Effective Uses of Digital Currency can be the Avenue to Achieve the Vision of Digital Bangladesh.

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Abstract: The phrase "Digital Bangladesh" stands for a concept which benefits the country as a whole by using Information and Communication Technology for management, administration and governance in order to ensure transparency, accountability and answerability at all levels of society. The internet has opened up many freelance opportunities, expanded available markets, and has contributed to service sector growth in many countries like Bangladesh. As everything is being digitalized, we also need digital currency for making easy online money transfer that will facilitate for achieving the vision of Digital Bangladesh. With the rapid progress of internet, freelancing business is becoming popular worldwide. Boost up of freelancing business is occurred for a rapid increase of freelancer. Currently Bangladesh is facing difficulty in receiving remittance earned through outsourcing. Besides E-commerce is at all-time high with transactions of millions of dollars happening every day through various online shopping platforms. Lack of digital currency companies are also facing online transaction problem. The purpose of this paper is to focus on the importance of digital currency and the adoption and effective uses of digital currency to build digital Bangladesh. Adoption and effective uses of digital currency can solve this problem and facilitate the achievement of the vision Digital Bangladesh.

Keywords: Digital Bangladesh, Vision 2021, Digital Currency, Outsourcing, Bitcoin, Online payment system.

I. Introduction

The slogan of “Digital Bangladesh” of the Government of Bangladesh has special significance for national development. Digital Bangladesh with Vision 2021 is a big impetus for the use of digital technology in the country. Digital Bangladesh is an Idea that includes the IT use for management, administration and governance to ensure transparency, accountability and answerability at all levels of society and state. This is a tool that will help accelerate economic development and increase competitive edges of Bangladesh in the world market. Unlike Internet banking and third-party payment services using traditional electronic payment tools to facilitate fiat money transmission, digital currencies represent a new class of technology. They are developed out of a number of brand new and groundbreaking technologies — they are not tools to transmit money; they are arguably money themselves. Among them, one particular kind utilizes modern cryptography, earning its name crypto-currency. Bitcoin is an example of this kind of digital currency. After its creation, the idea inspired and led to many similar systems. Some commercial banks and central banks also work on their own digital currencies. But Bangladesh don’t have own digital currency and not even pay pal, a global online payment system. This becomes a problem for freelancers who regularly work for third party. The biggest obstacle to run the freelancing business, again majority of the firms has indicated international money transaction difficulty as the most upsetting one. This objective of paper is to show the necessity of adopting digital currency and effective uses of it to solve online payment system which is being faced by many freelancer and E-commerce company. This study begins with the objectives. Definition for Digital Bangladesh, Key features of digital Bangladesh, Digital currency, and the features of digital currency are explored next. The next section of the study focuses on bitcoin and the popular of it in the absence of digital currency. The paper concludes with suggestions for achieving the vision of Digital Bangladesh through adopting digital currency.

II. Objectives of the study

- To show how digital currency play an important role to build digital Bangladesh.
- To show the importance of digital currency for any country.
- To show how digital money transfer system can help to increase remittance & GDP.
- To show the secured & hassle free characteristics of online payment system.
- To draw government attention on the fact that availability of legal digital currency may reduce the access of crypto currency.
- To show the popularity of banned digital currency due to the absence of valid digital currency in Bangladesh.

DOI: 10.9790/5933-0706045460
III. Methodology

This research paper is based on literature review. Data is collected from secondary source. Secondary data and information have gathered from online books, journals, newspaper, research papers, related to digital Bangladesh and digital currency.

Digital Bangladesh:

Digital Bangladesh implies the broad use of computers, and embodies the modern philosophy of effective and useful use of technology in terms of implementing the promises in education, health, job placement and poverty reduction. The party underscored a changing attitude, positive thinking and innovative ideas for the success of “Digital Bangladesh”. The philosophy of “Digital Bangladesh” comprises ensuring people’s democracy and human rights, transparency, accountability, establishing justice and ensuring delivery of government services to the citizens of Bangladesh through maximum use of technology, with the ultimate goal being the overall improvement of the daily lifestyle of general people. This includes all classes of people and does not discriminate people in terms of technology. The government further emphasized on the four elements of “Digital Bangladesh Vision” which are human resource development, people involvement, civil services and use of information technology in business. The ‘Vision 2021’ aims at developing Bangladesh into a resourceful and modern economy through efficient use of information and communication technology. This goal has eloquently been described by the Prime Minister as ‘Digital Bangladesh’. It is believed that through the successful implementation of the ICT policy and its principles it would be possible to create a Digital Bangladesh by 2021 as promised by the government.

Key Features of Digital Bangladesh:

Towards middle income economy: Underlying Vision 2021 is the goal of turning Bangladesh into a middle income country by 2021. The macroeconomic framework of the Perspective Plan will support the strategies and policy guidelines to achieve the development vision through ensuring of macroeconomic stability over the long-term. For Bangladesh, the journey to middle income country and high HDI status requires sustained growth and its equitable and inclusive nature. The technical framework designed to achieve growth and related dimensions of the macro economy shows that the economy needs to grow at a consistently high rate over the next eleven years for the vision to be realized. Accordingly, the Perspective Plan targets annual real GDP growth rate to rise to 8.0 per cent by 2015, and further to 10.0 per cent by 2021, significantly improving living standards of the population by drastically reducing unemployment and poverty, riding on substantially higher output and export growth, while maintaining macroeconomic stability. Per capita annual income is projected to rise to about USD 2,000 (at constant 2013 dollars) by 2021, thus crossing the middle income threshold. To achieve and sustain the high rates of growth, gross domestic investment will reach 38% of GDP, with gross national savings at 39%, and headcount poverty dropping to only 13.5%.

Agriculture and rural development: With a view to enhancing agricultural production and ensuring food security, the target of agriculture sector is that, by 2021, food deficiency will be eliminated and the country will attain self-sufficiency in food production enabling to meet nutritional requirement of the population. In this context, the key targets are to achieve self-sufficiency in rice production, to diversify agricultural crops, to form production and marketing cooperatives, to encourage R&D for increasing productivity etc. In addition, for fisheries sector, the plan prioritizes on closed water fisheries production, promotion of technical knowledge among the educated youth in closed water cultivation as well as on the adoption and implementation of fishermen cooperatives. To promote development of livestock sector, the plan argues that, it is imperative to develop breed, to increase production and supply of feed and to extend veterinary services. For ensuring sustainability in development process, the plan will adopt strategies to increase productivity, to strengthen the Sundarban and to promote agro and social forestry. In the context of rural development, the key strategies taken under the perspective plan are to establish a powerful autonomous local government body for providing coordination among private and public rural development institutes and to consider reviving the local government commission.

Industrial development: The Perspective Plan target of reaching 10 percent annual GDP growth by 2021 is premised on a prolific and competitive manufacturing sector growing at or near double digits during the 2010-21 decade. Consequently, the broad industrial sector will continue to account for a much larger share of GDP, approaching 37% by 2021, compensating for the secular decline in the share of agricultural sector, which falls to 15%. This trend is consistent with the stylized facts of structural change in the process of development. For Bangladesh to reach middle income threshold by 2021, industrial expansion must accompany hand-in-hand with highly productive farm and non-farm agriculture. Furthermore, a strong and competitive manufacturing sector is especially important for generating productive high income jobs.
Manufacturing exports: The main driver of manufacturing growth will be the export markets, although growing domestic demand from higher income generation will also provide impetus to import substitute production. Low-cost labor with growing skills gives Bangladesh potential competitive advantage in most labor-intensive activities which will continue to drive manufacturing growth for at least another decade. It is projected that the share of exports in relation to GDP will rise to about 25% of GDP by 2021 reflecting a leading role that export sector is envisaged to play in the economy. The target with regard to the external sector is to ensure strengthened global integration of the Bangladesh economy by building necessary trade related supply side capacities. This will be realized through raising the competitiveness of Bangladesh’s exports, ensuring a larger share for the country in the global trade in goods and services, and by encouraging both product and market diversification. This will be done by renewing efforts at moving up market and by raising the efficacy of trade facilitation measures. Bangladesh’s strong performance in the global labour services market will be continued and further consolidated. The overarching goal here will be to ensure that trade-GDP ratio rises to nearly 60% of GDP with export of goods and remittance earnings approaching 40 per cent by 2021.

Trade policy regime: Trade liberalization enacted thus far has improved manufacturing efficiency and competitiveness. Tariff reductions and QR removal introduced a substantial degree of import competition in the local manufacturing sector, forcing enterprises to restructure and raise productive efficiency. On balance, output and employment growth in manufacturing was robust in the post-liberalization period. Over the next decade, trade openness will deepen further so that only those manufacturing enterprises that remain globally competitive are expected to survive and prosper. It is critical that the trade policy regime is geared to ensure productivity and export. Competitiveness while facilitating emergence and expansion of new export products. Such a trade policy regime is the backbone of a high-performing manufacturing sector. To cross the middle income threshold by 2021, Bangladesh will need to transform its trade regime to the kind seen in high-performing emerging market economies. To that end, Bangladesh will need, among other things, to reduce average tariffs to levels already reached by countries such as Vietnam, Malaysia, India and China. This has to happen ideally by the close of the Sixth Plan in 2015, well before 2021.

Opportunities from globalization: Globalization presents opportunities as well as challenges for Bangladesh. What is clear is that missed opportunities in an age of globalization could be costly. The Bangladesh economy is more integrated with the global market today than ever before. This is largely due to rapid growth in trade, massive out-migration of labor and remittance inflows, liberalization of foreign exchange regime, financial sector reforms, and creation of a favorable FDI regime. Bangladesh having embraced globalization, the right policy framework and infrastructure will have to be put in place to seize opportunities coming its way and to address challenges. Besides strengthening our balance of payments position, remittance inflows have had significant impact on poverty reduction. Remittance inflows in 2011, at $11.5 billion, were about 10 per cent of GDP. Sustaining the growth of remittance inflows could be a major source of external finance in the march up to the country’s middle income threshold by 2021. Strategic actions to ensure continued flow of remittances include (a) close monitoring and supervision of the activities and practices of recruitment agencies, (b) moving to technology-based system of effective practices for remitting money, (c) training workers in the vocations and skills that have a high future demand in global markets, and (d) making the Overseas Employment Policy more comprehensive so that it covers multiple aspects of migration, including workers’ and employers’ documentation, employment contracts, their implementation, and settlement of worker’s welfare.

Foreign investment: Bangladesh’s projected needs for investment in infrastructure for an expanding transport network and burgeoning urban centres cannot and need not be met from domestic resources alone. With improved economic management and a highly liberalized investment regime, and with strategic locational shifts in labor-intensive industries, Bangladesh could become an attractive destination for private capital flows over the next decade. The Perspective Plan will consider the following strategic actions to stimulate inflow of FDI: (a) improve the investment climate by giving high priority to constraints in infrastructure, regulatory framework, and policy environment, (b) the general governance situation (and related high transactions costs) will be addressed to improve the country’s image, (c) special effort will be made to encourage regional investment in emerging and potentially high return sectors (e.g. software development and IT from India, electronics from China), (d) a string of Special Economic Zones (SEZs) will be established along international borders to stimulate cross-border investments and trade, in line with the successful examples of China and Vietnam, and (e) the private sector will be encouraged to enter joint ventures and other forms of collaborative investment with NRBs and foreign partners in areas of high potential.
Multilateralism: Addressing the multilateral trading regime will mean coping with the challenges of asymmetric and inequitable trading rules that are prejudicial to the trading interests and performance of LDCs, including Bangladesh. Strategic actions to be pursued during the Perspective Plan will include (a) support negotiations for reduction and elimination of export and domestic subsidies and in favor of agricultural trade liberalization; (b) mainstreaming trade in the country’s national development agenda, and should particularly incorporate Aid for Trade; (c) enhance Duty-Free Quota-Free access under provisions of NAMA; (d) as Bangladesh approaches middle income status, more effort should be focused on enhancing competitiveness of Bangladesh’s exports; (e) regarding trade in services, try to secure “permanent, nonreciprocal, special priority”, notwithstanding any provisions of the GATS; (f) negotiate for establishing simple, transparent, and preferential Rules of Origin; and (g) consolidate and expand capacity for trade negotiations.

To fulfill all the features of digital Bangladesh, we need digital currency. Bill gates owner of Microsoft and one of the pioneer of digital world refers that “digital currency as an important banking tool for the poor.” Though maximum people of Bangladesh lives below poverty line. So achieving the vision of digital Bangladesh digital currency can help.

Digital Currency:
Digital currency can be defined as an Internet-based form of currency or medium of exchange distinct from physical (such as banknotes and coins) that exhibits properties similar to physical currencies, but allows for instantaneous transactions and borderless transfer-of-ownership. Both virtual currencies and crypto currencies are types of digital currencies

The Benefits of Digital Currency:
When I look at digital money, I see a revolutionary technology that allows people or institutions to transfer funds instantly, securely and without a middleman. Digital money can potentially expand international commerce, support financial inclusion, and transform how we shop, save and do business in ways we probably cannot even yet fully understand. From programmable money to new forms of e-commerce, here are five ways the new technology will change the world:

Faster, cheaper bank transfers:
The way banks move money today is archaic. International bank transfers can take up to a week, with correspondent banks and country-specific clearing houses involved at both ends. Even the cross-border sharing of payment data faces challenges and frictions. By using a digital currency such as bitcoin, bank transfers could be made instantly, cheaply and safely. In fact, such transfers could even happen without using new currencies. Ripple Labs, for which I am an adviser, supports a protocol that allows clients to transfer funds from one currency to another (say, dollars to euros) using a secure digital ledger. Their technology moves money around the globe in seconds by first finding the most efficient path between trading partners, where the path might consist of a series of transactions among foreign exchange traders who have accounts in a variety of banks, and then confirming all required transactions simultaneously.

A boost to global remittances:
Every year, migrants from developing countries send home more than $500 billion in remittances, a sum that exceeds foreign direct investment. With total fees for international transfers averaging 6-10% for sending $200, the burden on some of the world’s most vulnerable people is substantial. Technology has the potential to help these transfers become fast and cheap. Using virtual currency, private users could even send money directly to their families via mobile phone, with the only remaining fees being those charged by the currency exchanges. While traditional money transfer companies have to carry capital to compensate for delays in international money movement, capital requirements are much lower for firms using digital currencies. Of course, capital carrying costs and the cost of money movement comprise only part of the cost for remittance businesses. Nonetheless, reducing these costs might make it easier for smaller players to enter and establish new remittance corridors or for existing players to serve smaller towns or new countries.

Safe money for the poor:
The explosion of mobile technology in Africa has already shown that developing countries can lead when it comes to sophisticated technology. Estimates suggest that 60% or more of commerce in Kenya takes place using mobile phone credits as a medium of exchange. Anyone with a mobile phone can store money there, and send credits to another user. The problem is that the fees are large: cashing out has historically cost as much as 20%, although the widespread acceptance of the credits means that many consumers are able to spend the credits directly without incurring large fees. Digital currencies could become another convenient and safe form
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of payment in countries where most citizens don’t have bank accounts. While using bitcoin as a second currency in a country would expose citizens there to a certain amount of currency risk, it might be better than the existing options, particularly in high-inflation countries. For example, it would be physically safer than storing cash at home or buying gold jewellery. In addition, someone holding bitcoin could exchange it for a more stable currency on one of the global bitcoin exchanges. In this way, it could expand access to international financial markets, allowing even the unbanked a way to save and protect against inflation. One implication may be that capital controls become harder to enforce.

Unleashing the potential of e-commerce:
Today, concerns over credit card fraud are forcing many online merchants to turn away good business. Such fraud is more common in global transactions, and so many firms do not accept international payments. With a digital currency such as bitcoin, the transfer cannot be undone once it has been made. This eliminates the risk of fraud for merchants and thus allows them to sell worldwide. And since virtual currencies let customers send funds as easily as email, online shopping would turn into a much smoother process. Digital currency could also allow small businesses in developing countries to engage more in global e-commerce. Latin American vendors could sell hand-crafted goods globally, Chinese teenagers could offer Mandarin tutoring over Skype, and African firms wanting to market their products through online advertising marketplaces would have a payment option that is unavailable today. Small value transactions are a particularly salient use case; as low transaction fees could enable low-value in-app purchases or micro-payments for reading online news articles from media outlets around the globe.

Programmable money and smart contracts:
Once an asset is purely digital, it can be moved in automated ways. This paves the way for “programmable money” and “smart contracts”. One practical example would be escrow accounts. Such accounts are already used in large transactions, such as property deals. The buyer puts money into escrow, and it only goes to the seller when he or she hands over the title to the property. In the digital age, where the issue of trust can be a key impediment for individuals wishing to transact at arm’s length, this system could be used for much smaller sums. Another example is multisig, where money can only be disbursed from an account when multiple individuals authenticate. This could be used to prevent the theft of digital funds, but it could also help firms ensure that money is not “lost” or stolen when it moves across borders, between divisions of a firm, or among charitable organizations and contractors in developing countries. Programmable money could also have a role in much more complex contracts, such as financial contracts involving multiple parties and complex derivatives. You might put some money in a financial contract which will pay out according to what happens to certain stock prices. A computer program could be linked to stock prices from the Bloomberg terminal feed and then, depending on what happens to certain stocks or certain combinations of stocks, different individuals receive funds.

At present Bangladesh, does not have any legal digital currency but some people uses crypto currency such as Bitcoin.

Bitcoin:
Bitcoin is a form of digital currency, created and held electronically. No one controls it. Bitcoins aren’t printed, like dollars or euros – they’re produced by people, and increasingly businesses, running computers all around the world, using software that solves mathematical problems.

The Method of Functioning Bitcoin:
The shortcut summary of how bitcoin works are given below.

Block chain:
The block chain is a shared public ledger on which the entire Bitcoin network relies. All confirmed transactions are included in the block chain. This way, Bitcoin wallets can calculate their spendable balance and new transactions can be verified to be spending bitcoins that are actually owned by the spender. The integrity and the chronological order of the block chain are enforced with cryptography.

Transactions - private keys:
A transaction is a transfer of value between Bitcoin wallets that gets included in the block chain. Bitcoin wallets keep a secret piece of data called a private key or seed, which is used to sign transactions, providing a mathematical proof that they have come from the owner of the wallet. The signature also prevents the transaction from being altered by anybody once it has been issued. All transactions are broadcast between
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users and usually begin to be confirmed by the network in the following 10 minutes, through a process called mining.

**Processing – mining:**

Mining is a distributed consensus system that is used to confirm waiting transactions by including them in the block chain. It enforces a chronological order in the block chain, protects the neutrality of the network, and allows different computers to agree on the state of the system. To be confirmed, transactions must be packed in a block that fits very strict cryptographic rules that will be verified by the network. These rules prevent previous blocks from being modified because doing so would invalidate all following blocks. Mining also creates the equivalent of a competitive lottery that prevents any individual from easily adding new blocks consecutively in the block chain. This way, no individuals can control what is included in the block chain or replace parts of the block chain to roll back their own spends.

**Popularity of Bitcoin in the absence of Digital Currency:**

“Bitcoin” is illegal in Bangladesh, according to a notice issued by the central bank of Bangladesh. Bangladesh Bank (BB), the central bank of Bangladesh, issued a notice. The announcement comes within a month of the formation of Bitcoin Foundation Bangladesh. Transaction through Bitcoin or any other artificial currency is not recognized by the central bank or any other agency of the Bangladesh Government, read the BB notice. The notice said: “Bitcoin's transactions take place through online-based networks, which is not approved by any central authority or by the payment system that controls authority. Therefore, the clients may be affected.”

Despite of being banned bitcoin is popular in Bangladesh. In a country where there is no existence of Paypal, Moneybookers or Alert-pay; virtual currencies are a bit over stretch. It does not mean that it’s out of the play, rather there's nowhere to play with it. Many Bangladeshi Forex traders, freelancers and tech-mongers are getting more and more in to virtual currencies now-a-days. Since it is very handy and a 'cooler' way to buy stuff online, popularity of virtual currencies in South Asia is increasing. There are now communities that trade, sales and buys virtual currencies in Bangladesh and some Indian's who run this business in Bangladesh. Bitcoin, most popular out of all, is the most traded one. There are many facebook groups that now trade Bitcoins in Bangladesh now. One of them is 'Bitcoin Bangladesh', a non-profitereing facebook group that trades bitcoins, various virtual currencies and does digital money transfers. Talking with them, we got to know that Bitcoins are yet to be popular in Bangladesh. Mostly people come to them are for money transfers via Paypal or Webmoney. Besides Bitcoins, Facebook credits and Amazon coins are also becoming popular in Bangladesh for apps, gift and other nifty virtual purchases. Not so in style now, but these currencies are expected to pick up as Bangladesh Bank is formulating guidelines for virtual currencies. Indeed, it is good news.

Present age is often referred to as information age and the society is called information society. The key to information age and information society is the use of digital technology, that is, information and communication technology (ICT), to the needs of the society. To achieve the main vision of digital Bangladesh within 2021 our government and central bank need to give more concentration on digital currency and digital money transfer systems. As part of the digital Bangladesh vision, the central bank hopes to convert a portion of normal currency to electronic one to reduce the printing cost as well as facilitating the digitization. Using e-currency, customers can pay bills, change money from one account to another, and pay for things they want to buy, such as food and household products."We're also working to bring all banks and non-banking financial
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institutions (NBFIs) in a single electronic network to oversee their overall functions instantly,” Dr Atiur Rahman explained. The central bank has already launched a ‘dashboard’ for monitoring all kinds of foreign-exchange transactions. It provides summary of export, import, inland back-to-back letter of credit (LC), and inward and outward remittances separately. The ‘dashboard’ and the Integrated Supervision System (ISS) are in place in the central bank to monitor all banking operations at the branch level digitally.

IV. Recommendation

- We can find through this research that digital currency is one of the key indicators to achieve the Government vision of digital Bangladesh.
- Remittance & GDP which are the two main instruments towards middle income economy are positively affected/influenced by digital currency.
- In the age of globalization Bangladesh need to adopt digital currency to sustain in open market economy.
- Digital money can potentially expand international commerce, support financial inclusion, and transform how we shop, save and do business in ways we probably cannot even yet fully understand.
- By using digital currency balance transfer could be made instantly, cheaply and safely thus will be helpful for digital Bangladesh.
- Digital currency could become another convenient and safe form of payment in countries like ours where most citizens don’t have bank accounts and they use digital money transfer systems through their phone.
- Digital currency could also allow small business in developing countries to engage more in global e-commerce, which contribute to our GDP.
- Digital financing services lower the cost and increase the security of sending, paying and receiving money. This will also help in women empowerment.
- Proper initiatives should be taken for starting the service of Paypal and make it available.
- Guidelines for virtual currencies should be formulated by government to smooth the online payment operation.

V. Conclusion

Digital Bangladesh is one of the nation’s dreams, and so special emphasis is given on the application of digital technologies to realize Vision 2021, which we commonly call Digital Bangladesh. By 2021, after 50 years of independence, our goal is to be a middle-income country with peace, prosperity and dignity. The Government of Bangladesh implemented a large number of projects relating to digital technologies and a number of these are already underway. National ICT Policy-2009 was developed with a view to achieve middle-income status of the nation by 2021 and developed status by 2041. This short article briefly summarizes the need of adopting digital currency for achieving Vision 2021, examines our status in the global perspective, and suggests steps to be taken to achieve the vision “Digital Bangladesh” through the adoption of digital currency and effective utilization of digital currency.

Reference