

Blockchain in energising the economy during and after Covid-19

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As Covid-19 ravaged the livelihoods of the country's poor, restarting the economy became an imperative for the Bangladesh government with a projected decline of 3.0 percent GDP growth in the financial year 2020. Now, the question is--how to rebuild the economy while saving lives.

Technology can play a pivotal role in managing the health crisis while accelerating the economic recovery. Blockchain is one such technology. Its ability to provide secure transactions globally--both in services and manufacturing sectors--highlights the opportunities for Bangladesh government and companies to implement blockchain technology to energise the economy.

Blockchain applications in Bangladesh Economy

Blockchain is a disruptive technology that has the potential to revolutionise the way transactions are recorded and stored on a decentralised network using cryptographic tokens. As the information is stored in multiple locations with no one holding ownership, all parties within the network have access to each transaction and associated data.

Use of cryptographic tokens eliminates intermediate central authorities that reduces associated transaction costs and prevents anyone from altering the recorded data. Smart contract feature of blockchain technology facilitates parties in the contract to follow the rules and trust each other even when they are not well known to each other.

In Bangladesh, blockchain technology can be deployed in several industry sectors that have the potential to rejuvenate the economy and play a significant role towards attaining the middle-income nation status.

Readymade Garment Industry

During the pandemic, garment factories have experienced a decline in orders by 45.8 percent over the first quarter of 2020, with an 81 percent contraction in April alone.

As consumers across the world become more conscious about the society and environment during the pandemic, in the post covid era there will be an increased demand on retailers such as Nike, Inditex and Next to source products from suppliers who adopt sustainability practices. Being transparent on green practices, safety and compliance and providing such information by the garment manufacturers will be imperative for triumphant recovery of the industry.

In this context, blockchain technology can be used to monitor factory safety in its global supply chains. It can provide an interface between overseas buyers and factory workers through a self-reporting infrastructure.

It means that the system provides an opportunity to the workers to record and



post their experiences, thus giving them a real voice. As this system will record the worker experiences on a blockchain which are timestamped, the results could never be manipulated.

Remittance

In 2019, remittance accounted for 5.8 percent of Bangladesh's GDP with expatriate Bangladeshis sending \$18.3 billion. Legal channels such as banks and money transfer organisations and illegal channels through personal connections are the two means that expats transfer money to Bangladesh.

Use of foreign currency exchange organisations such as Western Union, PayPal, Skrill, etc and banks involve hefty transaction costs, while the second form of currency exchange is risky due to lack of trust among the members involved in currency exchange.

Meanwhile, the informal currency exchange also results in the government to lose revenue and imposes challenges to track the remittance. For example, it's been reported that in 2018, the Bangladesh government has lost \$4.7 billion in revenues due to the informal remittance.

Blockchain technology can eliminate the middleman and their associated costs in the remittance supply chain. Promoting the use of digital currency underlined by the blockchain technology will remove the risks associated with currency fluctuations.

By developing policy guidelines on digital currency and the use of blockchain for money transfers, a government facilitated remittance process would enable to track the remittance which would assist in addressing broader issues related to tax aversion by expats working in Bangladesh and capital flight by Bangladeshis.

Pharmaceutical

Counterfeit medicines are a major concern for the \$3 billion pharmaceutical market in Bangladesh. Over the past five years, licenses of several pharmaceutical companies were cancelled over the allegations of producing counterfeit medicines of substandard quality. All the distribution channels from drug stores to hospitals such as Evercare and United are accused of selling substandard drugs. In the first 6 months of 2019, a total of 370 cases of fake medicines were filed.

To limit the circulation of counterfeit drugs in Bangladesh, drug testing facilities will be critical. However, current facilities can only test 5% of the total produce, as it is expensive and not possible to test each drug circulating in the market, the pharmaceutical industry is seeking other innovative alternatives.

One such initiative that gained much attention is the use of blockchain technology in pharmaceutical supply chains. A blockchain-based platform that tracks pharmaceutical products throughout the supply chain from the point of origin of raw materials/ingredients across the manufacturing sites, and then to larger healthcare ecosystems ensures only authentic products reach the consumer.

The creation of immutable records of traceability makes it easier to respond to product recalls, holds, and new releases in the market. Ultimately by eliminating the circulation of counterfeit drugs and streamlining the reverse supply chain with the use of the blockchain technology, community health will be improved. This will also be a key driver for the Bangladesh pharmaceutical industry sector to achieve the objective of capturing 10 percent of the global generic market.

Halal food

The global halal product market was

valued at \$2.7 trillion in 2015 and forecasted to increase to \$10.51 trillion by the year 2024.

To grab a portion of the global halal market share, Bangladeshi entrepreneurs in this sector are seeking the help of the government to develop policy guidelines including establishment of international halal certification and creation of a special economic zone for manufacturing halal products.

To assure the integrity of halal certified products and build public confidence, an application of blockchain will be invaluable. The inherited characteristics of the blockchain technology enhances trust through transparency from "paddock-to-plate" in supply chains.

Particularly, smart contracts of blockchain technology could digitally prescribe processes and requirements according to a halal standard, verify halal compliance and enforce the performance of halal supply chains.

In addition to these industries, blockchain technology has the potential to be deployed across a range of applications, industries and use cases. The more novel the application is, the more effort will be required to ensure that all the users understand what problems the blockchain solves.

Regardless of the use cases, blockchain technology implementation does come with challenges varying from technological to organisational, external environment, and supply chain related that an organisation needs to overcome.

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