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Fintech as a tool for promoting financial inclusion and economic development in Nigeria

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FINTECH AS A TOOL FOR PROMOTING FINANCIAL INCLUSION AND ECONOMIC DEVELOPMENT IN NIGERIA

ABSTRACT

In Nigeria, 67.1 per cent of the population lives below the poverty line. Access to basic financial services can make a significant difference in reducing poverty and financial technology has been used to enhance the provision of financial services to the poor and unbanked in Sub-Saharan Africa. This paper seeks to highlight the nexus between financial inclusion and financial technology as well as how it can help reduce poverty in Nigeria.

1.0 INTRODUCTION

Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way (World Bank, 2015). Without access to financial services, the economy suffers, as savings are stored outside the financial system thereby making credit creation by financial institutions scarce and expensive.

Financial Inclusion is an integral part of the Central Bank of Nigeria's (CBN) vision of promoting sustainable economic development in Nigeria. Greater access to financial services for both individuals and firms may help reduce income inequality and accelerate economic growth (World Bank, 2015).

The World Bank estimates that two (2) billion people are excluded from any formal form of financial services globally. Financial inclusion seeks to unlock development opportunities for the poor by providing access to basic financial services, especially micro-credit facilities.

In recent times, there has been increased global focus on financial inclusion as a means of poverty eradication and a catalyst for economic growth. The United Nations (UN), the World Bank, the Group of Twenty (G-20) and the World Economic Forum (WEF) are some the major international institutions working towards financial deepening. The UN sees financial inclusion as critical to achieving a number of its Sustainable Development Goals (SDGS). In 2006, financial inclusion was brought to the fore as a tool for economic growth and development when the Nobel Peace Prize was awarded to Prof. Muhammad Yunus and Grameen Bank of Bangladesh for their work in providing microcredit to the extremely poor people. The bank lends to people with no collateral. In 2006, seven million borrowers had been granted small loans with US$100 being the average amount borrowed. Over 95.0 per cent of the loans went to women or groups of women. (Nobel Prize, 2006).

Majority of people without access to any form of financial services operate in the informal sector. Petty traders, artisans, subsistence farmers and hawkers all operate in the informal economy. Access to financial services can be a pathway to poverty eradication and a better quality of life. In Malawi, research showed that farmers who deposited their earnings into a new bank account spent 13.0 per cent more on equipment and increased the value of their crop output by 21.0 per cent (Lasse et all, 2016).

Creating new bank accounts does not always translate into regular use or financial inclusion. Nigeria has a total of 96.2 million accounts, but only 65.5 million are active, meaning 31.94 per cent of the accounts in Nigeria are dormant (NIBBS, 2016). Also, most account holders have multiple accounts and are concentrated in large urban areas such as Lagos, Abuja, Kano and Port Harcourt.

Increasing financial inclusion requires a reworking of a country's financial system structure. To achieve this aim, a modern central bank has to embrace non-traditional instruments at its disposal. This paper seeks to highlight one non-traditional instrument to help bring about financial inclusion in Nigeria.

Financial Technology (Fintech) is the use of technology to provide financial services such as savings, micro-credit and funds transfer. Some Fintech solutions have been described as "having a bank in your pocket" because they offer financial services in a quicker and more convenient way than traditional deposit money banks (DMBs). Connecting the unbanked and under-banked to basic financial services is a valuable tool for poverty eradication and driving economic growth, which can be achieved using Fintech.

2.0 FINANCIAL INCLUSION IN NIGERIA

The Nigerian Bureau of Statistics (NBS) in its 2015 Report titled "Formal and Informal Sector Split of Gross Domestic Product" reported that the percentage share of the informal sector of Nigeria was 41.4 per cent of nominal GDP and valued at N39 trillion. This means that N39 trillion worth of value was created in the informal sector that could not be harnessed by the Government as the sector is unregulated and untaxed. This has far reaching implications for the tax revenue of the Federal Government of Nigeria (FGN), especially at a time of fall in oil prices and the push for the diversification of revenue streams for the Government.

The EFInA in its 2016 Report estimated that 40.1 million adults (41.6 per cent) out of a possible 96 million people in Nigeria were financially excluded. The South West has the highest number of financially included people at end-2016 with 78.0 per cent, while the North West has the least number of financially included people in the same period with only 24.0 per cent. Women, the uneducated, rural dwellers and the elderly are likely groups of people without access to financial services.

Nigeria has a poverty rate of 62.6 per cent (UNDP, 2016). This means that over 112 million people live on less than US$1.90 a day. This extremely high level of poverty is a huge challenge to financial inclusion as large parts of the population do not earn enough money to save.

Cash is the predominant medium of exchange for transactions in the informal economy. There is a general mistrust of financial institutions and technology by low-income earners. Many prefer to keep their money at home under the mattress or bury their savings in the ground. Nigeria's service sector (hospitality, retail, transport and health) is largely cash-based as customers and service providers prefer the use of cash for transactions. The cashless policy introduced in 2013 has succeeded in reducing the dependence on cash. With the increase in the provision of ATMs, Point of Sale (PoS) terminals and other online payment solutions, more merchants now encourage payments and offer incentives to customers to pay virtually.

For the population to be able to make sound financial decisions, they have to be financial literate. Financial literacy entails knowledge of making appropriate financial decisions (Investopedia, 2016). Based on this definition it is safe to assume that a large number of people are financially literate to a certain degree as they seek to maximise the value of their money. The problem lies in the fact that they are not aware of better and formal ways to keep and invest their funds and end up making poor decisions due to inadequate formal financial education. Better financial education can help to widen the net of financial inclusion as financially literate people will make use of financial services that are available to them.

There is also the widespread use of cooperative societies called Ajo in Yoruba and Esusu in Igbo. These societies receive previously agreed amount as cash contributions from their members on a daily, monthly or yearly basis and give credit to members when they need it. Borrowing from family and friends is the predominant source of credit in the absence of formalised micro-credit. About 76.3 per cent of borrowers get credit from family and friends, 18.1 per cent get credit from informal sources such as the Esusu and a paltry 2.7 per cent from banks (EFInA, 2016). Family members in the urban areas remit large amounts of money to their families in the rural areas. This is usually done by giving the cash to public transport operators for delivery to the countryside or through relatives or friends travelling home. This system is often unreliable as the delivering party might not deliver the exact amount sent and runs the risk of getting robbed of the money before getting to his destination.

Inclusive economic growth cannot occur if certain groups are excluded from basic financial services. Access to credit, insurance, money transfer and other services for all individuals regardless of gender, formal or informal sector, geopolitical regions economic activities will increase and employment will be created. This translates to increased tax revenue for the provision of critical infrastructure thereby accelerating economic growth.

2.1 CBN Effort At Financial Inclusion In Nigeria

The use of financial services is constrained by market failures that cause the costs of these services to become prohibitively high or that cause the services to become unavailable due to regulatory barriers, legal hurdles, or an assortment of market and cultural phenomena (Global Financial Development Report, 2014). The focus of policy is to correct these market failures and inequalities.

On September 30, 2011, Nigeria was among the seventeen (17) early adopters to commit to financial inclusion at the Maya Declaration, Mexico (Alliance for Financial Inclusion, 2011). The CBN committed to developing and pursuing a financial inclusion strategy to reduce the adult financial exclusion rate from 46.3 per cent in 2010 to 20.0 per cent by 2020 (Alliance for Financial Inclusion, 2011). To achieve this target, the National Financial Inclusion Strategy (NFIS) was launched in October 2012. The objectives of the NFIS and efforts the Bank has made to achieve them so far are listed below:

- Transformation of Existing Know-Your-Customer (KYC) Regulations into a Simplified Risk-Based Tiered Framework

The CBN introduced the three-tiered KYC requirements to ensure the application of flexible account opening requirements for low and medium value accounts. The KYC requirements were relaxed and simplified for low and medium value customer to make account opening easier and more attractive. It was also targeted at reducing administrative costs for the banks (CBN Circular, 2013). The KYC form contains personal information such as the home address of the customer in line with anti-money laundering regulations. The Bank Verification Number (BVN), a centralised biometric identification system was introduced and enforced in 2015 to address the lack of proper means of identification for lower income individuals. The BVN is unique to each individual and is linked to the accounts opened. It also includes the KYC details of the customer so that banks can authenticate and verify the identity of prospective and existing customers. It also strengthens the money laundering detection system in the financial sector.

- Development and implementation of a Regulatory Framework for Agent Banking

The Agent Banking Guideline and the "Licensing Framework for Super Agents" were released in 2013 and 2015, respectively. The CBN granted an approval in principle to Innovectives Limited and Interswitch Financial Inclusion Services Ltd to operate as Super Agents (AFI, 2016)

- Pursuance of Mobile Payments System and other Cash-less Policies to reduce the cost and increase the ease of financial services and transactions

The Cash-less Policy aimed at reducing the handling of cash and the cost of banking services was introduced in 2013. It set daily cumulative withdrawal limits (N500,000.00 on individual accounts and N3,000,000.00 on corporate accounts). Withdrawals over the limit attract a charge of 3.0 per cent for individual accounts and 5 per cent for corporate accounts that is borne by the customer (CBN FAQ on Cashless Policy, 2013). The policy was piloted in Lagos state in 2012 and extended to Rivers, Anambra, Abia, Kano and Ogun states and the Federal Capital Territory (FCT) in 2013. This initiative led to an increase in the use of PoS terminals and online fund transfers as an alternative to cash. The Payments System Management Bill drafted in 2009, governs payments, clearing and settlement systems in Nigeria and seeks to establish a legal framework for its management, administration, operation, regulation and supervision. The Mobile Payment Regulatory Framework (2009) specifies requirements for various participants in the mobile payments, services industry in Nigeria (KPMG, 2016).

- Development and implementation of a National Financial Literacy Framework to increase Awareness and Understanding of Financial Products and Services

The National Financial Literacy Framework was approved for implementation in 2012 with the objective of educating the populace to make informed financial decisions. Through the Financial Literacy Working Group has undertaken mass sensitisation programmes, school outreach and is working on introducing financial literacy to the School Curriculum.

- Implementation of a Comprehensive Consumer Protection Framework

The Consumer Protection Framework was released in November 2016. The Framework enforces an effective resolution mechanism and mandates financial institutions to pay compensation where appropriate. It also includes sanctions on financial institutions for violation of the guidelines.

- Micro, Small and Medium Enterprises Development Fund (MSMEDF), 60 per cent which will support loans from microfinance banks and institutions to women and women-owned enterprises

The N220 Billion MSMEDF was introduced in 2015 to fund SMEs. The fund allows financial institutions borrow from the CBN at 2.0 per cent and lend to the SMEs at 9.0 per cent.

3. FINTECH

Fintech refers to the application of ICT in the field of financial services, including digital payment and remittance, investment and distribution platforms, peer-to-peer financing platforms, cyber-security, big data and data analytics and distributed ledger application to new asset classes and processes (Steering Group on Financial Technologies, 2017). A diverse and competitive financial sector that includes different service providers and markets is vital to achieving the goal of financial inclusion (Global Financial Development Report, 2014). Competition leads to innovation as the competing parties seek to discover new methods of providing better products/services to the consumers at lower prices than their competitors.

The Global Financial Crisis of 2007-2009 was a pivotal moment for Fintech as it led to increased regulation for traditional financial institutions in the United States of America (USA) with the introduction of Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States of America. The Dodd-Frank Act mixed with the anger and distrust of traditional financial institutions by the consumers led to a digital revolution in the financial sector, consumers and the technology industry began to find ways to disrupt the traditional financial services sector and make it more transparent and efficient.

Fintech has the advantage of not needing physical structures to interact with consumers. All that is needed is a stable internet connection and a mobile device. This is essential for financial inclusion as this could be used to provide financial services to financially excluded people. The following paragraphs highlight the uses and achievements of Fintech across the globe.

The largest Fintech company in the world is Ant Financial, the financial arm of Alibaba of China with a valuation of US$60 billion at par with Switzerland's biggest bank UBS (The Economist, 2016). Its online payment platform Alipay processed US$1.7 trillion in 2016 (Better than Cash Alliance, 2016), its online mutual fund called Yu'e Bao is the largest money market fund in the world. In February, it attracted over US$93 billion in investments from over 80 million customers in China. Blockchain is a distributed ledger database, highly encrypted to discourage hacking and it powers the digital currency bitcoin. It is currently being used in different ways than it was first imagined.

Fintech has been deployed with a degree of success as a poverty reduction tool in some sub-Saharan African countries. Kenya offers a glimpse as to what can be achieved when Fintech is embraced to solve the problem of financial inclusion. According to the World Bank report on Financial Inclusion, Kenya accounts for the highest percentage of adults with a mobile money account in Africa (58.0 per cent). This is due to the large-scale use of mobile money solutions such as M-Pesa.

M-Pesa is a mobile device-based platform for money transfers and financial services founded in Kenya in 2007, it allows users deposit, withdraw, transfer money, pay bills through their mobile devices. It involves a network of agents who pre-buy mobile money and retail it to customers for cash-in operations (Alexandre, 2010). It also offers crowd-funding services for a variety of reasons, including medical emergencies and droughts (Runde, 2015). The percentage of people living on less than US$1.25 a day who use M-Pesa rose from less than 20 per cent in 2008 to 72 per cent by 2011, while the percentage of the unbanked who used M-Pesa rose from about 21 per cent in 2008 to 75 per cent (Suri et all, 2012). Access to M-Pesa increased consumption levels over a six year period, enabling an estimated 186,000 families or as many as 2.0 per cent of Kenyan households move out of poverty (Dawson, 2017). M-Pesa has contributed to business creation through the agent networks and the provision of micro-credit for small businesses. In 2015, the One Acre Fund (OAF) a non-profit organisation in Kenya that provides farmers with agricultural input such as seeds and fertilisers on credit enabled farmers make loan repayments through M-Pesa in some of the poorest farming communities in Kenya. The result was an 85 per cent reduction in payment leakages, an 80 per cent cost savings on collection and a 48 per cent increase in earnings over their peers who did not participate in the OAF programs (One Acre Fund, 2016). This clearly illustrates that Fintech is a viable option on bringing more people financial services, improving their quality of life and acting as a catalyst for economic growth.

In March 2017, the Kenyan Government issued its first mobile only bond the M-Akiba bond (Reuters News, 2017). The bond was offered on the M-Pesa app and similar mobile apps. It allows the investor to buy through the phone, record their holdings and receive coupon payments through the phone. This initiative allows the Kenyan Government tap into a previously untapped base of rural and low-income earners. This is good for financial inclusion as it helps the population save and at the same time fund the government.

To facilitate cross-currency, cross-border and cross-network payments in Africa, MFS Africa, a Fintech company provides financial services to the unbanked and under-banked population by connecting mobile wallets in Africa. This allows funds to be transferred on the platform throughout the continent thereby saving money on transaction costs that are higher when using popular fund transfer apps.

Digital currency, especially Bitcoin, has gained wide acceptance in recent times. Bitcoins, which can be exchanged for traditional currencies, can be transferred across the internet by users and have no central monetary authority. It is underpinned by peer-to-peer network made up of its users machines (The Economist, 2013). Central banks all over the world are looking at bitcoin and are contemplating issuing sovereign digital currencies as it has the potential to reduce printing costs and monetary policy reasons. In Africa, Senegal is expected to launch its digital currency e-CFA on mobile platforms and wallets such as M-

Pesa to help with financial inclusion. This digital currency is to be issued by the Banque Regionale du Marches (BRM) and the second phase will be extended to the members of the West African Monetary Union (WAEMU), excluding Nigeria (Quartz, 2017).

3.1 Fintech and Financial Inclusion in Nigeria

The World Bank estimates that end-2015 Nigeria had one (1) commercial bank branch per 20,000 people and one (1) bank ATM per 16,000 people. This clearly shows that the available financial infrastructure is inadequate. Fintech startups can help bridge this gap by simplifying the money transfer and payments processes, lowering transaction costs, perfecting giving loans at reasonable rates using technology (Amaza, 2016).

The liberalisation of the telecommunications industry by the administration of President Olusegun Obasanjo in 2003 laid the foundation for the emergence of Fintech in Nigeria. The monopoly held by the state owned Nigerian Telecommunications Limited (NITEL) was broken, making way for new private sector players such as MTN of South Africa, Globalcom Limited of Nigeria to provide Nigerians with access to mobile and internet services that were hitherto unavailable. Due to the liberalisation, Nigeria had 86 million unique mobile phone subscribers with a penetration rate of 45.4 per cent and a smartphone adoption rate of 29.9 per cent at end-2016 (GSMA Intelligence, 2017). This statistic shows that more Nigerians have mobile devices than bank accounts; this is a clear opportunity for Fintech to bridge the gap by providing financial services to more people.

Also, the adoption of the Cash-less Policy accelerated the growth of the Fintech industry in Nigeria. It gave rise to several innovative payment systems propelled by changing consumer patterns, rising adoption of smartphones, increased internet penetration, and deployment of ATMs (KPMG, 2016).

Interswitch Limited is the largest payment processing service provider in Nigeria and Africa. The Company provides transaction switching and electronic payments processing infrastructure that connects banks in Nigeria. This enables debit cards function on payment terminals (ATMs and PoS terminals) of member banks, international cards such as MasterCard and VISA can also function on the network. Thirty Two (32) million consumers use Interswitch's Verve PIN cards and chips (Techcrunch.com, 2016). This enables funds transfer, digital payments between banks and helps to provide more people with these important services at their convenience thereby boosting financial inclusion. Interswitch also offers a digital payment app that is available on mobile devices and ATMs called "Quickteller". It allows users transfer funds, pay bills, buy airtime credit, among other services, in real time. At end-2016, Quickteller has processed over US$2.4 billion in transactions. In the same year, the CBN granted approval in principle to Interswitch Financial Inclusion Services, a subsidiary of the company to operate as a Super-Agent. The company has also attracted foreign direct investment (FDI) into the country. It received funding to the tune of US$110 million in 2010 from Helios Investment Partners and Adlevo Capital Managers, LLC and another US$20 million from the International Finance Corporation in 2011 (KPMG, 2016).

Pagatech Limited is another Fintech startup helping to bridge the financial inclusion gap. This startup utilises Unstructured Supplementary Service Data (USSD) codes and a mobile app to provide mobile phone-based money transfer and bill payment services. Paga is also a CBN approved mobile money agent. It has the single largest network of financial access points in Nigeria with 11,600 agents, compared with 5,358 branches of all banks in Nigeria combined. To further increase financial access points, Paga in 2017 partnered with the Nigerian Postal Service (NIPOST) in line with the Shared Agent Network Framework of the CBN to bring financial services closer to previously excluded individuals. With this partnership, there are now 49 NIPOST-Paga outlets in 4 states (Lagos, Bayelsa, Bauchi, Rivers) and the FCT. In 4 years, Paga has processed over 31 million transactions worth N400 billion (Paga, 2016). To further provide financial services to the un-banked and under-banked, Paga partnered with MFS Africa Hub to provide mobile money remittance services from any country in Africa (Thisday, 2017). It offers a reduction in transaction costs and by-passing the filling of countless forms to receive funds, instead the funds are sent directly to Paga users who can then withdraw the cash from a network agent.

Traditional commercial banks have also realised the potential to provide more efficient banking services to a wider audience at a lower cost. They have the advantage of having more capital, better manpower, consumer data and an existing customer base that are not available to startups. These banks are largely interested in payment and money transfer solutions such as USSD codes and mobile banking apps. The number of transactions performed using the USSD service has more than doubled the number of transactions on mobile banking platforms for banks that offer the USSD service (KPMG, 2016). In 2015, Access Bank introduced "PaywithCapture", a mobile app that allows customers pay bills by scanning a QR code with a smartphone linked to their account. Wema Bank in 2017 launched a fully digital bank called "ALAT" with no paperwork required to open an account, a phone number and a BVN number are all that are required. This is useful in attracting people in the rural areas as it eliminates the cumbersome account opening process.

International development agencies are also involved by funding the deployment of Fintech to provide financial services to the unbanked. The Bill and Melinda Gates Foundation and the UK Department for International Development (DFID) through Enhancing Financial Innovation & Access (EFInA), a financial sector development organisation that promotes financial inclusion, awards an innovation grant to help organisations provide financial services to the unbanked using technology or other innovative means. It has awarded over US$10 million in grants to Fintech startups, Deposit Money Banks (DMBs) and Microfinance Banks (MFBs).

Fintech is also a useful tool in fighting corruption and leakages. The Federal Government in 2007 implemented the Integrated Personnel & Payroll Information System (IPPIS) for the payment of salaries and wages directly to Government employees. It was initiated to solve the problem of payments to individuals not in the government's employ known as 'ghost workers". This system has been a success so far with the government eliminating over 60,000 ghost workers while saving over N185 billion.

In 2015, the FGN began the full deployment of a Treasury Single Account (TSA) for its Ministries, Departments and Agencies (MDAs), Parastatals and Institutions through a Consolidated Revenue Account (CRA) domiciled at the CBN. The TSA is a bank account or a set of linked accounts through which the government transacts all its receipts and payments (IMF, 2010). This was made possible by the deployment of Remita, an e-collection platform owned by Systemspecs Ltd, a human resources and Fintech company. According to the Nigerian Finance Minister, the TSA had been able to capture a balance of N2.2 trillion that was previously deposited in different commercial banks.

4.0 CHALLENGES TO THE GROWTH OF FINTECH AND FINANCIAL INCLUSION IN NIGERIA.

1. Inadequate Industry Infrastructure

ATM and debit card transactions take place within a complex infrastructure. Payment processing requires a chain of activities such as transaction initiation, transmission of payment information to participating parties, sorting and aggregating payment information, and transfer of funds to appropriate parties (Hayashi et all, 2003). All these are done through Electronic Funds Transfer (EFT) networks. In Nigeria, the EFT network is mostly run by third party service providers such as Interswitch and the NIBBS. Often due to poor internet connectivity by the Internet Service Providers (ISPs) and card switching issues, card/online transactions get declined causing a lack of confidence in cash-less solutions and embarrassment to the user. As a result, most people choose to carry cash around and rely on Fintech solutions as a backup.

2. High Prevalence of Cybercrimes

Nigeria is a low-trust environment due to the high incidence of cybercrimes/fraud. The Nigerian Electronic Fraud Forum (NeFF) in its 2016 Annual Report estimated that N2.19 billion was lost to fraud. According to the Report, ATM fraud accounted for N464 million of the total; e-Commerce N132 million and mobile banking, N235 million. As a result, the average Nigerian is skeptical of the services offered by both the traditional banks and the Fintech startups.

Also, the DMBs have a poor record of resolving cases of switching/network problems, including debiting twice for a transaction, debiting an ATM withdrawal without receiving the cash. All these issues make the customers lose trust of the banking system, thereby making it difficult to attract the unbanked.

3. Inadequate Financial Literacy

Most adult Nigerians lack basic financial knowledge on savings, investment and insurance. Consequently, they use traditional and unregulated methods of banking that offer less value than formal financial services. Financial literacy is therefore needed to educate the population and dispel myths about the financial services sector.

4. Exclusion of Telecoms Companies from Providing Mobile Money Services

Under the Guidelines for Mobile Money Services by the CBN, telecommunications companies are excluded from delivering mobile money services. Only banks and other corporate organisations are allowed to operate mobile money services. M-Pesa in Kenya is owned and operated by Safaricom, a telecommunications company. Telecommunications companies have a large, diverse customer base, especially in the rural areas, making them ideal mobile money operators.

5. Inadequate Funding

This is a major impediment to entrepreneurship in Nigeria. SMEs do not have access to cheap credit. The interest rates on loans from the banks are high. Banks prefer to lend to the big companies, thereby crowding out small businesses. With the introduction of a collateral registry and the effective implementation of the Micro, Small and Medium Enterprises Development Fund (MSMEDF), there is hope small businesses can get access to credit, thereby promoting financial inclusion in the country.

5.0 POLICY RECOMMENDATIONS

Policymakers must create an enabling environment for innovation that seeks to correct market failures. The CBN as the lead regulator of the Nigerian economy has to walk a fine line between providing incentives for innovation and protecting the consumer at the same time fostering economic growth and financial stability. To achieve this, the Bank should consider the following options:

1. Creation of a Fintech Facilitation Office (FFO)

The CBN can learn from the example of the Hong Kong Monetary Authority (HKMA) by establishing a Fintech Facilitation Office. This would signal willingness to transition from a commodity-based economy to a knowledge/services-based economy.

The main function of this office will be to promote innovation by providing a platform for industry players and the regulator to interface. The office should be seen as a front office for Fintech in Nigeria and be equipped to assist stakeholders and develop policies that will attract foreign and local investments to Nigeria.

2. Funding Research and Development

Research and development are very important and no industry succeeds without quality research. International donor agencies such as the Bill and Melinda Gates Foundation already provide grants to assist in achieving the financial inclusion target. While this is commendable, it is inadequate. The CBN should consider funding research and providing incentives for interested parties to fund research into finding effective methods to achieving financial inclusion.

The Government of Hong Kong plans to send over 300 students to join Fintech camps in universities around the world to gain knowledge on the sector (Steering Group on Financial Technologies Hong Kong, 2017). The CBN can implement a variant of this, thereby promoting human capital development of the country.

3. Enhanced Methods of Teaching Financial Literacy

Research indicates that standard classroom-based financial education aimed at the general population does not have much impact on financial inclusion (GDR Report, 2014). For financial inclusion to become a reality, the population has to have basic knowledge of how financial services benefits them. This can be achieved through targeted placements in popular TV and radio shows on local language channels. The local language radio stations such as the BBC Hausa reach a very wide audience. Skits could be developed to educate and encourage formalised savings and improve access to microcredit for entrepreneurs.

4. Regulatory Sandbox Programmes

Over-regulation stifles growth. Regulation different from formal financial industry is needed in the early stages of Fintech to help startups grow. Regulatory sandboxes are protected and monitored in environments where Fintech startups can develop products and solutions without running afoul of laws and risking customers' money and sensitive data (TechAsia, 2017)

This involves a clear compliance and regulation strategy for selected Fintech startups. The startups/interested parties will apply for admission into the sandbox programme to work on priority areas outlined by the CBN. For each successful application, the Fintech Facilitation Office will take charge. This would help to foster innovation and eventual growth and development of the economy. The program is being implemented with considerable success in South East Asia (Singapore, Hong-Kong and Malaysia). The Bank of England is also implementing a similar programme called the "Fintech Accelerator".

5. Digitizing Government Payments

The success of the IPPIS and TSA has shown that Fintech has the potential to plug leakages and reduce graft. It is easier to track online payments than cash payments. The government should consider implementing a version of the IPPIS that tracks payments and receipts for the procurement of goods and services; also conditional cash payments to the poor should be done through Fintech channels to deepen financial inclusion.

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