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FINANCIAL INCLUSION AND STABILITY THROUGH DIGITAL FINANCE

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ABSTRACT

Financial inclusion is one of the cornerstones of a developing economy. Launched in 2015, Digital India has been regarded as a significant intervention to bring the unbanked population, who had been kept out of the mainstream economy, into the formal financial net. While there has been an improvement in digital transactions across the country, issues still remain of last-mile connectivity of banks and other financial institutions, dormant accounts, among others.
Keywords: *Financial inclusion, Digital finance, Dormant accounts, Fintech.*

INTRODUCTION

This study examines the impact of digital finance for financial inclusion and financial system stability. Focusing on digital finance, this article provides a discussion on digital finance and explores the impact of digital finance for financial inclusion and financial system stability an issue which has not been addressed in the literature.

Today, the relevance of digital finance and financial inclusion for poverty reduction and economic growth is attracting the attention of policy makers and academics, largely because of the number of issues that persist which if addressed can make digital finance work better for individuals, businesses, governments and the economy. Digital finance and financial inclusion have several benefits to financial services users, digital finance providers, governments and the economy such as increasing access to finance among poor individuals,

reducing the cost of financial intermediation for banks and fintech providers, and increasing aggregate expenditure for governments.

Digital finance and financial inclusion have not adequately permeated vast segments of the population, which suggests an existing gap between the availability of finance, its accessibility and use. One area where the disparity is quite pervasive and is receiving increased attention particularly among fintech providers is digital financial inclusion, financial data inclusion and digital finance. The relationship between these and the issues they pose for financial inclusion have received very little attention in the literature. Also, fintech providers can promote economic growth during good economic times by increasing the volume of financial transactions in the financial system, although, it is still unknown whether fintech providers and their activities can exacerbate economic crises during bad economic times.

The discussion in this article contributes to the ongoing debate led by the World Bank in support of financial inclusion as an effective solution for poverty reduction in developing and poverty stricken countries.

1.1 Digital finance: concept and benefits

Digital finance encompasses a magnitude of new financial products, financial businesses, finance related software, and novel forms of customer communication and interaction delivered by fintech companies and innovative financial service providers. While there is no standard definition of digital finance, there is some consensus that digital finance encompasses all products, services, technology and/or infrastructure that enable individuals and companies to have access to payments, savings, and credit facilities via the internet (online) without the need to visit a bank branch or without dealing directly with the financial service provider.

There are three key components of any digital financial service: a digital transactional platform, retail agents, and the use by customers and agents of a device, most commonly a mobile phone, to transact via the digital platform. To use digital financial services (DFS), the DFS user will have an existing bank account which they own (or third-party accounts with approved permission to use them), and should have available funds (or overdraft) in their accounts to make cash payments (outflows) or to receive revenue (cash inflow) via digital platforms including mobile devices, personal computers or the internet.

Digital finance has a few advantages. For example, digital finance can lead to greater financial inclusion, expansion of financial services to non-financial sectors, and the expansion of basic services to individuals since nearly 50% of people in the developing world already own a mobile phone.

Digital finance has the potential to provide affordable, convenient and secure banking service to poor individuals in developing countries. Recent improvement in the accessibility and affordability of digital financial services around the world can help millions of poor customers move from cash based transactions to formal digital financial transactions on secured digital platforms.

Digital finance promises to boost the gross domestic product (GDP) of digitalized economies by providing convenient access to diverse range of financial products and services (and credit facilities) for individuals as well as small, medium and large businesses, which can boost aggregate expenditure thereby improving GDP levels. Digital finance can also lead to greater economic stability and increased financial intermediation, both for customers and for the economy.

Innovation in digital finance can have long-term positive effects for banking performance. The adoption of SWIFT has large effects on profitability in the long-term; these profit- ability effects are greater for small banks than for large banks; and exhibits significant network effects on performance.

Digital finance also benefits governments by providing a platform to facilitate increase in aggregate expenditure which subsequently generates higher tax revenue arising from increase in the volume of financial transactions.

Digital finance has benefits to financial and monetary system regulators because full-scale digital finance adoption can significantly reduce the circulation of black money and counterfeit money. Other benefits of digital finance to customers include greater control of customers' personal finance, quick financial decision making, and the ability to make and receive payments within seconds.

In short, digital finance should improve the welfare of individuals and businesses that have formal bank accounts and have funds in their bank accounts to complete multiple financial transactions. However, the expected benefits of digital finance can only be fully realized if the cost of providing digital financial services is negligible or zero.

1.2 Digital financial inclusion: concept and benefits

The digital financial inclusion can be defined as digital access to, and the use of, formal financial services by the excluded and underserved population. The process of digital financial inclusion begins with the assumption that the excluded and underserved population has some sort of formal bank accounts and need digital access to enable them to carry out basic financial transactions remotely. If the excluded and underserved population understands and can be persuaded about the intended benefits of digital financial inclusion, an effective

digital financial inclusion program should be suited to meet the needs of the excluded and underserved population, and should be delivered responsibly at a cost that is sustainable to providers and affordable to customers.

Digital financial inclusion promises to help banks lower costs by reducing queuing lines in banking halls, reduce manual paperwork and documentation and to maintain fewer bank branches .With digital financial inclusion, large number of depositors can easily switch banks within minutes; forcing banks to provide quality services or risk losing depositors to rival banks. Digital financial inclusion also helps to reduce the amount of physical cash in circulation and is instrumental in reducing high inflation levels in developing and poor countries. Digital financial inclusion can improve the welfare of individuals and businesses that have a reliable digital platform with which to access funds in their bank accounts to carry out financial transactions. The expected benefits of digital financial inclusion can be fully realised if the cost of obtaining a digital transactional platform by poor individuals is negligible or low, where a digital transactional platform refers to mobile phones, personal computers and related devices.

1.3 Fintech providers: concept and benefits

The term 'Fintech' denotes 'financial technology' and is defined as the delivery of financial and banking services through modern technological innovation led by computer programs and algorithms. A Fintech provider, on the other hand, is defined as an individual or company that uses a technology platform, whether online or offline, to provide new financial services or to improve the delivery of existing financial services. Ideally, a provider would qualify to be termed a Fintech provider if it uses technology (whether online or offline) to provide, or to improve, the delivery of financial services such that the number of hurdles between requesting for a financial service and receiving the financial service is significantly reduced for users of financial services. Fintech companies play an important role in the digital finance economy. Fintech providers are emerging in the financial services sector to either compete with banks or to complement the functions of banks to their customers. Fintech companies are diverse, and their diversity largely depends on available technology whether online or offline. The activities of Fintech providers can have implications for financial inclusion and stability.

There are benefits of doing business with Fintech providers. There are reasons why individuals would rely on Fintech providers even though federally insured banks can provide the same financial services to customers at lower costs than Fintech providers.

- Fintech providers can provide quicker financial services with a seamless process, making it easier for low income individuals to manage their financial obligations on a day to day basis.

- Fintech providers do not handle deposits like banks which implies that Fintech providers will face fewer regulations (or will be unregulated in some countries) and the low regulatory burden they face makes it easier for Fintech providers to focus on improving their financial technology and intermediation function while reducing cost, where possible, to serve customers better.

- Fintech providers can partner with traditional lending institutions which can help them reduce operational costs and improve the quality of their intermediation activities. The financial technology of Fintech providers can add value to the activities of the traditional lending institutions they partner with, particularly in 'process improvement' for their online lending business.

- Fintech providers have superior ability to provide instant emergency funds or loans in small amounts to individuals with low and poor incomes compared to banks and other lending institutions. This is because conventional banks and other lending institutions are not obliged to provide emergency funds to anyone, and any request for emergency funding at a conventional bank or lending institution must go through the usual credit risk assessment process which may be too lengthy for individuals that need instant emergency funds.

- There is the potential for technology to provide convenience. Fintech providers that operate via online platforms can electronically provide increased convenience to users by providing access to such services and making it available always from any location where the user or consumer can access the Internet.

1.4 Digital finance and financial inclusion

1.4.1 Positive effects

The theoretical underpinning for the relationship between digital finance and financial inclusion is the premise that a large amount of the excluded population owns (or have) a mobile phone, and that the provision of financial services via mobile phones and related devices can improve access to finance for the excluded population.

The positive effects of digital finance for financial inclusion are varied.

- Greater digital finance when applied to the lives of low-income and poor people can improve their access to basic services, thereby leading to greater financial inclusion in rural areas.

- Greater digital financial services channelled to rural and poor communities can improve access to finance for bank customers in rural and poor communities who

cannot conveniently access banks located in the formal sector due to poor transportation networks and long queuing hours in banking halls.

- It will reduce bank customers' presence in bank branches and reduce cost because bank would cost efficiently maintain fewer branches, and the lower costs would have positive effects for bank profitability and financial inclusion in rural and poor communities.

- Easy to use digital finance can provide a more convenient platform for individuals to carry out basic financial transactions including payments for electricity, water supply, money transfer to family and friends etc.

- If digital finance platforms are easy to use, users of digital financial services can help inform and persuade their peers in the formal and informal (rural) sector to take advantage of digital financial services, leading to greater number of individuals using digital finance thereby leading to greater financial inclusion.

1.4.2 Negative effect

On the other hand, digital finance can have negative effects for financial inclusion. Providers of digital finance services are profit seeking corporations that use digital finance to maximise their profitability or to maximise the profitable opportunities of businesses affiliated with them.

- Corporate providers of digital finance services can discriminately use a more aggressive marketing tactic to persuade high and middle income customers to use a new or existing digital finance platform or infrastructure and use a less aggressive marketing tactic to persuade low income and poor customers to use new or existing digital platforms or infrastructure if they believe the latter cannot afford the associated fees, thereby leading to lower financial inclusion for poor and low-income customers since the net monetary pay off to digital finance providers is higher with high and middle income customers than with low income and poor customers.

- Bias in the provision of digital finance can be geographical because digital finance providers, based on their own internal risk assessment which may change from time to time, can choose to withdraw or discontinue the provision of specific digital finance services to high risk rural areas or communities that do not have the supporting infrastructure to sustain specific digital finance services, thereby leading to lower financial inclusion. Some supporting infrastructure needed to make DFS work efficiently may include mobile phones that have modern operating software systems and applications that support digital finance services.

- Educational bias can be introduced in the provision of digital financial services. If the net monetary value of providing digital finance to poor communities is very low, digital finance providers, based on their profitability assessment, can choose to focus less on the delivery of digital finance to poor and uneducated communities that do not have the basic financial literacy to use and understand digital finance.

1.5 Criticism

The World Bank holds the view that greater use of digital finance contributes to greater financial inclusion. However, in practice, greater use of digital finance may not lead to greater financial inclusion but rather can lead to greater financial data inclusion. Financial data inclusion involves merging individuals' biometric information to their bank accounts to permit financial transactions that can be verified and traced to the individual or firm while financial inclusion on the other hand involves increasing the number of individuals that have access to formal financial services mainly via having formal bank accounts.

Despite the benefits of digital financial services many countries in the developing world still face considerable challenges in attaining merchant acceptance of digital payments. Small businesses in urban and rural areas in the developing world do not accept digital payments due to high bank fees and high set up costs, and consequently, poor individuals that have digital banking credentials are not able to make payments for services from businesses that do not accept digital payments. In these situations, the increase in financial data inclusion does not improve financial inclusion if poor individuals participate in the digital system but cannot make payments for basic expenses from nearby small businesses who find it too costly to use digital payment devices such as point of sale (POS) devices in developing countries.

Moreover, the lack of trust in digital finance channels by customers has negative effect for a digital finance led financial inclusion program in emerging and developing countries, and this problem is greater in countries that lack strong consumer protection institutions and frameworks. The implication is that having greater financial data inclusion (or having digital banking credentials) does not necessarily improve access to finance for poor individuals if individuals do not trust digital channels.

The low level of financial literacy and low awareness of digital finance channels can reduce customers' patronage of digital financial channels to perform basic financial platforms. The implication is that individuals with low income and those who are worried about the state of their personal finance will have little incentive to use digital channels which they do not understand or do not have the financial literacy to understand how it works or if they are unaware of existing digital finance infrastructure.

Overall, an unintended consequence of a digital finance led financial inclusion program is that it can lead to greater financial data inclusion but not increase financial inclusion.

1.6 Regulatory concern/data security

Regulators and customers both have concerns about data security. The wide use of digital technologies has increased the pervasiveness and scale of cyber-attacks that pose significant threat to the security and privacy of customers' data on digital channels and regulators' awareness of cyber risks could prompt regulators to rethink the tradeoff between efficiency and security in financial services. Further- more, the cost of securing customers' data on digital finance channels can exceed the cost of offering digital financial services and can have serious implications for the efficiency and profitability of digital finance providers.

Similarly, customers' awareness that their data is prone to cyber-attacks can make customers loose trust in digital channels, or they may avoid using digital channels to perform important financial transactions until strong customer protection frameworks are in place. The existence of strong consumer protection frameworks which apply to digital financial services will be critical in building the necessary trust and confidence that customers need and this can also help reduce the level of voluntary financial. Therefore, emerging digital financial services (DFS) regulations should address the efficiency issues associated with DFS security which DFS providers want, and the data security concerns that customers have.

1.7 Underestimation of risk

The overwhelming benefits of digital finance for financial inclusion can lead to the underestimation of the risks associated with digital financial inclusion.

- Digital financial inclusion is criticised because it does not benefit individuals without a formal bank account. This includes individuals outside the formal financial services sector. Digital financial inclusion also does not benefit individuals that do not use digital devices for financial decisions or transactions.

- Digital financial inclusion is more likely to benefit individuals in the urban sectors that have higher income than those in the rural sectors. The implication is that individuals with relatively high income in urban areas have greater incentive to participate in the digital financial system since the fees charged for transactions would be negligible to them, however, such fees may be substantial to poor individuals in rural areas, thereby, reducing their incentive to use digital finance platforms.

- Non-market barriers to competition are a risk that needs to be addressed. If digital finance can be provided to the poor profitably, there is the risk that existing players in the digital finance space can use non-market actions to fight off any competitive threat from new entrants seeking to enter the digital finance space. Banks and investment firms affiliated with existing Fintech businesses can refuse funding to new

entrants to compel new entrants to merge with existing players or acquisitions, and this is a major reason why Fintech startups often rely on venture capital funding rather than bank loans at the early stage of their businesses.

- Regulatory risk is also a major issue. It is difficult to develop a one size fit all regulatory framework for digital finance to regulate all kinds of financial innovation in the online digital finance space. What we see in the real world in recent years is the emergence of new and sophisticated Fintech businesses that use unconventional business models, and some of these models are designed in ways that help Fintech providers avoid all forms of banking and financial regulation. These unconventional business models will pose new challenges and risks to financial services regulators which they need to address in a proper and timely fashion, as more and more Fintech firms continue to emerge.

- Quality and affordable access to digital connectivity is needed to ensure that poor and low income individuals can have access to digital financial services from any location and at all time.

In short, there should be a robust regulatory system to monitor digital finance and its inclusion objectives to ensure that digital finance reshape the financial services industry and produce outcomes that were anticipated or wished for both by financial system regulators and the World Bank.

1.8 Challenges of fintech as a business model

One problem associated with Fintech platforms is that they often attract 'high-risk customers', that is, customers perceived to be highly risky by conventional banks. The credit score and credit risk assessment outcome of these customers makes them unlikely to receive loans from regulated conventional banks, which then makes Fintech providers the alternative lender that risky borrowers can resort to. Over time, excessive patronage of Fintech providers by large number of risky customers can threaten the stability of the financial intermediation process if massive defaults arise from such risky lending.

A second issue is that Fintech providers can help reduce the cost of financial intermediation, but the cost incurred in offering the financial service is not completely zero. This is because Fintech providers will normally incur some costs which may include the cost of adopting new technology, the cost of improving existing financial technologies, the cost of online security, as well as, regulatory costs in the country where the Fintech operate in, if they are regulated. These costs can affect the profitability of Fintech providers.

Another problem is that Fintech providers may not have a sustainable revenue base because they typically provide their service free of charge or for a negligible amount to attract new

customers and to retain existing users; therefore, the sustainability of Fintech firms in the long run is an important issue for digital finance.

Another important issue is that stress tests have not been applied to Fintech providers, which suggests that their ability to survive a recession, high interest rates, financial crises, capital crunch, credit freeze, massive and unexpected loan defaults due to high unemployment, is almost unknown. Fintech became prominent just after the 2008 financial crisis which indicates that they have not being in operation through a full business cycle to see whether they can withstand adverse shocks that could adversely affect the delivery of their services.

Another issue is that most Fintech providers operate through an online platform which requires access to the internet to use financial services, and this has become the mainstream business model for most Fintech providers. However, the unhealthy reliance on the internet by modern Fintech providers fail to take into account that access to the internet is not universal, and factors such as income, age, education, politics and geographical differences can influence the ability of individuals to access the internet.

Another issue is that the use of Fintech platforms does not necessarily eliminate the problem of discriminatory lending which is common among conventional lending institutions. Discriminatory lending occurs where lenders are more likely to favourably grant loans to some group of individuals compared to other groups because they are from a privilege income level, credit quality, educational status or social status. Banks and other lending institutions continue to face criticism for engaging in discriminatory lending. We expect Fintech providers to incorporate machine learning into their online platforms to eliminate racial, political and other demographic bias in lending. While this is a good idea, it remains unclear how Fintech providers can successfully eliminate discriminatory lending practices if a user's demographic information is required as inputs for access to use their online platforms to engage in financial transactions.

1.9 Availability is not accessibility: some precautions

There seem to be some implied confusion between greater ‘digital financial inclusion’ and ‘access to finance’. To address this, we first need to understand that if digital finance is accessible to all and without bias; digital finance would improve the welfare of individuals that have formal bank accounts who wish to carry out basic financial services on their accounts via personal digital devices. But the availability of digital finance services is erroneously often equated to access to digital finance services, which is the case in some emerging countries. Because banks in emerging countries have online banking services does not necessarily mean that access to digital banking services is cheap for poor and low income individuals. In fact, it is often the case that such individuals find it cheaper to walk into their banking halls to undertake some transactions than to use online digital finance platforms. This means that the availability of digital finance to the poor and low income individuals

does not mean that poor and low income individuals have convenient access to it. Also, even if access to digital finance products is guaranteed to all, such access can only be convenient to low income individuals if it is cheaper to access digital finance products than to walking into a banking hall. However, this does not mean that Fintech or digital finance providers should not charge a price for their services even if it comes at a high cost for the poor. Rather, the point is that efficiency in the provision and use of digital financial services should be suited to customers' needs and delivered responsibly at a cost that is affordable to digital finance users and sustainable for digital finance providers.

1.10 Concluding remarks

This article provides a discussion on digital finance and its implication for financial inclusion and financial stability. Digital finance through Fintech providers has positive effects for financial inclusion in emerging and advanced economies, and the convenience that digital finance provides to individuals with low and variable income is often more valuable to them than the higher cost they will pay to obtain such services from conventional regulated banks. Despite the benefits of digital finance, this article has highlighted some challenge that digital finance pose for financial inclusion and financial stability. Finally, an interesting direction for future research would be to explore the relationship between digital finance and economic crises to determine whether digital finance helps to propagate financial contagion during a crisis.

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