FIN-Biz

Finance for All

Issue 3 | June 2019

Three Things that Banks Should Do

Race with – Not Against – Machines

The Partner-Agent Microinsurance Model: Overcoming Challenges

Unlocking Digital Economy -- Six Priorities

Technology Alone Cannot Induce Financial Inclusion

CRYPTOCURRENCY

21st Century Unicorn or Money of the Future?

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ব্র্যাক ব্যাংক

আস্থা অবিচল

আমাদের আস্থা আপনার সম্ভাবনায়

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FROM THE EDITOR

This issue of FIN-Biz highlights financial technology; or 'fintech', a combination of the words 'financial' and 'technology'. Fintech describes the use of technology to deliver financial services and products to consumers. Although a relatively new word, fintech is actually nothing new. Technology has always changed the financial industry. Presently, Fintech is changing the world of finance for consumers in a myriad of ways. For example, one can now open a bank account over the internet, without physically visiting a bank. One can link the account to smartphone and use it to monitor transactions. One can even turn smartphone into a 'digital wallet' and use it to pay for things using money in the account.

Fintech is also rapidly changing the insurance and investment industries. Car insurance providers now sell 'telematics-based' insurance where your driving is monitored using data collected via your smartphone or a 'black box' fitted in your car. This data can then be used to determine how much you pay for your insurance policy. In the future, it may be possible to buy insurance on a short-term or 'pay as you go' basis.

Advances in technology means consumers can also invest over the internet on an 'execution only' basis without any face-to-face interaction. In time, you may be able to get automated financial advice or 'robo advice' with little or no human interaction!

In some markets, Fintech innovation is leading to app-driven challenger bank gain traction among customers who are paying for their morning coffee with a tap of their smartphone. Similarly, every day we get some update on cryptocurrencies and the potential impact of blockchain.

Fintechs such as cloud-based core banking system are developing software that has been consistently proven to help financial organisations expand outreach into the rural areas. Much-needed technologies in microfinance have now enabled customers to instantly check their balance over the phone.

The beauty of Fintech is that, while some policymakers are still considering the challenges and barriers, Fintech start-ups are thinking of 'solutions' to the benefit of millions of the poor people.

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Photo: *S. M. Mahadi Masnad*

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INSIGHTS AND IDEAS FROM FINANCIAL INCLUSION NETWORK BANGLADESH (FIN-B)
An initiative of InM

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Time for Banks to Act

Traditionally, banks operating in Bangladesh and other countries do not view financially excluded individuals, and micro, small and medium enterprises (MSMEs) as profitable target customer segments. The good news is that technological advances are increasingly reducing the cost of serving these customers and opening up a potentially significant growth opportunity for banks.

For the banks, driving greater financial inclusion will not only generate sizable economic benefits through boosting GDP but would also increase banks' revenue incomes. Worldwide, there are 1.6 billion unbanked individuals, 3.7% of which live in Bangladesh. Similarly, more than 40% of MSMEs in countries like Bangladesh report challenges in obtaining finance. Obviously, financial inclusion can be faster in markets in which infrastructure and government policies make it easier for the banks to rapidly expand financial inclusion through innovative strategies.

Banks that act now to increase financial inclusion will be well-placed to dominate retail and MSMEs banking in Bangladesh for years to come. The key issue is to provide affordable, accessible, and relevant financial products to individuals and businesses that had previously not been able to access these products.

■ FIN-B Desk

Three Things that Banks Should Do

In the market with the right infrastructure and policies, banks need to adapt their operations to achieve profitable financial inclusion. Experience tells us that banks that focus on three actions are likely to be the most successful.

Customise offerings — to raise relevance and deepen account adoption

While regulators may require banks to offer basic accounts, simplify onerous documentation or allow correspondent banking to increase financial inclusion, such measures do not always deliver the desired results. Standardised accounts may not meet the specific needs of certain communities. For example, a traditional monthly loan payment may not be possible when an individual or MSME relies on a seasonal income stream. This can result in underutilisation of such accounts and may leave customers not truly financially included.

To drive financial inclusion, banks must structure highly relevant and potentially simplified financial solutions that meet the specific needs of their customers at an affordable cost. This requires building deeper customer understanding and a compelling customer proposition. Examples include savings accounts with insurance coverage, community savings accounts, personalised credit facilities, affordable trade financing, equipment purchase facilities or unsecured loans for MSMEs. By assuring that their product portfolios have a sufficient mix of innovative products and services, banks can earn the loyalty of newly onboarded customers and drive cross- and up-sell opportunities.

Innovate channels — to reach more customers at lower cost

Digital channels provide greater convenience for customers at a lower cost for banks and have been instrumental in helping providers overcome challenges related to infrastructure and geography in many countries. Moreover, digital technology can streamline the lending process, enable direct origination of loans and significantly reduce decision times, while also enabling greater transaction volume.

Research shows that the cost to serve customers through different bank channels varies from a high of USD 3.00 for branch teller, USD 0.65 for ATM and to a low of USD 0.10 for mobile. However, while digital channels may have the lowest cost to operate, effective financial inclusion may require a 'bricks-and-clicks' distribution model that includes a physical branch presence to build trust and confidence, perhaps supplemented by correspondent agents (such as post offices and supermarkets).

Such a model can still operate efficiently if automation is employed effectively. For example, in dense urban areas, banks could build no-frills mini branches or kiosks that offer standard products. Similarly, a correspondent agent model could serve as a local

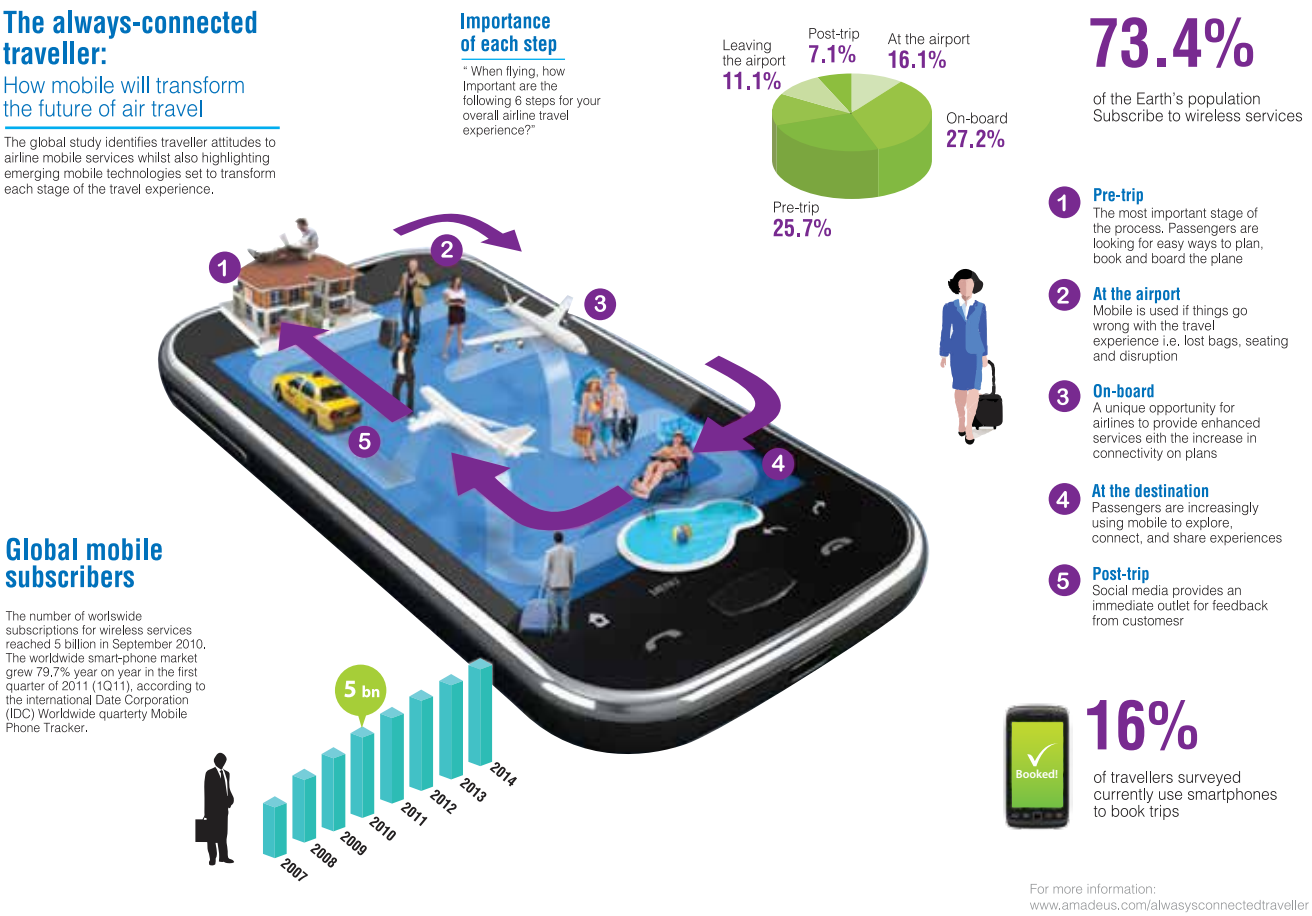
touch point for offering basic financial services in previously unbanked towns and upazilas. Partnerships with correspondent agents can also lead to integrated product or service offerings that deliver greater value to new banking customers. Physical locations could further promote financial literacy awareness and drive future demand for banking products.

Creatively mitigate risks — to address absence of credit histories

Many financially excluded individuals and MSMEs do not have the financial track record that banks traditionally rely on to support lending decisions, nor do they necessarily have access to proven identity, address and security details. This effectively cuts off their access to bank credit. To illustrate, agriculture contributes about 15% of Bangladesh's GDP and yet loans to the sector account for less than 3% of the commercial banking credit portfolios. Farmers' access to conventional bank loans has been limited by the lack of typical credit scoring data and consequently, many are forced to secure credit from informal lenders and pay exorbitant rates especially during the planting season. By developing creative credit profiling techniques, banks could boost lending to the sector and help close the financing gap to Bangladesh's agriculture sector.

In many countries, nonbanks are pioneering in this space, developing new underwriting and credit scoring analytics for individuals and businesses. These are exploring nontraditional data, such as consumers' internet footprint, social media usage, psychometric test results and biometric digital trails, as data sources to assess lending risk. Many MSMEs also have digital footprints related to e-commerce, so reviewing their customers' feedback on product and service credibility can provide data to evaluate business viability and creditworthiness. Banks should partner with or emulate these nonbank counterparts to develop innovative techniques to fill potential customers' credit history gap.

■ FIN-B Desk



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The Future is Mobile

The Digital Revolution has been taking Bangladesh and the developing world by storm for years. Much like the beginning of the Industrial Revolution in Europe, the Digital Revolution promises great change, especially for those traditionally located at the bottom of the economic pyramid. In Bangladesh, rural farmers use their mobile phones to access information about fertilisers, pesticides and the prices of crops via text messages. With nearly half of Bangladesh's labour force living off the land, the use of mobile phones should have a measurable impact on economic growth.

Further, adopting a comprehensive mobile financial system (MFS) in Bangladesh is likely to:

01 supplement existing banking models;

02 increase the likelihood that more people will be able to access finance no matter where they live;

03 decrease income inequality;

04 spur economic and employment growth.

Encouraging innovation by implementing mobile financial systems is a wholesale game changer because MFS removes the barriers to entry when it comes to the ability of the poor to access financial products and services. These financial consumers no longer need to travel to urban centres or rely on traditional banking infrastructure to access these products and services. Thus, mobile phones are spurring the delivery of needed banking, healthcare, education and financial products and services in radically new ways.

Mobile finance is not just about helping the poor. It is also intended to increase economic activity among micro, small and medium-sized enterprises (MSMEs). Many entrepreneurs would like to start up their own businesses, but refrain from doing so due to the lack of credit to finance their initial or subsequent operations. The economic opportunities offered by MFS extend to all groups of people: banked and unbanked; farmers and fishermen; informal workers and formal workers; rich and poor; educated and less educated; health service providers and health service users; and so on.

The major benefit of implementing MFS is that such a system lowers direct and indirect costs of conducting

financial transactions. Higher costs are associated with traditional banking architecture, in which certain privileges and services are tied to having an account. Opportunity costs might include the costs of transportation, including the cost of getting to the physical bank location, time spent lining up, waiting to be helped, and security. In addition, there are costs that are associated with having access to check-writing privileges, having to make a payment in person, or a physical visit to a branch or ATM to withdraw money. There are also costs associated with making domestic remittances. Lowering these costs means more financial access for greater numbers of people. In other words, digital finance is cheaper!

Lowering these costs means more financial access for greater numbers of people. In other words, digital finance is cheaper!

Across the developing world, countries in which mobile money failed to ignite are those that adopted a heavy-handed approach to regulation. Attempting to regulate the banking and financial sector in these countries poses unique problems for regulators who are faced with a large informal sector that is part and parcel of the national life. The informal sector operates beyond the formal regulations because of inadequate legislation and inefficient bureaucracy.

In the arena of digital finance, two important types of regulation exist—

A. Prudential

B. Non-prudential.

Prudential regulation deals with preventing systemic risks that may result from the failure of banks and other financial institutions.

Non-prudential regulation is more concerned about promoting transparency and establishing accounting standards and mechanisms for dispute resolution to protect consumers.

In Bangladesh, the Bangladesh Bank is concerned with both prudential and non-prudential regulation. Regulation of the financial sector is viewed as essential because such regulation provides stability to markets; protects customers, workers and taxpayers from moral hazards; maintains confidence; promotes business confidence; and minimises the risk of future financial crises.

Despite its problems, Bangladesh is uniquely positioned to take advantage of technological developments that have, and are, transforming the developing world. The risks of emerging technologies can be mitigated by re-examining existing regulations. Developing laws that are transparent, fluid to change, and tailored to address the Digital Revolution is not an insurmountable task.

However, to make it work, Bangladeshis must decide to embrace change, and must agree that the current status quo is untenable. Before attempting any comprehensive regulatory reform that embraces technology, the government and the regulators need to listen to the demands and unmet needs of the people. Any new mandate should specifically include a commitment to provide increased access to financial products and services to the excluded populations and enterprises.

Bangladeshi youth are hungry for opportunity. There are many youths who are creative and driven enough to follow through on their dream of a better Bangladesh—one that is inclusive, productive, and more competitive. There is no reason why regulatory reform could not put Bangladesh in a much better economic position than it currently enjoys.

It is fundamentally about moving on to a new development path, a path characterised by greater inputs of knowledge, new production and working practices, new corporate arrangements, and new business models. Similarly, Bangladesh has the numbers to scale up mobile financial services to a level that would be sustainable by themselves.

One thing seems clear—Bangladesh, like several other developing countries– has successfully adopted digital finance as the way forward and this has led to demonstrated increases in employment and GDP. Yet, Bangladesh needs to be cautious about identifying the kinds of regulation that will work best to help fledgling mobile money services grow while still maintaining stability in financial markets. Many of the financial crimes have now migrated over to the cyberspace.

In Bangladesh, digital finance does not have to replace existing banking systems; what it needs is a sufficient space to breathe.

■ FIN-B Desk

CRYPTOCURRENCY

21st Century Unicorn or Money of the Future?

Mustafa K Mujeri

Billionaire investor and known Bitcoin bull Tim Draper argues that in five years, only criminals will use fiat as crypto becomes universally widespread. Draper made his claims in an interview with the American financial news TV channel Fox Business released on 18 February 2019.

What cryptocurrencies really are

A cryptocurrency is a digital asset that works as a medium of exchange and uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets.

Cryptocurrencies use decentralised control as opposed to centralised digital currency and central banking systems. The decentralised control of each cryptocurrency works through distributed ledger technology, typically a blockchain that serves as a public financial transaction database.

Thus, a cryptocurrency is a digital or virtual currency that uses cryptography for security. A cryptocurrency is difficult to counterfeit because of this security feature. Many cryptocurrencies are decentralised systems based on blockchain technology, a distributed ledger enforced by a disparate network of computers. A defining feature of a cryptocurrency, and arguably its biggest allure, is its organic nature; it is not issued by any central authority, rendering it theoretically immune to government interference or manipulation.

Bitcoin, first released as open-source software in 2009, is generally considered the first decentralised cryptocurrency. Since the release of bitcoin, over 4,000 altcoins (alternative variants of bitcoin, or other cryptocurrencies) have been created. Bitcoin is the first and still most important cryptocurrency, a new electronic cash system that uses a peer-to-peer network to prevent double-spending. As of February 2019, there were over 17.53 million Bitcoins in circulation with a total market value of around $63 billion (although the market price of Bitcoin can fluctuate quite a bit).

Bitcoin's success has spawned a number of competing cryptocurrencies, known as "altcoins" such as Litecoin, Namecoin and Peercoin, as well as Ethereum, EOS, and Cardano. Today, there are literally thousands of cryptocurrencies in existence; with an aggregate market value of over $120 billion (Bitcoin currently represents more than 50% of the total value).

To realise digital cash, one needs a payment network with accounts, balances, and transaction. This is easy to understand. However, one major problem that every payment network has to solve is to prevent the so-called double spending: to prevent that one entity spends the same amount twice. Usually, this is done by a central server who keeps record about the balances.

In a decentralised network, there is no such server. So, one needs every single entity of the network to do this job. Every peer in the network needs to have a list

with all transactions to check if future transactions are valid or an attempt to double spend. But the real issue is: how can these entities keep a consensus about the records?

If the peers of the network disagree about only one single, minor balance, everything is broken. They need an absolute consensus. Usually, a central authority declares the correct state of balances. But how can you achieve consensus without a central authority?

Satoshi Nakamoto, the inventor of Bitcoin, developed a peer-to-peer electronic cash system in 2008. His major innovation was to achieve consensus without a central authority. Cryptocurrencies are a part of this solution – the part that made the solution thrilling, fascinating.

How cryptocurrencies emerged

Cryptocurrencies are limited entries in a database no one can change without fulfilling specific conditions. This may seem ordinary, but, this is exactly how you define a currency.

Take, for example, the money on your bank account. What is it more than entries in a database that can only be changed under specific conditions? You can even take physical coins and notes. What are they else than limited entries in a public physical database that can only be changed if you match the condition than you physically own the coins and notes? Money is all about a verified entry in some kind of database of accounts, balances, and transactions.

The mechanism ruling the databases of cryptocurrencies works as follows. A cryptocurrency like Bitcoin consists of a network of peers. Every peer has a record of the complete history of all transactions and thus of the balance of every account.

A transaction is a file that says, “Aliyah gives ‘X’ Bitcoin to Rayhan“ and is signed by Aliyah‘s private key. It is basic public key cryptography. After signed, a transaction is broadcasted in the network, sent from one peer to every other peer. This is basic P2P technology.

The transaction is known almost immediately by the whole network. But only after a specific amount of time it gets confirmed. Confirmation is a critical concept in cryptocurrencies. One could say that cryptocurrencies are all about confirmation.

As long as a transaction is unconfirmed, it is pending and can be forged. When a transaction is confirmed, it is set in stone. It is no longer forgeable, it can‘t be reversed, it is part of an immutable record of historical transactions: of the so-called blockchain.

What miners do

Only miners can confirm transactions. This is their job in a cryptocurrency-network. They take transactions, stamp them as legit and spread them in the network. After a transaction is confirmed by a miner, every node has to add it to its database. It has become part of the blockchain. For this job, the miners get rewarded with a token of the cryptocurrency, for example with Bitcoins. The miner‘s activity is the single most important part of cryptocurrency-system.

In a way, everybody can be a miner. Since a decentralised network has no authority to delegate this task, a cryptocurrency needs some kind of mechanism to prevent one ruling party from abusing it. Imagine someone creates thousands of peers and spreads forged transactions. The system would break immediately. So, Satoshi set the rule that the miners need to invest some work of their computers to qualify for this task. In fact, they have to find a hash – a product of a cryptographic function – that connects the new block with its predecessor. This is called the Proof-of-Work. In Bitcoin, it is based on the SHA 256 Hash algorithm.

SHA 256 is the basis of a cryptologic puzzle the miners compete to solve. After finding a solution, a miner can build a block and add it to the blockchain. As an incentive, he has the right to add a so-called coinbase transaction that gives him a specific number of Bitcoins. This is the only way to create valid Bitcoins.

Bitcoins can only be created if miners solve a cryptographic puzzle. Since the difficulty of this puzzle increases the amount of computer power the whole miner’s invest, there is only a specific amount of cryptocurrency token that can be created in a given amount of time. This is part of the consensus no peer in the network can break.

Thus, cryptocurrencies are entries about token in decentralised consensus-databases. They are called CRYPTOcurrencies because the consensus-keeping process is secured by strong cryptography. **Cryptocurrencies are built on cryptography. They are not secured by people or by trust, but by math.**

Blockchain and cryptocurrency

Cryptocurrencies hold the promise of making it easier to transfer funds directly between two parties in a transaction, without the need for a trusted third party such as a bank or credit card company; these transfers are facilitated through the use of public keys and private keys for security purposes.

In modern cryptocurrency systems, a user's "wallet", or account address, has the public key, and the private key is used to sign transactions. Fund transfers are done with minimal processing fees, allowing users to avoid the steep fees charged by most banks and financial institutions for wire transfers.

Central to the appeal and function of Bitcoin is the blockchain technology it uses to store an online ledger of all the transactions that have ever been conducted using Bitcoins, providing a data structure for this ledger that is exposed to a limited threat from hackers and can be copied across all computers running Bitcoin software. Every new block generated must be verified by the ledgers of each user on the market, making it almost impossible to forge transaction histories.

Many experts see this blockchain as having important uses in technologies such as online voting and crowdfunding, and major financial institutions such as JPMorgan Chase see potential in cryptocurrencies to lower transaction costs by making payment processing more efficient. However, **because cryptocurrencies are virtual and do not have a central repository, a digital cryptocurrency balance can be wiped out by a computer crash if a backup copy of the holdings does not exist, or if somebody simply loses their private keys.**

At the same time, there is no central authority, government, or corporation that has access to your funds or your personal information. **The semi-anonymous nature of cryptocurrency transactions makes them well-suited for a host of nefarious activities, such as money laundering and tax evasion.** However, cryptocurrency advocates often value the anonymity highly. Some cryptocurrencies are more private than others. Bitcoin,

for instance, is a relatively poor choice for conducting illegal business online, and forensic analysis of bitcoin transactions has led authorities to arrest and prosecute criminals. More privacy-oriented coins do exist, such as Dash, ZCash, or Monero, which are far more difficult to trace.

Since prices are based on supply and demand, the rate at which a cryptocurrency can be exchanged for another currency can fluctuate widely. However, plenty of research has been undertaken to identify the fundamental price drivers of cryptocurrencies. Bitcoin has indeed experienced some rapid surges and collapses in value, reaching as high as $19,000 per Bitcoin in December 2017 before returning to around $7,000 in the following months. Cryptocurrencies are thus considered by some economists to be a short-lived fad or speculative bubble. There is concern especially that the currency units, such as Bitcoins, are not rooted in any material goods. Some research has identified that the cost of producing a Bitcoin, which takes an increasingly large amount of energy, is directly related to its market price.

Cryptocurrencies' blockchains are secure, but other aspects of a cryptocurrency ecosystem are not immune to the threat of hacking. In Bitcoin's 10-year history, several online exchanges have been the subject of hacking and theft, sometimes with millions of dollars' worth of 'coins' stolen. Still, many observers look at cryptocurrencies as hope that a currency can exist that preserves value, facilitates exchange, is more transportable than hard metals, and is outside the influence of central banks and governments.

Revolutionary properties

Describing the properties of cryptocurrencies we need to separate between transactional and monetary properties. While most cryptocurrencies share a common set of properties, they are not carved in stone. The transactional properties are:

Irreversible After confirmation, a transaction cannot be reversed. NOBODY can reverse it. If you send money, you send it. No one can help you, if you sent your funds to a scammer or if a hacker stole them from your computer. There is no safety net.

Pseudonymous Neither transactions nor accounts are connected to real-world identities. You receive Bitcoins on so-called addresses, which are randomly seeming chains of around 30 characters. While it is usually possible to analyse the transaction flow, it is not necessarily possible to connect the real world identity of users with those addresses.

Fast and global Transactions are propagated instantly in the network and are confirmed in a couple of minutes. Since they happen in a global network of computers, they are completely indifferent of your physical location.

Secure Cryptocurrency funds are locked in a public key cryptography system. Only the owner of the private key can send cryptocurrency. Strong cryptography and the magic of big numbers make it impossible to break this scheme.

Permissionless One does not have to ask anybody to use cryptocurrency. It is just software that everybody can download for free. After you install it, you can receive and send Bitcoins or other cryptocurrencies. No one can prevent you; and there is no gatekeeper.

There are several monetary properties as well:

Controlled supply Most cryptocurrencies limit the supply of the tokens. In Bitcoin, the supply decreases in time and is expected reach its final number sometime around the year 2140. All cryptocurrencies control the supply of the token by a schedule written in the code. This means the monetary supply of a cryptocurrency in every given moment in future can roughly be calculated now. There is no surprise.

No debt but bearer The Fiat-money in the bank account is created by debt, and the numbers, on the ledger represent nothing but debts. It is a system of IOU. Cryptocurrencies do not represent debts. They just represent themselves. They are money as hard as coins of gold.

To understand the revolutionary impact of cryptocurrencies, one needs to consider both properties. Bitcoin as a permissionless, irreversible and pseudonymous means of payment is an attack on the control of banks and governments over the monetary transactions of their citizens. You cannot hinder someone to use Bitcoin, you cannot prohibit someone to accept a payment, you cannot undo a transaction.

As money with a limited, controlled supply that is not changeable by a government, a bank or any other central institution, cryptocurrencies attack the scope of the monetary policy. They take away the control the central banks have on inflation by manipulating the monetary supply.

Dawn of a new economy?

Mostly due to its revolutionary properties, cryptocurrencies have become a grand success that Satoshi Nakamoto probably never dreamt of. While other attempts to create a digital cash system did not attract a critical mass of users, Bitcoin had something that provoked enthusiasm and fascination.

Cryptocurrencies are termed as digital gold. It is

sound money that is secure from political influence and promises to preserve and increase its value over time. Cryptocurrencies are also a fast and comfortable means of payment with a worldwide scope, and they are private and anonymous enough to serve as a means of payment for black markets and other unlawful economic activities.

While cryptocurrencies are more used for payments, its use as a means of speculation and a store of value dwarfs the payment aspects. Cryptocurrencies gave birth to an incredibly dynamic, fast-growing market for investors and speculators. Exchanges like Okcoin, poloniex or shapeshift enables the trade of hundreds of cryptocurrencies. Their daily trade volume exceeds that of major European stock exchanges.

At the same time, the praxis of Initial Coin Distribution (ICO), mostly facilitated by Ethereum's smart contracts, gave life to incredibly successful crowdfunding projects, in which often an idea is enough to collect millions of dollars. In the case of "The DAO" it has been more than 150 million dollars.

In this rich ecosystem of coins and token, one experiences extreme volatility. It is common that a coin gains 10% a day – sometimes 100% – just to lose the same at the next day. If you are lucky, your coin's value grows up to 1000% in one or two weeks. After seven years in existence, Bitcoin's price increased from zero to more than USD 650, and its transaction volume reached more than 200.000 daily transactions. **Bitcoin serves as a digital gold standard in the whole cryptocurrency-industry and is used as a global means of payment.**

The second place in the hierarchy of cryptocurrencies is Ethereum. Its blockchain does not only validate a set of accounts and balances of

so-called states. This means that Ethereum can not only process transactions but complex contracts and programmes. This flexibility makes Ethereum the perfect instrument for blockchain -application.

In the cryptocurrency community, **Ripple has a native cryptocurrency – XRP – it is more about a network to process IOUs than the cryptocurrency itself.** XRP, the currency, does not serve as a medium to store and exchange value, but more as a token to protect the network against spam.

Litecoin is one of the first cryptocurrencies after Bitcoin and facilitated the emerge of several other cryptocurrencies which used it's codebase but made it, even more, lighter. While Litecoin failed to find a real use case and lost its second place after Bitcoin, it is still actively developed and traded and is hoarded as a backup if Bitcoin fails.

Monero is the most prominent example of the cryptonite algorithm to add the privacy features Bitcoin is missing. If Bitcoin is used, every transaction is documented in the blockchain and the trail of transactions can be followed. With the introduction of a concept called ring-signatures, the cryptonite algorithm was able to cut through that trail. Monero was the first non-premined clone of bitcoin and has achieved popularity.

Besides the ones mentioned above, there are hundreds of cryptocurrencies of several families. Most of them are nothing more than attempts to reach investors and quickly make money, but a lot of them promise playgrounds to test innovations in cryptocurrency-technology.

Overall, the market of cryptocurrencies is fast and extremely wild. Nearly every day, new cryptocurrencies emerge, old ones die, early adopters get wealthy, and investors lose money. Every cryptocurrency comes with a promise, mostly a big story to turn the world around. Few survive the first months, and most are pumped and dumped by the speculators,

Despite market volatility, cryptocurrencies have come to stay – and probably to change the world. This has already started. People all over the world buy Bitcoin to protect themselves against the devaluation of their national currency. In Asia, a market for Bitcoin remittance has emerged, and the Bitcoin using darknets of cybercrime are flourishing. More and more companies discover the power of Smart Contracts or token on Ethereum, the first real-world application of blockchain technologies.

The danger, however, is that since cryptocurrencies are devoid of a central repository, a digital cryptocurrency balance can be wiped out by a computer crash, a hack, and other unexpected events.

Whether we like it or not, the revolution has already started. Institutional investors buy cryptocurrencies. Banks and governments realise that this invention has the potential to draw their control away. **Cryptocurrencies are likely to change the world. One can decide whether to stand beside and observe – or become part of the history in the making!**

■ *Mustafa K Mujeri, Economist and Executive Director*
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১৭ লাখ ছাত্র-ছাত্রীর উপবৃত্তির টাকা সরাসরি তাদের বিকাশ একাউন্টে পৌঁছে যায়

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের উপবৃত্তি কার্যক্রমের উদ্দেশ্য হচ্ছে স্কুল থেকে দরিদ্র পরিবারের শিশুদের ঝরে পড়ার হার কমানো ও লেখাপড়ায় তাদের অংশগ্রহণ বাড়ানো। উপবৃত্তি প্রদানের মহৎ এই ডিজিটাল উদ্যোগের সাথে সম্পৃক্ত হতে পেরে বিকাশ গর্বিত। এজন্য ছাত্র-ছাত্রীদের ক্যাশ আউট করতে কোনো খরচ হয় না বা কোনো সার্ভিস চার্জ দিতে হয় না।

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Chinese University Launches Blockchain Research Centre

Recently, one of the most selective universities in China, Fudan University, has opened a blockchain research centre. Fudan University has established the Shanghai Blockchain Engineering Technology Research Centre in collaboration with Zhongan Online Property Insurance Co. Ltd. and Shanghai Zhongren Information Technology Co. Ltd.

The Centre will carry out basic research on blockchain technology, demonstrate its application, as well as provide associated talent training. The establishment of the Shanghai Blockchain Engineering Technology Research Centre will further promote the development and growth of the blockchain industry and facilitate the development of the Shanghai economy.

Other Chinese universities have also integrated blockchain into their scholarship programmes. In January 2019, in collaboration with blockchain payments firm Ripple, the Institute for Fintech Research at Beijing's Tsinghua University (THUIFR) announced the Blockchain Technology Research Scholarship Programme (BRSP). The programme intends to bring together the best graduate students in China in 2019 to study global blockchain regulations and industry development.

Earlier, the Chinese Institute for Fintech Research at Tsinghua University joined Ripple's global University Blockchain Research Initiative (UBRI) — which was originally launched in June 2018 — that supports academic research, technical development and innovation in blockchain, cryptocurrencies and digital payments.

■ FIN-B Desk

DIGITAL ECONOMY: A NEW DRIVER OF DEVELOPMENT

Can digital technologies become a new driver of Bangladesh's development? Some of the ingredients that propel the success of digital technologies can be put in place through establishing a **Digital Free Trade Zone (DFTZ)**, a special trade zone that promotes the growth of e-commerce by providing a state-of-the-art platform for small and medium enterprises (SMEs). This can attract major investments to the DFTZ, for example, from Alibaba, the largest e-commerce company in the world, and others.

Interrelated issues, closely aligned if Bangladesh is to emerge as the information and communications technology (ICT) and e-commerce hub of the region.

- Digital connectivity
- Digital entrepreneurship
- Taxation of digital platforms

First, ubiquitous, reliable, and ultrafast broadband Internet service is the key. In this respect, policy objectives for digital infrastructure should include enhancing the quality and affordability of broadband services and improving access to ultrafast fixed broadband networks.

Second, government initiatives should generate great enthusiasm for entrepreneurship. Currently, digital entrepreneurship in Bangladesh is constrained by shortages of human and financial capital, among others.

Third, Bangladesh needs to take measures that will safeguard future tax revenues from the digital economy to improve public services and reinvest in areas that the economy needs most.

Although Bangladesh faces several challenges with regard to developing the digital economy, its recent performance justifies considerable optimism. Bangladesh's remarkable transition from the least developed country (LDC) to the lower-middle-income status has occurred in parallel with rapid social and economic development. **Recent growth in GDP has reached close to 8% per year.** Bangladesh's initial growth was driven largely by factor accumulation. Strong domestic and external demand-supported by favourable demographic dynamics--contributed to rapid rise in employment and increase in the capital stock. Increasing productivity has become more important since Bangladesh's structural transformation in the 1990s and 2000s, but capital accumulation still accounts for most growth.

The adoption of digital technologies across the public and private sectors--in manufacturing, in services, and in agriculture--is essential to enable the growth in productivity that Bangladesh needs for broad-based improvements in living standards.

By leveraging the Internet, smartphones, big data, the Internet of Things, artificial intelligence, and other digital technologies, Bangladesh can increase productivity, spur innovation, and improve livelihoods. Digital technologies can drive Bangladesh's economic growth by promoting inclusion, lowering costs and increasing efficiency, and encouraging innovation and scale economies.

Most of the country's citizens are connected to the Internet, and there is more than one mobile cellular subscription for many of them. These positive trends are mitigated by relatively low adoption by businesses and poor fixed broadband quality. Despite the limitations, the digital economy is growing rapidly in value-added terms. E-commerce is growing particularly quickly, and is expected to account for a large share of the digital economy within a short period. It is seen that large export-oriented firms are adopting e-commerce at higher rates than SMEs. Improving access to affordable, reliable, and high-speed fixed broadband will help SMEs to compete with them.

The government may launch a number of initiatives to support the digital economy, including setting up the DFTZ, grant programmes,

and accelerators for digital entrepreneurs.

Access to the Internet by businesses has risen, but digital technologies have not yet made a commensurate impact on business practices. Every sector of the economy has seen progress, but despite improved access, the businesses have adopted associated technologies less readily than in other countries. Bangladesh also has less international Internet bandwidth, fewer businesses with websites, and fewer secure servers. Much of the digital economy continues to be dominated by large firms alone. Business establishments engaged in e-commerce tend to be much bigger than average. Similarly, establishments owned by women and SMEs are less likely than the average business establishment to access and use the Internet.

To increase the benefits and reduce the risks of the growing digital economy, the government needs to eliminate barriers to digital adoption, especially by increasing access to inexpensive, reliable, and high-speed Internet, and encourage entrepreneurship, particularly among SMEs and women-owned businesses. There can be programmes to encourage adoption and innovation by these enterprises.

The government also needs to ensure it collects enough revenue, in a manner that does not disadvantage domestic companies, to adequately fund the infrastructure, financing, and educational programmes that spark– and will sustain – growth in the digital economy.

In terms of digital connectivity, while a large of the population is online, Bangladesh lags in the coverage and adoption of fixed broadband services. Bangladesh also has slower download speeds and higher prices than many of its neighbours. This is a key barrier to deep adoption of digital technologies, especially by businesses.

High prices, low coverage, and limited ambitions for fixed broadband in Bangladesh are driven by a lack of market competition. Meanwhile, national policies and complex arrangements for network deployment prevent new competitors from emerging. More aggressive application of existing regulations would increase the efficiency of the existing fixed broadband infrastructure and drive down costs for consumers. The guidelines on dominance and lessening of competition need to be updated to provide for remedies that could be imposed once an anticompetitive practice is proven.

The government needs to attract more private capital to multiply public investments, close coverage gaps, and set the stage for delivery of ultrafast broadband services at speeds of over 100 Mbps. To this end, the government should consider crowding-in private investment and easing the creation of new network infrastructure through streamlined rules and regulations.

At present, a large number of the country's working population are engaged in some form of early-stage entrepreneurship activity, being motivated by emerging opportunities. There should be support for early entrepreneurship in effective ways. The education system and workforce training programmes should prepare enough workers with the right skills to meet the digital economy's increasing demands. There should not be any gap between the knowledge, skills, and attitudes of available labour and what the workplace requires.

Meanwhile, most firms rank access to capital as a moderate to very severe problem. Bangladesh has very few venture capital firms, leaving firms to rely mostly on own funding when they graduate from seed-stage funding provided by the banks. This undermines the market and deprives entrepreneurs of the expertise that typically comes with venture capital.

So far, the growth of the digital economy has occurred with limited taxation of the sector. The government needs to consider balancing the need to provide a supportive investment climate for the digital economy, with the need for fair and equitable taxation in order to support necessary public investments in physical and human capital.

The deep and rapidly rising digital adoption by the country's population provides the foundation for the takeoff of the digital economy in Bangladesh. The country's digital entrepreneurs have also shown impressive talent, producing recognisable digital startups. Further unlocking of the digital economy as the new driver of Bangladesh's development requires a coordinated approach by the government and the private sector--guided by a common vision of a dynamic and equitable economy that matches advanced technology with skilled workers with predictable regulations, transparent public institutions, and competitive markets.

■ FIN-B Desk

Race with - Not Against - Machines

History tells us that, in the long run, fears of technology leading to job losses and lower wages are misplaced.

However, in the short and medium term, the dislocation cost can be severe for certain types of jobs and population groups. It is during the transition that policies are needed to facilitate labour market flexibility and mobility, introduce and strengthen safety nets and social protection, and improve education and training.

There is a growing fear that recent and emerging breakthroughs in digital and modern technologies such as AI and robotics will lead to replacement of human workers by machines, thus bringing an era of mass joblessness and wider income inequality. History documents that jobs and livelihoods were significantly impacted by the machines in the past – as seen in the First Industrial Revolution in the 1760s, and more recently, strikes by taxi drivers in protest of on-demand car services, such as Uber. The fear of losing jobs is one of our greatest fears – and for good reasons. Job loss has significant and long-lasting negative effects on employment, earnings, consumption, health, and even life expectancy.

What determines vulnerability to automation is not so much whether the work concerned is manual or white-collar but whether it is routine. **Employment growth in many countries follows a U-shape, termed as 'job polarisation'.** In such cases, middle-skill jobs decline but both low- and high-skill jobs expand. While the U-shape holds for many developing countries, the outcome of the relationship between employment growth and skills distribution depends on local labour market conditions, existing skills distribution, and adoption of technology.

The claim that automation will make humans obsolete dates back to the past three Industrial Revolutions – **the 1760s, 1890s, and the 1970s. Each was characterised by technological innovations: First by steam engines and the mechanisation of factory production; second by electricity; and the third by using electronics and information technology (IT) in production.**

The past Industrial Revolutions led to large productivity increases, which in turn significantly raised human welfare in terms of both material living standards and leisure. Since the material living standards and leisure in developing countries such as Bangladesh lag far behind those in developed countries, this suggests that Bangladesh stands to gain more from technology-driven productivity growth.

However, productivity gains take time to materialise. For example, productivity boom occurred only in the 1920s in the case of electricity--30 years after factory electrification. For ICT, which started in the 1970s, had a visible impact in the 2000s. This long gestation period is a likely phenomenon observed for most technologies. This is particularly pronounced for general purpose technologies, as production processes need to transform and adapt to reap the benefits.

Yet in the past 250 years, the warnings of technological unemployment have been dealt with economic responses to automation. Some specific jobs in certain sectors may have disappeared, but new jobs have also been created. For instance, in the United States, farming declined from being the main employer in the economy, with 41% of all jobs in 1900 to employing only 2% of workers in 2000. Over this century, productivity gains allowed agriculture to feed a growing population with fewer workers, while the rise of new economic activities created better-paying jobs and opportunities in the cities for all workers.

The positive labour effects of these shifts typically take decades to materialise and, as in the past, there may be long periods during which period wages and employment may fall or remain stagnant despite the adoption of new technologies and increases in productivity. This long pause--coined as the 'Engels' pause'—may cause labour disruption, social unrest, and even political upheavals.

Industrial Revolutions usually pose different labour market effects. The pessimist's view of machines taking away all jobs and the optimist's view of technology creating new ones have created an ongoing controversy among the policymakers and experts. **While it is hard to predict the future outcome, the implications of the Fourth Industrial Revolution are broad-based as machines can now perform non-routine tasks which apply human logic and information.**

Evidence of such disruption is seen in the Philippines where some companies in the business process outsourcing industry have begun replacing call centre agents with chatbots powered by AI systems. While the present impact of technological change is mostly evident on relatively low-skilled 'process-driven' business outsourcing, there are widespread fears of more general impacts in the medium term.

The above, however, does not mean that machines will replace all labour or that wages will plummet across the board. Computers based on AI are remarkably effective in conducting specific tasks rather than replicating human intelligence. Human contribution is likely to remain a crucial ingredient, citing the example of the 'O-ring'. Moreover, the replacement of labour by machines takes time, and depends on specific circumstances, such as the relative cost of labour and the different stages of development of a country.

To assess the effects of technology on employment and wages, innovations are categorised into enabling technologies and replacing technologies. Enabling technologies expand the productivity of labour, and lead to higher employment and wages. Replacing technologies, on the other hand, substitute labour, making workers less useful and lowering their wages. While the direct effect of replacing technologies is negative on wages and employment, it can still have a positive effect in two main ways. First, new technologies can generate complementary tasks. Second, the productivity effects can be sufficiently large to create wealth and generate demand for other jobs. Ultimately, the effects of technology do not depend only on the properties of technology, but its interaction with the workers' abilities and the conditions of the labour market.

Over all, present day technological change promises tremendous gains in productivity and welfare. History shows that the transition for workers is likely to be difficult, and even more so in the advent of AI. Therefore, policies should focus on maximising the potential social gains and making it easier for workers to acquire new skills and switch jobs if needed. This requires policies that facilitate labour market flexibility and mobility, introduce and strengthen safety nets and social protection, and also improve education and training.

Policies that make labour unduly expensive induce the adoption of labour-replacing technologies. Labour market reform should be directed at facilitating labour flexibility and mobility, including international migration. Getting the basic business environment right for firms to invest and hire workers, and reducing market failures that hinder the growth of startups, can similarly help capture the gains of technological change. The policy principle should not be to protect obsolete jobs, but to protect people.

Safety nets are essential to support workers (and their families) who are displaced or replaced when new technologies are implemented. In the long run, broader redistribution policies may be desirable to make sure that the technological dividends are spread over the entire population, making everyone 'owner' of the current and potential technologies.

Educational reforms– emphasising scientific, mathematical, and communicational abilities, as well as softer skills such as perseverance, flexibility, creativity, adaptability, and teamwork – is crucial to developing the complementary skills that workers need to benefit from all types of machines and technologies. Complementing fundamental education with active labour market policies, workforce training, and other opportunities for lifelong learning, can encourage workers to stay engaged and continue to participate in evolving labour markets.

In the long run, technological innovation can bring about higher incomes and better quality of life, including more leisure. Even in the light of the challenges of the Fourth Industrial Revolution, this prediction is attainable– but only if public institutions promote equality of opportunity, generate an educational system that favours flexible skills and creativity, and use redistribution policies to share the proceeds of technological gains. With proper public institutions, instead of racing against the machines, instead, we can race with the machines towards a better future.

■ FIN-B Desk

Financial Inclusion

Driver to Reaching Out the Poor

The banks' financial inclusion growth opportunities can be maximised by creating a market in Bangladesh

(i) that embraces technology-led innovation;

(ii) which has a clear and supportive policy framework for financial stability.

For moving successfully, Bangladesh needs to work on both technology and infrastructure drivers as well as policy and systemic drivers.

Technology and infrastructure drivers cover **five key elements:**

High levels of mobile adoption and e-payments

As mobile devices become more affordable and network coverage expands, digital connectivity of financially excluded individuals and MSMEs is improving in the country. The access to financial services can be transformed by providing an entry-level e-payment platform to the majority of the population. High levels of mobile adoption, coupled with government action to digitalise payments (e.g. G2P and direct cash assistance programmes) could be a catalyst for low-income communities to adopt financial services. The government has already started to deliver financial assistance via digital payments into a bank account.

National digital identity (NID) system

Government-issued biometric NID programme is already operational in the country. This can provide real-time verification of identities using a fingerprint scan, iris scan or digital face print. Among others, the system enables the direct transfer of government subsidies and other benefits. Banks could leverage the biometric NID programme to verify customers at ATMs or service counters and widen access to financial services.

Credit data infrastructure

The absence of traditional credit data for financially excluded individuals and MSMEs is a major barrier to accessing finance. Bangladesh can form MSME credit registries to enable the collation of reliable and transparent data that potential lenders can use to facilitate loan applications. Banks seeking to boost lending to underserved segments could use these registries to address information asymmetry and reduce their cost to serve.

Open access to digital data

Innovative use of new data sources, such as social media profiles, can provide greater behavioural analysis that can provide financial inclusion. Meanwhile, open application programming interfaces (APIs) allow financial institutions to collaborate with FinTechs, government and external partners on innovative mobile applications and digital payment solutions. Such collaboration can lower the cost of customer acquisition and foster financial inclusion. Good examples are available (e.g. Digital India service) of the benefits of open access to digital data in the development of banking apps — particularly in the areas of security, authentication, e-signature capabilities and unified payment interfaces.

Photo: *S.M. Mahadi Masnad / Internet*

Currency digitisation

Virtual currencies have the potential to improve transaction oversight, which would reduce fraud and counterfeiting. The Bank for International Settlements (BIS) released a note in 2017 urging central banks to consider issuing digital currencies. India, for example, is weighing options for releasing its own cryptocurrency, Lakshmi. Digital currencies would lower transaction costs and drive financial inclusion, but require tight regulation, including linkage to fiat money, and an innovative response from banks that wish to remain relevant.

A combination of these new technologies can radically improve financial inclusion in Bangladesh. As new technology infrastructure increasingly permits the secure exchange of up-to-date customer information, MSMEs will seek standardised and simplified means to identify and verify themselves. Concepts such as a Digital Passport, a distributed mechanism for trusted and secure customer information exchange between multiple providers, would enable easier identification and vetting, help build credit histories and make it easier for customers to switch providers by facilitating Know Your Customer (KYC) and onboarding processes.

Policy and systemic drivers have **six major dimensions.**

1. Strong customer safeguards

Low-income consumers are particularly susceptible to aggressive and predatory sales and collection practices. Thus, implementing and enforcing stringent consumer protection laws with strong transparency and disclosure, financial integrity, and effective recourse mechanisms for grievances would build trust in banks and encourage greater financial inclusion. This also includes simplifying legal documents using plain and understandable language.

2. Responsible financial literacy and education programmes

Basic education on financial offerings can help individuals and MSMEs understand the value of having access to the financial system, which may improve money management. Financial literacy/education programmes are typically government-initiated move to establish a dedicated advocacy unit to address all inclusion initiatives and drive financial awareness. Banks can seek to support and leverage such government programmes to deepen relationships and foster customer loyalty.

3. Bankruptcy regimes

For driving financial inclusion, Bangladesh needs to regulate the wind-down of failed companies and ventures, support creditor rights, and help to resolve claims in an orderly and unbiased manner. Insolvency regimes protect lenders and raise willingness to provide credit to MSMEs.

4. Regulatory incentives for banks

Recognising that onerous regulations can be a barrier to financial inclusion, the government can move to ease selected rules. Examples include simplification of onboarding requirements for no-frills accounts (Reserve Bank of India), and measures that reduce KYC documentation for small balance accounts with correspondent agents (Brazil, Peru, Colombia and Mexico). The government-backed funds to guarantee loans to MSMEs also can facilitate enterprise financial inclusion by eliminating collateral requirements. Funds such as India's 'Credit Guarantee Fund Scheme for Small Industries' covers credit facilities of up to INR 200,000 (US$2859.90) without requiring collateral or third-party guarantees. Such guarantees insulate banks from losses related to potential defaults by MSMEs.

5. Diverse financial ecosystems

Increased provision of financial services by NGO-MFIs, e-commerce firms, FinTechs, retailers, and telecommunication companies has a direct impact on expanding financial inclusion. Consequently, a vibrant start-up community with access to diverse sources of capital is an important enabler. For example, China's leading internet and mobile payment platforms (Alibaba's Alipay and Tencent's Wechat Pay) enabled US$2.9 trillion in digital payments in 2016, raising China's e-payments value 20-fold in just four years. Digital finance dramatically helps increase sales revenues and access to capital for small merchants, while platforms such as Alibaba's Yu'e Bao make financial investments more accessible for lower-income communities.

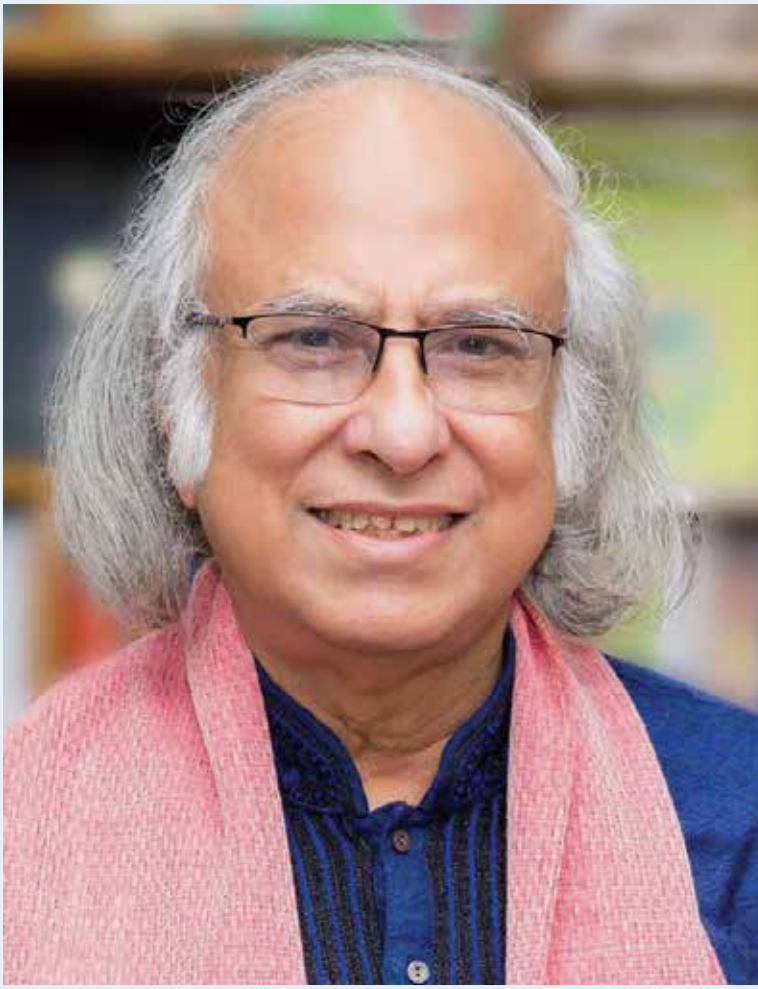
6. Interoperable financial systems

Interoperability allows for a collaborative financial system, enabling users on multiple digital networks to transact across platforms. For example, in Peru, the government, financial sector, and the four main telecommunications providers launched Modelo Peru in 2016 to establish an interoperable mobile payment platform for customers to transact across mobile networks and financial providers. This facilitates the use of mobile wallets offered by e-money issuers and promotes greater inclusion.

■ FIN-B Desk

We must fully explain how greater access and use of financial services, albeit in association with other necessary non-financial services, improve poor people's well-being.

Dr. Qazi Kholiquzzaman Ahmad



Dr. Qazi Kholiquzzaman Ahmad, the Chairman of Institute for Inclusive Finance and Development (InM), a renowned socio-economic specialist and development thinker and practitioner of international repute, has been keenly promoting sustainable development in all its aspects. In a career spanning over four decades, Dr. Ahmad has extensively participated in research activities and dialogues, nationally and internationally, covering different social, political, economic, and environmental aspects and issues of sustainable development as they relate to Bangladesh and other developing countries.

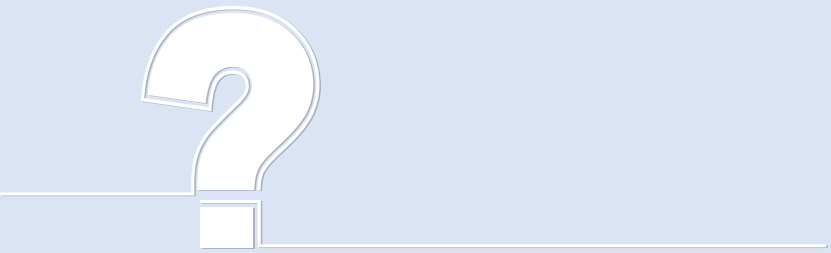
He has, over past several decades, relentlessly sought and promoted ways of achieving socially inclusive development. He has to his credit a wide range of research works on policy planning, food and agriculture, environment and water resources, rural development, poverty alleviation, human development, technology and employment generation, women in development and gender issues, etc., including 35 books and over 200 learned articles by himself or jointly with others published at home and abroad.

Dr. Qazi Kholiquzzaman Ahmad is the current Chairman of Palli Karma-Sahayak Foundation (PKSF) and the founder Chairman of the multidisciplinary research organisation Bangladesh Unnayan Parishad (BUP). He is also the Chairman of Governing Council and Director of Dhaka School of Economics (DScE), Co-Chair of the 2010 National Education Policy (NEP) Formulation committee, Regional Chair of Imagine a New South Asia (INSA), a people-centred process of South Asia regional cooperation and development. He is the former President (2002-2010) of Bangladesh Economic Association (BEA), and a former Research Director at the Bangladesh Institute of Development Studies (BIDS), former president of the Kuala Lumpur-based Association of Development Research and Training Institutes of Asia and the Pacific (ADIPA), Vice President of the Rome-based Society for International Development (SID).

He participated in the Bangladesh War of Liberation in 1971 and worked in the Planning Cell set up by the Bangladesh Government in exile. He received the Ekushey Padak awarded by the Government of Bangladesh in 2009 and The Independence Award, the highest state award in 2019.

He was a Coordinating Lead Author of the Intergovernmental Panel on Climate Change (IPCC)-Third Assessment (completed in 2001). He was also the Lead Author for IPCC Fourth Assessment (2004-2007) and is a member of the 2007 Nobel Peace Prize winning UN Intergovernmental Panel on Climate Change (IPCC) Team. He is also the Coordinator of Bangladesh Climate Change Negotiating Team, and a Member of the UNFCCC Clean Development Mechanism (CDM) Executive Board. He has played a key role in preparing the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009. He has also been the Convener of the Drafting Committee for the Country Report of Bangladesh "Rio 20: National Report on Sustainable Development" for the Brazil United Nations Conference on Sustainable Development (June 2012).

Photo: *InM*



1. Why, do you think, is it important for Bangladesh to ensure full access to useful and affordable financial products and services for the marginalised communities to ensure meaningful and inclusive development?

The important issue for Bangladesh is to ensure full access to useful and affordable and appropriate financial services for the marginalised communities to have positive impacts on poverty and income inequality. We must however also realise that financial inclusion can only help sustainably lower poverty and income inequality when the marginalised people are empowered through education, health services and training as appropriate to use access to finance for productive purposes such as expanding a business or investing in children's education. We need better policy, legal, and regulatory conditions to provide an enabling environment for a range of development outcomes for the poor. In Bangladesh, structural impediments often constrain meaningful and inclusive development. These include those relating to education, health, and infrastructure in general, where more proactive public policy interventions are needed.

Removing impediments to and increasing productivity in agriculture and MSMEs is essential. This means paying greater attention to generating economic opportunities in rural areas and for MSMEs. Public policy interventions can help build the necessary legal and institutional framework and create a level playing field that gives inclusive businesses the finances and associated services they need to start up and/or grow.

Unless we have a clearer understanding of how change happens from access to use to well-being and human dignity, we will continue to shoot in the dark.

2. A comprehensive approach to financial inclusion defines full financial inclusion as a 'state in which everyone who can use them has access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, with respect and dignity'. Would you recommend such an approach for Bangladesh?

We need a solid and comprehensive approach to financial inclusion to understand and establish which factors contribute to and how financial inclusion helps achieve inclusive development. The approach can help investigate how the most commonly cited factors such as economic growth, financial sector development, and technological advances can be shaped to promote financial and economic inclusion of the excluded and marginalised communities and enterprises.

We must fully explain how greater access and use of financial services, albeit in association with other necessary non-financial services, improve poor people's well-being. How does a simple transaction account to send money or pay a bill lead to poverty reduction? How do we know that a transaction account will improve someone's well-being? What other services are relevant? Unless we have a clearer understanding of how change happens from access to use to well-being and human dignity, we will continue to shoot in the dark. Not all finance is good, and increased

use does not necessarily mean increased well-being. We need to identify when and for whom and in what condition financial services may enhance welfare.

3. A vast segment of Bangladesh's population exists on the margins of the country's financial systems. Do you think an all-inclusive the financial system will help reduce the gap?

Bangladesh has successfully reduced poverty over the years and poverty is now mostly concentrated in geographical pockets and among different disadvantaged groups. They also belong to the margins of the country's financial system. One of the challenges for designing an all-inclusive financial system is the lack of a clear theory of change that explains how access and use of financial services improve the well-being across different types of people especially those who live on the margins of the country's financial system.

I think, the biggest opportunity in Bangladesh is that by building digital rails, we can reduce transaction costs and unlock business models and product innovations to serve these poorest people.

It is important to facilitate access to financial services to the disadvantaged people, because apart from enabling people to save money, it would help establish human dignity and empower women who, with a credit line, could undertake activities unthinkable otherwise; increase consumption and investment, and thus grow assets and income; and increase spending on other social aspects, such as preventive health and education. Many of the worst problems presently endangering the poor can be resolved through financial inclusion, along with other necessary non-financial services.

I think, the biggest opportunity in Bangladesh is that by building digital rails, we can reduce transaction costs and unlock business models and product innovations to serve these poorest people. But we need to ensure that why or how someone would choose to shift from existing channels that may be working for them, especially if there are high social and transaction costs in the use of a digital channel. Inclusive finance, along with other non-financial services, enables the poor to have livelihoods, jobs and even opportunities for entrepreneurship.

We live in a complex ecosystem and face difficult times. Natural calamities and climate change compound the already complex global economy. In such times and conditions, access to financial services and the ability to save, invest and hedge risks is important for every individual. An all-inclusive financial system, with due attention to necessary non-financial services, will help improve financial inclusion by using cutting edge technology and the social obligation of creating a prosperous Bangladesh.

The Partner-Agent Microinsurance Model: Overcoming Challenges

The lives of the poor in Bangladesh are not smooth at all. They recurrently face adverse shocks, catastrophic or manmade, and sink heavily deeper into poverty. In the absence of formal insurance, poor households mostly resort to informal mechanisms to cope with these shocks including selling productive assets and other properties which, in many cases, create negative impacts on their survival strategies.

Microinsurance, a low-cost insurance policy that covers lives, health, crops, livestock and property, is often seen as a central way of providing social protection to these populations. As such, countries around the world are developing and implementing inclusive insurance mechanism for protecting the poor. Microinsurance is still in emerging stages in Bangladesh and is considered as one of the key financial services for financial inclusion.

Commercial insurers lack both in capacity and sometimes willingness to offer microinsurance services to low-income households in Bangladesh; while a portion of MFIs, particularly the large ones, are offering various financial instruments that can be categorised as microinsurance. The MFIs-driven microinsurance initiatives have emerged for protecting their borrowers from income or productivity loss. Among the available channels of offering microinsurance services, the partner-agent model is often advocated as an effective delivery channel. It is a partnership between MFIs or cooperatives and the insurance companies.

The MFIs are responsible for the delivery and marketing of products to the clients, while the insurance companies retain all responsibility for design and development. In this model, the MFI needs to bear the risk of losing the clients of its microfinance schemes if the insurance company fails to keep its commitment successfully. Further, there are some legitimate legal issues in the field of microinsurance that need to be discussed and resolved in Bangladesh.

In 2006, MFIs came under regulation, first time, upon enactment of MRA Act 2006. The Act allows MFIs to offer microinsurance services. The MRA Act 2006, Clause 24 (2) says that “microcredit institutions can offer different types of insurance services and other social development oriented loan facilities for the loan recipients and members of their families”. On the other hand, Clause 8(1) of Insurance Act 2010 says that no person can do insurance business without obtaining the registration certificate from the Insurance Development and Regulatory Authority (IDRA), formed under the IDRA Act 2010, giving it the responsibility to control the institutions relating to insurance and re-insurance industry.

Additionally, the National Insurance Policy 2014 says that the MFIs are not allowed to do any insurance business without making a partnership with any registered insurance company under IDRA. This, in

Under the partner-agent model, agents (MFIs) can protect their clients by shifting the risks to the insurance companies and can earn some revenue through providing services, such as marketing, enrolment, claim recording, and claim processing.

fact, refers to the partner-agent relationship where MFIs will be treated as agents of registered insurance companies.

Under the partner-agent model, agents (MFIs) can protect their clients by shifting the risks to the insurance companies and can earn some revenue through providing services, such as marketing, enrolment, claim recording, and claim processing. On the other hand, the agents may experience some risks (borrowers may opt out) if insurance companies fail to provide the stipulated benefits in a timely manner. If this happens, the model may come under serious peril.

Most commercial insurers are keen to operate in the 'life market', which generates profit in a short order. Unlike health or livestock or crop insurance, moral hazard and adverse selection problems are much less of a barrier in this market. On the other hand, economic benefits of health, crop, livestock and accident insurance are much higher than life insurance products to the poor. Thus there is a mismatch of interests!

Yet, there are negligible examples of partner-agent practices in Bangladesh. Pilot experiments are needed to develop the model in Bangladesh context. Existing MFI initiated schemes of microinsurance practices are also awaiting institutional decisions. For resolving the conflicting issues, regulatory regime needs to be accommodative to new approaches and models. The regulatory framework for poor-friendly microinsurance products should encourage low-cost distribution channels and innovative partnerships.

The MFIs with strong financial portfolios and diversified geographic coverage should not be restricted to offer microinsurance services or similar financial services that address the need of low-income households in areas where they have access with fully functional branches. Along with the partner-agent model, other institutional set ups need experimentation for expanding microinsurance services for the poor in Bangladesh.

Nahid Akhter, Senior Research Associate, InM

Immersive Story

Cryptocurrency:

Can Women Change the Game?

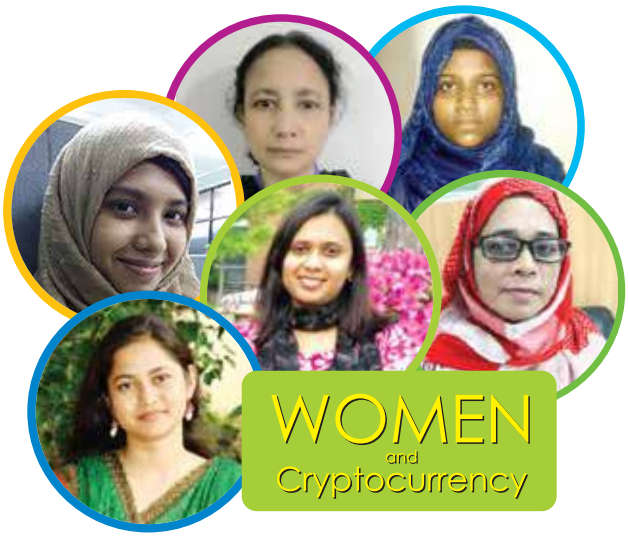
The most fascinating feature about cryptocurrencies is that they do not care who you are. You may be a woman or a man; a person of colour; someone with bad credit or no credit, but that does not matter—as long as you can log on to a computer and push the right buttons, you can send money just like anyone else.

This accessibility is a big advantage that makes the technology such a breakthrough. There is no gatekeeper!

This is possible because these currencies are built that way. Cryptocurrency transactions are processed and recorded by peer-to-peer networks—not any individual, bank, or government. These networks get around relying on those institutions by putting to work as a group of people on the network called miners.

In the case of Bitcoin, for example, thousands of these miners compete every moment to process a bunch of transactions and add them to a record called the blockchain. This competition is really a race to solve a

series of cryptographic puzzles—the first one to make it across the finish line gets rewarded with a handful of new Bitcoins, hot off the minting press. These entries in the blockchain record are then verified by other people on the network.



Cryptocurrencies are also changing the way we use money, because a lot of things happen when banks and governments are not making all the rules. Suddenly, borders, time zones, and working hours become irrelevant. You can send a payment anywhere in the world at any time and have it go through, generally, within minutes—you do not need permission from your bank, you do not need to go through a company like PayPal or Venmo.

'There's a massive opportunity here to change the global financial structure, to change a lot of ways that society interacts with technology', says Elizabeth Stark, the CEO of Lightning Labs, which, in March 2019, released an early version of much anticipated software that is designed to make Bitcoin transactions faster, cheaper, and more private. **"And it is crucially important that women participate."**

But this new financial world has started out much like the old one did: males and whites. In the early days of Bitcoin, for example, miners were mostly men who racked up much of the wealth. When it came time for these lucky few to reinvest in cryptocurrency development, the teams they built reflected the original gender disparity.

Tavonia Evans, who worked in the tech industry for nearly 20 years before launching her own cryptocurrency, called $Guap, says they are raising the bar because of how they have been held back in the past. 'The crypto market is highly competitive at the moment with people fighting for influence', she says. 'The men I have observed vying for influence are not very tech-savvy at all. Women in tech, however, tend to overachieve, study more, and expand their expertise legitimately just so they can get in this space'.

Meltem Demirors, who recently left her post as a vice president at Digital Currency Group, a cryptocurrency- and blockchain-focused investment firm that she helped launch in 2015, notes that 80 per cent of consumer spending in the U.S. is influenced by women. Not making these currencies work for women would mean **'missing out on the biggest concentration of wealth',** she says. **'It is women who control money in this world'.**

The new generation of female entrepreneurs, having watched men own the tech space, is keen on keeping the playing field level. They insist that closing the gender gap will result in a more inclusive technology.

'Wealth in our world is unfortunately still synonymous with power', says Demirors. **'So if we want to see women in power, let us help each other create wealth and let us redeploy that wealth into helping other women grow amazing businesses. It is not hard to foster more diversity. Empower women, hire them, give them capital. We are in the middle of one of the largest wealth-creation cycles of this decade, if not this century'.**

Blockchain technologies today are analogous to the early days of the Internet. **'Women need to be building this new frontier',** Stark says. **'There's way too much of the prior generation of the Internet that was not built by a diverse group of people'.** Recently we have seen how a diet of all-white-male test data can lead to bias in artificial intelligence, overlooking people of colour, for example. **'I want to see broader participation',** says Stark, **'broader perspectives contributing to better problem-solving'.**

Thanks to the women on the front lines, the industry may just have a shot at getting things right this time. We all have to be ready to make sure women do not miss out any more.

■ FIN-B Desk

Photo: *InM*

Unlocking Digital Economy- Six Priorities

Digital lifestyles, cashless societies, app-based businesses, 'smart' nations, virtual services – there is a tremendous amount of excitement at present about the growth of the digital economy. There is an intense race now among countries to become a hotspot for digital development. Bangladesh is also steadily raising Internet and social media use. The signs of the country's digital transformation are obvious, from the entrepreneurs and small firms that are innovating and using technology to grow. The government is implementing various strategies to grow the digital economy.

However, the full potential of technology as a driver of private sector growth is still not fully realised. This is because Bangladesh faces significant barriers to growing the digital economy. There are **six priorities** that stand out to strengthen the enabling environment for the digital economy.

The first is to improve the availability of affordable, high-speed Internet. Around half the country's population still lacks Internet access, and when available it tends to be through mobile broadband (for example, using smartphones) rather than the fixed broadband needed for data-intensive business applications. Both public and private investments are needed to address this, but policymakers can also help through regulatory reforms. In many countries, the broadband market is dominated by one or two large firms, and often these are state-owned. Reforms that promote competition could help to lower prices and increase speeds.

The second priority is to strengthen the population's digital skills. Although Bangladesh has a relatively good literacy and numeracy foundations, education system needs to be more focused in developing the skills needed for the digital economy. These range from basic computer usage to advanced skills like coding and data analytics, as well as 'soft skills' like collaboration and communication. Achieving this requires a focus on lifelong learning; not necessarily acquiring specific degrees but developing skills for life. There should be programmes for ongoing re-training and skills development.

Digital payments are an essential part of a digital economy, and expanding their use is **another priority.** The latest World Bank Global Findex data shows that only 19% of financial account holders in Bangladesh access their accounts using a mobile phone or the Internet. This is well below the average of the world's middle-income countries, and Sub-Saharan Africa, at 27% and 24% respectively. The government can help by putting the appropriate regulatory infrastructure in place and also by using digital payments in their interaction with citizens to the fullest extent – such as paying for government services or receiving pensions. Likewise, government-run digital NID scheme can help citizens gain account access more easily.

The next barrier, especially for e-commerce, is high-cost and unpredictable logistics. In this respect, along with challenging geography, regulation plays a role. Logistics barriers to cross-border trade in South Asia are among the highest in the world. E-commerce shipments face unpredictable customs procedures in many countries. The World Bank Logistics Performance Index shows that customs is one of the weakest areas of performance across the region's logistics environment.

The fifth relates to policies that promote trust which is essential for growing participation in the digital economy. These cover a range of areas from data privacy, to cyber security, to consumer protection. Bangladesh needs to have comprehensive data protection laws, and the capacity of data protection authorities should not be limited. These policies should also be coordinated regionally, making it easier for individuals and businesses alike to know what regulations apply when their data moves across borders.

Finally, the government needs to lead by setting examples and become more digital itself. This means streamlining the system on an integrated 'whole of government' basis; and also offering digital services platform that support businesses and reduce transaction times and costs, like online licensing and permit approvals.

Bangladesh's initiatives such as digital NIDs can trigger direct benefits in other areas of the digital economy – such as digital payments. Other policy areas, such as taxation, are also important for governments in growing the digital economy and managing its risks. Bangladesh should build the above six critical foundations for the digital economy, boosting its capacity and brokering technology to solve its development problems. This will place Bangladesh in a better position to unlock the full potential of the digital economy.

Driving Financial Inclusion through BPO

An institution that works for promoting financial inclusion has to become an emissary of trust. To establish trust of the financially excluded people in the financial network is a big challenge in Bangladesh and across the Third World economies. A country's postal network is often the most effective tool of establishing financial inclusion; yet it remains the least accredited and overlooked. A study by the Universal Postal Union (UPU) states that 1.4 million postmen go door-to-door daily establishing a daily 2 million odd contact points across the world. Postal networks therefore can become the strongest channels of inclusion globally.

Bangladesh Post Office (BPO) has a total of 9,886 post offices in five zones across the country. With such an extensive network, BPO is ideally suited to provide financial services to a wide variety of population groups across the country. Traditionally, the post office savings system has been used as a vehicle for providing financial services to the people. In recent years, BPO has introduced many changes in its services to keep itself relevant in the changing society. As such, post offices now deliver a wide range of basic postal services as well as financial and digital services using its countrywide network.

Current financial services of BPO

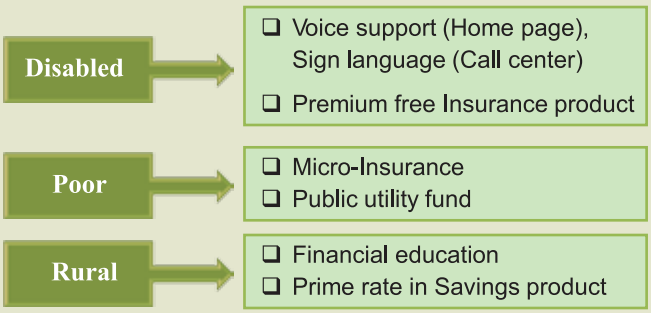
Challenges of BPO financial services

Throughout Asia--where 48% of the world's post offices are located--different models have emerged to serve local financial needs. In Indonesia, Bank Tabungan Negara sells its products through post offices and the profit is shared. In Japan, financial literacy is provided from an early age and primary school children open postal savings accounts and deposit a small amount every month for six years. It creates savings habit and develops basic knowledge of savings at an early age. The benefits of financial inclusion are therefore well known to these children.

South Korea's post bank is a good model of efficient postal finance. Under postal financial service, disabled, poor, rural, and other excluded populations can use services because of its quick adoption of financial technology and its tight integration of postal banking and mobile phone network. Korea Post

stands out for transparency of its customer services. It lists all customer complaints individually in its website for the public. Employees receive bonuses tied to customer services, and consumer surveys rank it as one of the country's most popular institutions. In recent years, Korea Post is providing savings accounts, insurance products, and credit cards aimed at low-income customers. In some remote areas, post offices even provide services like train and airline bookings as well.

Postal finance in South Korea



BPO can replicate selected features from the above models of postal financial services. For efficient and quick services, BPO can develop collaboration for ATMs services and issue debit cards that can be used at stores which will give customers the full range of banking services.

A recent innovative service of BPO is 'Nagad', which gives freedom of financial transactions with greater control and discipline. Nagad is a dynamic and secured digital financial service that facilitates customers daily financial transaction needs like cash in, cash out, send money (P2P), mobile recharge and other services. Cash out service enables customers to withdraw money with maximum cash out limit of Tk. 250,000 from Nagad digital financial service account from any Nagad Uddokta point located throughout the country. For moving forward, BPO needs to actively work out practical strategies in a number of areas covering technological, institutional, human and related dimensions:

Partnership — For moving forward, partnering with telecommunications and technology providers can enable BPO to be more effective in providing new digital financial services

Staff training — Postal operators need to ensure that postal officials and staff are trained in technical skills necessary to manage and operate the new services. This is especially the case when new services are expanded to rural areas

Interoperability — Similarly, interoperability across mobile networks for mobile services, as well as across ATM and POS networks for electronic card services, is essential if BPO is to provide easy and convenient access to postal financial services.

Incentives — The BPO also needs to embed incentives into its mobile or card solutions to encourage the staff to promote these services

Cash out — The liquidity issues in rural post offices also need careful consideration that may create trouble paying out remittances due to a lack of cash.

Postal Network — Postal operators can be successful in enhancing financial inclusion if they are able to ensure full utilisation of the postal network, connectivity among postal outlets, and capillarity of the postal network.

On the technological front, BPO needs computerisation and networking of its post offices across the country which can give better tracking and digitisation of operations. This should also involve core banking and insurance solution implementation and upgrades. The digitisation exercise can then be used for data registration services via the postal network to enhance digital reach and establish Phase 2 of financial inclusion. The government may set up a Task Force to leverage the postal network in the country to enhance the role of BPO in financial inclusion, among other services.

For ensuring institutional sustainability, BPO must work to change its typical image of a postman riding down a dusty village road on an old bicycle carrying letters. The traditional red post boxes across the country must mark the end of traditional post. In this spirit, BPO has started holding on strong for a transition and to make a deep impact in Bangladesh's financial inclusion journey.

Dr. Farhana Nargis, Research Fellow, InM

MICRO-MERCHANTS IN BANGLADESH: NEW FINDINGS

A new UNCDF review provides empirical insights into Bangladesh's second-largest market segment, micro-merchants. The 'Landscape Assessment of Micro-Merchants in Bangladesh', published in October 2018, gives a comprehensive assessment of micro-merchants in the fast-moving consumer goods (FMCG) sector in Bangladesh. The Programme's Micro-Merchant Research into Action series introduces the fast-growing micro-merchants in retail activities, generating an estimated $18.42 billion in annual sales. Women micro-merchants and interventions support their economic and financial empowerment.

The analysis highlights five key findings of an extensive landscape assessment that directly involved 2,100 micro-merchants in Bangladesh. Topics include the market size, volume of inventory and sales, merchant profiles and the nature of operations, as well as opportunities for further development and growth.

Market size and potential

The micro-merchant segment is poised to become the country's next engine of economic growth. Data generated from the landscape assessment uncovers the immense size of this market segment (1.3 million+), the significance of its economic contribution (13% of gross domestic product) and the massive volumes of sales and inventory ($18.42 billion in sales and $16.72 billion of inventory value). The data also reveal that the sector is constantly growing: every year, the market attracts 42,000 new micro-merchants. Taken together, these numbers point to both new challenges and needs. The micro-merchants highlight the urgent need for access to finance, capital investments and skills development, among others. Well-designed interventions are needed to help the sector continue to grow sustainably and to its full potential.

Micro-merchant profiles

Most micro-merchants enter the sector via other areas of work, or have additional sources of income from supplementary business activities. Once they become a micro-merchant, however, most merchants are successful, and tend to stay in business for an average of nine years. Although as a whole the sector is fairly diverse, the typical micro-merchant is male, with an average age of 38, is married and is literate, with at least a primary education. He moved into the retail sector after working in other sectors and/or occupations (such as agriculture), and was a full-time employee or an overseas migrant worker. He often has additional sources of income from other business activities. The diversity of micro-merchant backgrounds in the retail sector suggests that this sector has a relatively low entry bar for those seeking to change careers: micro-merchants are less likely to be born into their profession, or to enter it straight out of school. Diverse backgrounds and business

Photo: *Md.Tahidul Islam*

motivations also mean that different micro-merchants have different needs. For example, for a former full-time employee, being a micro-merchant may present a step towards independence and a first attempt at entrepreneurial activities. For a returning migrant worker, owning a retail business may represent a way to re-enter the domestic economy and an opportunity to re-connect or build up a social network. The sector's openness and flexibility goes a long way towards explaining the rapidly growing numbers of new micro-merchants entering the market every year.

Women micro-merchants

The estimated number of women in the micro-merchant sector is 94,800—or just 8% of the total micro-merchant market. Compared with their male counterparts, a typical woman micro-merchant does not have formal education, and does not hold a trade license for her business. Access to finance for women mostly comes from microfinance institutions that specifically target women borrowers. Women micro-merchants usually own a mobile phone, but internet access is often limited, making access to digital financial services difficult. These key disadvantages call for targeted interventions to level the playing field for women micro-merchants and help them gain a stronger foothold in the formal economy.

Business opportunities for the FMCG sector

Currently, inventory management and product sourcing are performed manually; stock ordering, for example, is based on merchants' intrinsic, common knowledge. As well, nearly three-quarters of customer sales are done on credit, using paper records. Payments to suppliers and from customers are all done in cash. At the same time, nearly all micro-merchants own mobile phones. The digitisation of record keeping, stock-ordering processes and payments would create accuracy and efficiency gains for micro-merchants, and accelerate their integration into the larger FMCG supply chain. For FMCG manufacturers, digitisation would also offer valuable data insights into the business operations of merchants, and help them create new strategies for reaching last-mile customers.

Business opportunities for the financial services sector

Most micro-merchant businesses are formalised, so they should, in theory, be able to access and use formal financial services. However, more than half of micro-merchants (57%) do not have access to a bank account. Two thirds (68%) —even among those who do have a bank account—rely on microfinance institutions for loans, and although one third (30%) have a mobile-money account (although every micro-merchant interviewed knows about mobile financial services [MFS]), their usage of these accounts for business transactions such as paying suppliers remains limited (5.6%). For providers, the potential to build on this widespread awareness of MFS and translate it into actual usage is clear. Uptake could come through both below-the-line and above-the-line marketing campaigns, or via targeted financial literacy interventions. For example, financial services providers could explain the commercial benefits of having merchant accounts to micro-merchants using merchant-specific use cases, such as payments through QR codes or via digitising payments to suppliers (business-to-business payments). Regulators, too, can play an enabling role for the sector by, among other things, promoting the digitisation of business operations and pushing for the responsible adoption of MFS by the retail industry. They can also take a lead role in promoting financial literacy campaigns, especially interventions that enhance women's financial capacities.

The potential for enhancing the use of mobile financial services is clearly promising, but uptake and usage will depend on providers' proactive engagement and investment in the sector. Significant numbers of micro-merchants remain un-served or underserved in Bangladesh—a wealth of opportunity for many actors in the sector. The massive volume of transactions and customers reached through these segments present great opportunities, but also come with significant responsibilities for the business community, policymakers and the development community.

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Courtesy: UNCDF

■ FIN-B Desk

Technology Alone Cannot Induce Financial Inclusion

Bangladesh is targeting 100% financial inclusion penetration by 2024. The most recent statistics on financial services in Bangladesh is the World Bank's Global Findex Database 2017, which shows that only half of the adults in the country have an account with a financial institution or a mobile money provider. The National Financial Inclusion Strategy-Bangladesh (NFIS-B) takes financial inclusion as when adults have easy access to a broad range of formal financial services that meet their needs at an affordable cost.

The main point is the broad range of formal financial services including payments, savings, loans, insurance, and pension products and services. Insurance penetration in Bangladesh, for example, is less than 1%. The NFIS-B philosophy is beyond just opening a bank account; it is the extension of financial services to the bottom of the pyramid — serving people who otherwise might not have access.

For example, a farmer should be able to easily access farming insurance, to protect him/her against loss in any form. In the same vein, a telecommunications subscriber should be able to access insurance services on their mobile, through their telecom service or insurance provider.

An insurance service for the mobile subscribers may, for example, be launched that ensures free cover that is valid for not less than 30 days as long as the subscriber keeps topping up their mobile airtime. Such insurance cover would ensure people added value for paying for mobile airtime. Similarly, a subscriber may be given a one-month insurance cover for maintaining a certain minimum balance in his/her savings account at the end of every month.

Surely, the above would further drive insurance penetration as the added value is higher than having the fund under a pillow at home. There would be less cash in circulation and the banks would also have customers that use their account regularly.

One can also imagine getting a discount whenever one makes payments using a mobile wallet. Merchants would also get a subsidised transaction charge for accepting any other form of payment aside cash. A model that encourages people to use financial services would go a long way in the penetration drive.

Having access to health insurance courtesy of activities on one's savings account would definitely compel one to go for a bigger insurance cover. In the same vein, if the government gives one-month free insurance cover for anyone who pays tax by the end of June, this could not only increase its revenue but also improve the livelihood of the tax paying citizens.

A shared agent network expansion programme may be adopted to set up the agent network across the country. The initiative would ensure less reliance on physical bank branches to serve customers. However, agents alone cannot help the attainment of financial inclusion. The kind of services that the agents would offer people in their neighbourhood will determine whether the 100% target is attainable or not.

Major challenges in relation to technology adoption are absence of last mile connectivity, financial and technology literacy, and proper technology adoption.

Both banks and telecommunications operators need to play respective roles in the mobile money market. There should not be any fear of dominance by the banks or the telcos. There are enough space for the activities of both the banks and the fintech startups.

No doubt, technology is a major enabler in the process of providing financial services to a larger section of society, with special emphasis on the under-privileged communities. The success of financial inclusion is dependent on the reach ability of the services to the financially excluded and the ability to deploy cost effective technology to transform the financial ecosystem. Further, there is a need to align technology solutions to ensure that the delivery of financial services is undertaken in a transparent, righteous and equitable manner at an economical cost.

Major challenges in relation to technology adoption are absence of last mile connectivity, financial and technology literacy, and proper technology adoption. Technology has enabled multi-channel branchless banking through E-KYC, transaction through mobile banking, immediate payment system, micro ATMs, national unified USSD platform, and many other opportunities. The challenge now lies in taking greater advantage of new technologies and their effective implementation to expand the coverage of the financial system. The technology based solutions can go a long way towards achieving greater financial inclusion.

The government, on its part, may set up a fund to achieve the set targets for financial inclusion. The fund could be used to provide incentives such as insurance cover, innovative product testing, and discounts, among others.

For the purpose, there is the need for a shift in mindset. The country's financial system reflects our culture and the way we treat the poor. The financial inclusion policies and measures must be poor-sensitive. For achieving the financial inclusion targets, there has to be a fundamental change in the approach to the financial service sector in the country.

Technology alone cannot induce financial inclusion; and cannot lead the growth of the economy. It would only reflect the decisions that we take and implement.

■ FIN-B Desk

Digital Financial Inclusion: Policy and Regulatory Enablers

Bangladesh has shown significant progress in the digital financial services (DFS) policy and regulatory arena. The development of DFS requires the interplay of several factors such as enabling framework for the provision of payments, e-money, use of agents by banks, a more flexible approach to innovation by financial authorities, and other broader policies. Addressing the challenges to DFS requires financial and other government authorities to approach these needs and goals in a comprehensive and coordinated fashion.

An evaluation may be conducted on how current DFS regulations favour competition, facilitate and adequately assess the risks of investments, and fulfill consumer protection goals. As the DFS environment advances, authorities should prioritise the development of both the traditional and the disruptive data infrastructure to support innovation on data gathering, storage, and management.

Bangladesh has strong political commitment to DFS. This is demonstrated through policies and regulations that reveal innovative ways to interact with the private sector (e.g. by means of orientation, piloting, and promotion activities); public sector initiatives in the retail payment system infrastructure; improvements in the NID system to facilitate customer identification for financial service providers; or the setup of regulatory frameworks for DFS, and considerations for e-money, crowdfunding, or online lending platforms.

Bangladesh has strong political commitment to DFS.

However, the goals in terms of DFS should be made more clear, and traditional financial system regulation or infrastructure (such as in the case of microfinance sector regulation, credit bureau penetration, or gross and retail payment system infrastructure) needs to be strengthened.

The use of electronic outlets is becoming more common (although their average usage is low), and there are flexible schemes to comply with customer due diligence for e-money and basic accounts. However, there has been little articulation so far of the national strategies to increase financial inclusion, digitisation of the economy, and other efforts related to supporting the expansion of inclusive financial services provided through digital channels.

Ensuring effective mechanisms of coordination among different government agencies is also necessary. Overlapping regulatory mandates may render ineffective the existing regulations that protect consumers or allow oversight of DFS providers. Existing gaps in the basic infrastructure, such as an efficient and accessible retail payment system, need

to be filled. Improvements to information services infrastructure (credit bureaus or complementary institutions to deal with alternative data sources) are also necessary.

Traditional financial services providers (MFIs, cooperatives and other non-bank financial institutions) should improve their fund protection mechanisms. Further, efforts to leverage large-volume flows to spread access and use of financial services must be increased.

In many cases, the weak regulatory and supervisory capacity, both to fully comprehend the evolution of financial services and to deal with the additional risks brought by innovations and new business models, needs to be strengthened. Additional elements that prevent the expansion of DFS include the potential risks of regulatory arbitrage, regulatory uncertainty or incomplete schemes for the protection of customers, deficiencies in financial and technological literacy, and the lack of reliable data related to traditional and emerging technologies.

Addressing DFS challenges requires a comprehensive and coordinated approach towards DFS needs and goals from financial and government authorities. This can be complemented with monitoring and evaluation framework, as well as institutionalised mechanisms to facilitate coordination. Considering how to leverage developments in terms of infrastructure (digital, outlets, and data), and particular features of the financial system (existing payment service providers, MFIs, nonbanks), could be a more efficient way to support progress in DFS.

Bangladesh needs to reassess how policies and regulations for each element of the analytical framework affect DFS expansion (political commitment, infrastructure, and crosscutting regulatory frameworks), as well as look at the status and targets within each catalytic pillar (DFS services, outlets, financial literacy, and large volume payment streams management). Progress in financial and technological literacy would enhance trust in DFS, and better data would help policymakers to set clear and feasible goals towards progress on financial inclusion, identifying the gaps and barriers that hinder development.

Concerted actions to remove regulatory barriers, and to enforce government actions when needed, could support the sound expansion of DFS in the country. Similarly, inter-country knowledge exchange, openness and facilitation of cross-border investment, and partnerships between the private and public sectors to support innovation could greatly enhance the development and use of DFS.

New technologies and business models, such as cloud computing, distributed ledger technology, or e-commerce, have the potential to support DFS expansion. Authorities should consider analysing these issues from a financial inclusion perspective (identifying risks and opportunities) to leverage these innovations for DFS expansion.

■ FIN-B Desk

FIN-B Events

○ FIN-B Conference
○ FIN-B Inclusion Fair

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Financial Inclusion – Glimpses Ahead

In Bangladesh, rapid advances in digital connectivity are fueling innovations in financial inclusion. Further, a client-centric approach to creating and delivering services is expanding to help the poor people to save, borrow, and transfer money, manage risk, and improve their lives. As we move forward, it would be important to advance in three broad areas to expand financial inclusion for the poor people. These drivers are: Partnerships, Policies, and Interoperability.

Collaborative partnerships, policies, and programmes are needed to create an environment that enables people at the bottom of the economic pyramid to connect to a wider digital marketplace. The need is to forge strategic partnerships with banks, MFIs, retailers, post offices, and mobile network operators to make it possible, legal, and less costly for individuals to access financial services.

One key area where Bangladesh is currently working is to design architecture to enable the government to digitise all its payments. Similar areas where quick progress is needed are: developing the marketplace for payments across different network operators and banks; realigning bank ownership structures and licensing rules to allow greater competition in mobile financial services; and helping regulatory environment for branchless banking and barriers to mobile network operators (MNOs). Often, payments services work as the channel for extending other financial services to users.

Infrastructure providers such as banks or mobile network operators can facilitate financial inclusion by enabling service providers to connect with their systems. Clients need to be able to send money across services without additional fees or devices for multiple service providers. The industry and the government will have to play a critical role with programmes and policies that enable interoperability between innovators and infrastructure.

Interoperability is a prominent area and the industry must recognise the need for payment products, ATM, and POS networks to understand each other to foster the type of innovative ideas that enable financial inclusion. Bangladesh has already progressed well with its ambitious programme to develop digital infrastructure by issuing national identity cards based on biometrics, instituting digital government payments, and integrating service providers into a unified payment system.

As next generation fintech service infrastructures incorporate distributed ledger technology, or blockchain, with existing or emerging technologies, such as digital identity platforms and digital currencies, relevant regulatory bodies, policies, and programmes must keep pace overseeing and monitoring transactions.

Looking ahead, traditional standards-setting bodies and regulators will need to adapt and work across financial product type and industry silos to foster and monitor innovation. For example, banks may cooperate with network operators to provide clients instant access to savings and, over time, credit to mobile money users. Similarly, 'Know Your Customer' (KYC) rules could employ tiered-regulation and customer-due-diligence approaches to make client-centric products available that promote financial inclusion while conforming to anti-money laundering/terrorism-combatting financing requirements.

Regulatory technology ('Regtech') innovators will need to find new ways to use technology to accelerate oversight of key financial services. Technology is changing so rapidly in Bangladesh and elsewhere, that it remains to be seen what form access to a transaction account to store money, send, and receive payments will take. Will social media become a significant force for financial inclusion in Bangladesh? Perhaps the best indicator of the future of financial inclusion will continue to come from digital data collected from clients themselves.

Data analytics is key too; to informing product development and ensuring that new solutions are formulated based on client wants and needs. Indeed, as we look ahead, client centricity must continue to play a central role in financial inclusion services, policies, and programmes. Without this, there is no guarantee that the rapid advancements in financial technology will drive financial inclusion.

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