya.
- b) To establish the effect of collective diaspora remittances on the development of FinTechs in Kenya.
- c) To determine the effect of voluntary diaspora remittances on the development of FinTechs in Kenya.
- d) To determine the moderating effect of regulatory frameworks on the relationship between diaspora remittances and the development of FinTechs in Kenya.

1.5 Scope of the Study

- a) **Conceptual Scope:** The study will concentrate on the concepts of diaspora remittances, digital banking technologies, and fintech development, with specific reference to the Kenyan market.
- b) **Geographical Scope:** The study will be conducted among Financial Technology service providers in Kenya. Specific emphasis will be laid to the cities, urban and peri-urban centers where these FinTechs actively participate in the financial sector.
- c) **Time Scope:** Since the study is expected to be cross-sectional, data will be collected at a single point in time, during at least one financial year from 2018 to 2020.

2. LITERATURE REVIEW

Johanness (2020) traces the development of Financial Technologies into three major stages, that is; FinTech 1.0, 2.0, and 3.0. FinTech 1.0 (1886-1967) denotes the earliest demonstration of a combination of communication and transport technologies that was used for rapid transmission of financial information across borders. These mainly included the telegraph, steamships, and railroads; for example the transatlantic cable (1866) and the Us FedWire (1918), which was the

first ever Electronic Funds Transfer system. This era ended with the introduction of credit cards to ease the burden and risk of carrying cash. FinTech 2.0 (1967-2008) saw the transformation of the banking sector, with the shift from analog to digital banking, the first handheld calculator and the first ATM installed by Barclays bank in 1967, introduction of the World's first digital stock exchange, the launch of the Society For Worldwide Interbank Financial Telecommunications (SWIFT), the the rise of banking mainframe computers and the world is introduced to online banking. The latest development in the sector has been FinTechs 3.0 (2008- current) has seen the introduction into the commercial sector, of third parties that provide value added services to supplement commercial and development banks. This stage emerged mainly from the Global Financial Crisis of 2008 that has bred a general public distrust of the traditional banking system. This led to a mindset shift, paving way for a new financial industry that client-centered and client driven financial service systems.

PWC's (2019) Global FinTech Report, as cited in Kliber et al., (2021) observes that almost half of all firms in both financial services and technology, media and communications (TMT) have fully incorporated FinTech-based products and services into their strategic operating models. The current FinTechs are a grand overhaul of the traditional digital banking technologies, morphing into mobile banking, agency banking, block chain technologies and cryptocurrencies, virtual currencies, peer to peer lending, crowd funding, crypto-asset exchange, and automated robotic advising in wealth management, among other new innovative financial solutions (IMF-World Bank, 2019). Kūçūkkocaoğlu and Bozkurt (2018) analyzed the effects of M&A on the performance of Turkish financial institutions. Research findings from the study indicate an increase in foreign capital investments owed to M&A which led to the strengthening of operations in the market. From this, organizations gained the necessary financial muscle to outshine their competitors.

Arner, Barberis, and Buckley (2016) add another more recent layer of financial technology which is mostly in the developing/ emerging and less developed markets. The authors contend that while Fintech 3.0 resulted from the global financial crisis and widespread distrust of conventional baking systems, Fintech 3.5 development in in Asia and Africa, are primarily prompted by the pursuit of economic development. The salient features of fintechs in the emerging market and developing economies (EMDEs) in Africa and Asia include, among others; widespread usage by young digitally savvy populations equipped with mobile devices; a fast-growing middle class; inefficient financial and capital markets in these countries, which in turn nurture opportunities for informal financial alternatives; shortage of physical banking infrastructure- thus the need to innovate ways of providing financial services to the poor; user behavioral pre-disposition in favour of convenience over trust; innumerable untapped market opportunities- the unmet demand for financial services in these countries; deregulation and establishment of more flexible policy frameworks; less stringent data protection, competition in the financial sector, major improvements in connectivity of financial systems (leading to increase in information exchange), advancement in computing power and reduction in its cost, all of which have created economies of scale and scope in the commercial sector, by alleviated transaction costs and given rise to new business models and new entrants and innovative products (Feyen *et al.*, 2021; Frost, 2020; Arner, Barberis, and Buckley, 2016).

Gelb et al., (2021) on the other hand observes that diaspora remittances do not only include individual transfers, but also collective remittances (usually for group investments), and philanthropy. Individual remittances refer to standard transfers of funds from a single household or individual in a country of residence (abroad) to a single house hold (individual) in their country of origin. This is also common in instances where these two households have family ties; and the remittances sent are usually in the form of money and physical items like household appliances, clothes, and food (especially if host nation and country of origin are close to each other) sent in kind. The individual remittances are usually sent using a combination of formal and informal channels. The formal transfer channels include money transfer agents (like Western Union), mobile money service providers, financial institutions like commercial banks operating in regulated financial markets in both the country of residence and the country of origin; while the informal channels include the non-regulated channels like cash transfer via trusted relatives and acquaintances. The most popular form of this kind of transfer is Hawala, a south Asian Islamic tradition based entirely on trust amongst brokers in a network, enabling the right to transfer a sum of money from original supplier in the diaspora to an ultimate recipient across the network. Proponents of this form of unregulated system contend that, while the transactions are enforced by legal contracts, and that there is always a risk of loss, the religious values of mutual obligations, plus reputational risk, and the advantages of lower transaction costs all support the preference to this kind of money transfer mechanism (Jamal, 2015; World Bank, 2017).

Iman (2020), citing Puschmann (2017) summarises the meaning of fintechs as incremental or disruptive financial service innovations induced by IT developments, and resulting in new intra- or inter-organisational business models, products and services, organisations, processes and systems. These fintech services are now actively provided in many sub sectors and

functions of the financial economy, including back-end and infrastructure banking, business lending, consumer and commercial banking, consumer lending consumer payments, crowd-funding, data and market research, equity financing, institutional investing, international remittance management, personal finance, point of sale systems, retail investing, financial data security, and small and medium enterprise (SME) tools, among others (Iman, 2020).

3. CONCEPTUAL FRAMEWORK

The conceptual framework of the study highlights the relationship between the independent and dependent variables which are mergers and acquisitions and financial stability respectively.

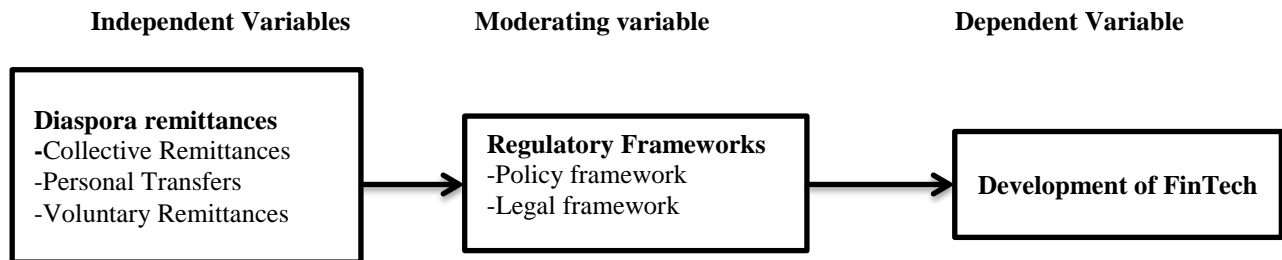


Fig 1: Conceptual Model

Source: Researcher, 2021

4. CONCLUSION

In the theoretical framework, fintech development is hypothesized to result from diaspora remittances, digital banking adoption and regulatory frameworks as independent variables. We have seen in the foregoing discussions, that all these constructs, including diaspora remittances, regulatory frameworks, and digital banking have a strong bearing on how fintechs evolve and develop in Kenya and Sub Saharan Africa in general (Mwencha, Hussein and Githaiga; FSD Africa, 2020; Iman 2020). The major focus of the study however is on the relationship between diaspora remittances and the development of Fintechs in Kenya.

The increase of diaspora remittances as a source of foreign exchange earnings, sometimes surpassing Official Development Assistance and Foreign Direct Investment (FDI) has led to the growing interest in the channels used to transfer remittances to home countries (Warnecke-Berger, 2021). Smith and Van-Zyl (2021) contends that the stream of research in this area has focused so much on innovations in the financial sector that help people in the diaspora to send money at lower costs of across borders, with more convenience and improved the accessibility to services by senders and receivers. In economies like Sub Saharan Africa, where money transfer services and conventional commercial banking services are still very expensive, there has been deliberate efforts by governments and players in the financial sector to encourage the development of financial technologies to close the gap between diaspora communities and their relatives or business associates at home. Players in the financial sector are doing everything possible to ensure easy remittance of small amounts of money across boarders in Africa with minimal cost to the senders and buyers (Rodima-Taylor and Grimes, 2019).

The development and adoption of digital financing technologies has greatly help have come in handy to close the infrastructural and cost-related gaps that were impending transfers to the global south (Africa, Asia, and South America). Other efforts that have driven diaspora remittances to lead to higher impetuous for fintech development include the improvement in the financialisation of developing and less developed countries, the higher demand created for digital financing and fintech products by diaspora and home communities, and the overall growth in the information technology sector (Bank for International Settlements and World Bank, 2020). There are many evidence based studies suggesting a conglomeration of very many fintech products that have sprung up in Africa due to active usage of these digital systems by diaspora communities and individuals. These include all mobile money transfer services (Mpesa, MTN Mobile Money, Airtel Money), and other porducts like Pezeshu, Digiduka, Tulaa, Cherehani Africa, PesaK, DusuPay, Eversend, Xente, Swipe2pay, Beyonic, Chippercash, among hundreds of others (Cambridge Center for Alternative Finance, 2021; FSD Africa, 2018). This therefore means that there is a strong relationship between diaspora remittances and the development of Fintechs.

When individuals in the diaspora for example decide to send personal finances or business and investment finances to the people they left at home, the chances are high that they will choose among the multiple digital technologies and in essence promote the use and development of financial technology. It is not of a surprise therefore, that since Kenya receives the largest share of diaspora remittances in the region, the country has also seen tremendous development in the financial technology sector (World Bank, 2020; Esser and Cooper (2020)). The country also has one of the highest adoption rates of information technologies and digital banking platforms that encourage the use and development of fintechs (Kenya ICT Action Network, 2019). Regulators like central banks, communication authorities and other government bodies also play a major role in breaking or making the pace at which fintechs evolve and develop. A highly restricted financial sector policy by the central bank may limit innovativeness and prohibit growth, while a very relaxed regulative framework can expose customers and businesses to fraud and potential loss while using financial technologies. This study therefore seeks to verify the hypotheses that diaspora remittances, digital banking adoption and regulatory frameworks predict the development of fintechs in Kenya.

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