



Uses of Blockchain Technology in International Trade

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Abstract:

The purpose of this study was to investigate the effect of blockchain - based on international trade, as well as how blockchain could enhance various aspects of global trade. In order to assist businesses, the study as well looked for the difficulties related to the introduction of block chain in international trade. Everywhere, Technology has been utilized to start making life easier for people. from information to communication. As a result, many people regard blockchain technology as the next big thing, owing to its numerous industry vertical applications. Blockchain technology, also known as a based on distributed ledger, has grown in popularity inside the technology sector as a means of implementing technological International trade innovations. It ensures security and can reduce trade costs by removing the intermediary from the transaction. There has been little research into the effect of block chain technology on international trade.

Keywords:

Trade, international trade, Blockchain, technology, blockchain technology, blockchain challenges trade finance, blockchain implementation, blockchain supply chain, WTO Laws.

Introduction:

Technology will not only transform international trade, but it will also push regulatory boundaries. The cross-border nature of the Internet created new challenges, raises major regulatory issues, and led directly to novel governance structures. Existing approaches are being challenged further by mobile technology that use the Internet. Amongst which, block chain is still making headlines. Some regard it as a game changer, while others regard it as the most overhyped new tech. Few techniques have generated as much debate.

Technological innovation has always shaped trade. Many people have hailed Blockchain, a new technology, as the next big game changer in recent years.

Latin American and Caribbean countries have an incredible opportunity at their disposal. They could use blockchain technology to increase regional and international trade as a whole, thereby aiding the economic recovery.

The Inter-American Development Bank's Interconnection and Keep trading Sector, in addition to its Implement for the Promotion of Trade, Integration, and (INTAL: Integration of Latin America and the Caribbean) published the report "Blockchain and International Trade: New Technologies for a Bigger and Better Latin America International Insertion" to assist more countries and users in comprehending block chain technology. The publication investigates blockchain's advantages and obstacles from various angles, as well as its application at various stages of international trade. [1]



Blockchain technology transforms the strategic sourcing and trade finance, as well as simplifies the modern international trade process. However, as discussed in this study, there are certain major challenges affiliated with public blockchain, and some critical demands must be fulfilled in ahead of time for successful implementation. There were also several suggestions for large-scale blockchain application in trade finance.

In international trade, trade expenses are a major concern. They define the competitive ability needed for international trade actions. Tariffs for global trade had also fallen to historic low levels as a result of consecutive trade deal bargaining at the worldwide, geographic, and bi-lateral levels, having left non-tariff barriers to international trade, such as logistics and customs procedures, as the main stumbling blocks. The introduction of the COVID-19 pandemic in a globally interconnected economy has caused numerous interruptions in worldwide supply chains, trade, and cross-border travel. Blockchain technology may be used to improve trade automation efforts and aid in trying to mitigate the socioeconomic effects of the crisis.

Blockchain enables automated, secure, and effective sharing of data to ensure the efficient execution of Mutual Recognition Arrangements/Agreements. It enables participants in the shipping supply chain ecosystem to connect, exchange information, and collaborate digitally. Governments, regional and international organisations, and individuals can all play critical roles in establishing the ecosystem required for having to engage all stockholders, attempting to address actual or perceived risks, and making sure that blockchain can effectively support sustainable and inclusive development. Transporting goods across continents could become significantly cheaper, offering new impetus to resettle production or source materials and goods from abroad. According to the World Economic Forum, the benefits would not be limited to shipping. Using blockchain to technology to manage and border government could add \$1 trillion to global trade.[2]

Blockchain is defined as a decentralised system that allows the parties involved to independently build a network and store the necessary information. The entire database is built and encrypted using complex algorithms designed to simplify data security and information integrity. This technology is thus a source of compensation for the complex processes that companies and startups today must follow in order to stay in business. The underlying principles of blockchain technology include decentralisation and disintermediation, data transparency, immutability, trade consensus, and reliability and trust.

Global trade is the movement of neat and services across international borders. Globally, countries export as well as duties on imports from other countries. According to comparative advantage theory, product or service exchange occurs even though producer countries have competitive benefits. Because of their respective productive resources, some nations are able to generate certain goods and services more efficiently than others. Variations in capacity effectively allow states and territories to produce things that are more efficient while importing those that are not. Countries' production costs, commodity prices, and market share all fall as a result. Nonetheless, international trade is a complex task made possible by a variety of financial, social and political, and technological forces. Blockchain technology, that is still in its infancy,



is set to keep revolutionary international trade. In this light, it is essential to look into the cryptocurrency The technology's responsibilities and impact in world trade, including its benefits, challenges and issues, and suggestions for enhancing its utility.

Blockchain technology has the ability to disrupt, reinvent, or revolutionise global trade. This is happening at a time when humanity is only beginning to understand the impact of internet new tech on commerce and the economy. Information technology has facilitated modernization, global value chains, internet-connected systems, 3D printing, and a lot more by lowering communication costs. It has supplied many fresh possibilities for businesses that were heretofore unable to break into the global marketplace. The internet lowered entry barriers, shortened geographic speed and distance, and decreased the price of trading. As a result, relatively small actors, including such customer bases and medium-sized companies, can now trade in previously inaccessible markets.

Review of Literature:

As according Statista, block chain technology makes staying records easier, more comprehensive, and even more secure. Because it is resistant to change, blockchain technology can offer timely based information on transfers of money, whether they are among both private individuals, major corporations, distribution channels, or even a global supply chain.

According to Kadan Stadelmann, the chief technology officer of Komodo, a rapid technological changes as well as an open source workshop,

“Blockchain’s biggest advantage is immutability, meaning data can’t be deleted or edited after it’s on the ledger. For international trade, this provides an opportunity for more transparency across several major industries.”

According to Stadelmann, Foods can be monitored from their beginnings (a plant in this other nation) to the industry's local supermarket using this technology. According to him, this can contribute to bettering the world's food supply by addressing issues such as food contamination outbreaks, as the WHO recently reported that 600 million of people — nearly every one of ten people worldwide — Every year, 420,000 individuals pass away because of eating contaminated food. [3]

Blockchain will have a significant effect on global trade as well as financial business development, according to World Trade Organization (WTO) experts (Derindag et al., 2021; Sirimanne & Freire, 2021). Given the rapid technological advancement, this is not surprising. It was created only a few decades previously for cryptocurrency operations, but it has since expanded beyond cryptocurrency management. At the same time, covering all activity spheres is the only way to form its distribution directions. Because cryptocurrency's The primary goal is to enhance mutual settlements and trade relationships, the technology will spread to related industries such as global commerce and financial services. [4]

A public blockchain technology allows anyone to create, confirm, and record content; a blockchain network controls access to enter as well as verify the data; and a bitcoin blockchain is a form of blockchain system that is partly distributed and did manage by a group. Blockchain

technology has numerous applications, including banking, government, and so on (see figure 1) [5]

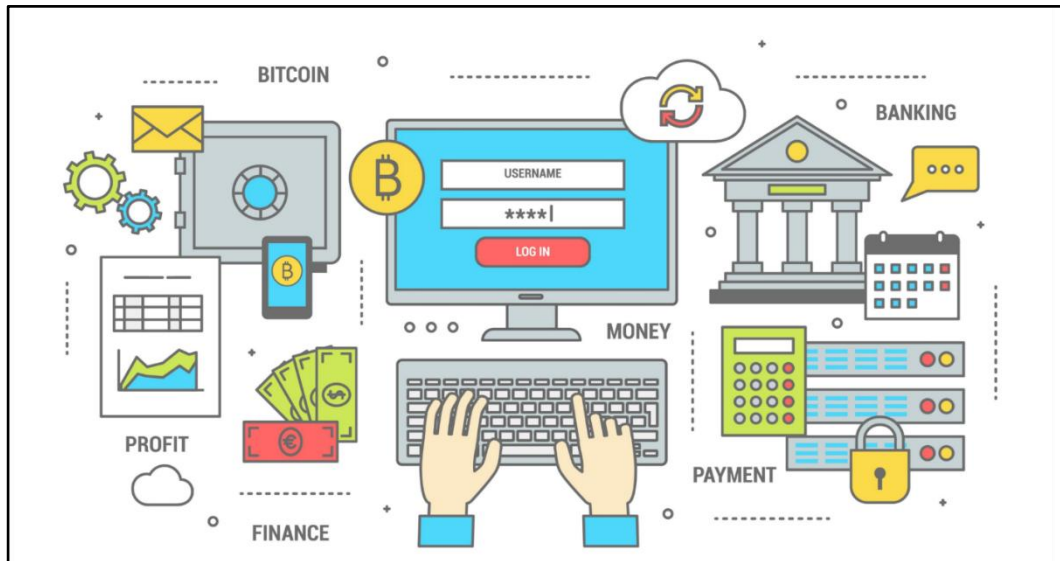


Figure 1: Blockchain-based applications[6]

Since its introduction in 2008, blockchain technology has played a significant part in global business. Block chain technology is one of many new smart technologies that are emerging. As the founding for Bitcoin, which is among the world's most popular cryptocurrencies, the technology rose to prominence. Ganne contends that [7], technology has the potential to transform people's lives, although a few critics claim this is a silly idea. Nonetheless, the use of block chain technology serves an important purpose in international trade. The technology's numerous difficulties may be tackled in the hope of enhancing its execution in daily financial relationships. Blockchain is made reference to as a "tamper-proof, decentralized and dispersed digital record of the transactions that builds trust and has been described as highly resilient".

Wikipedia contends that, a smart contract is "a computer focusing particularly to digitised enable, verify, or enforce the negotiating process or performance of a contract. Smart contracts enable the execution of believable transactions without the involvement of third parties. These transactions can be tracked and are irreversible."

The fundamental blockchain, AI, and Iot. are linked by smart contracts. In exercise, a smart contract is a process that does not require human involvement to monitor and verify its progress. For the needs that must be satisfied in order to move on to the next phase, the agreement works with an if/then technique. As a result, the existing production phase demonstrates that all previous stage requirements have been met. The agreement can be written in such a manner that the actual system has been transparent and trackable, which would need sub - contractors to fulfil not just the physical aspects of delivering but also the documentation required and inspections. A smart contract, for instance, can verify that an item fulfills legal and regulatory requirements, such as being sustainable and kind to the environment, as well as complying to worker protections, rules of beginnings, and so on.



Objectives:

- To investigate the workings of blockchain technology.
- How to successfully implement blockchain for international trade.
- Examine the blockchain technology's role in enabling global supply.

Research Methodology:

This study gathered information from both primary as well as secondary sources. In analyses the various disciplines encompassing blockchain based and its implementation in international trade, both primary and secondary information are gathered. Reading scholarly articles, scientific journals, news stories, and internet company publications provided secondary data. Conducting interviews was the primary data collection method used to determine how businesses adapt to arising blockchain technology and its implications for international trade.

Result and Discussion:

Today, blockchain technology is primarily used to begin organising bitcoin circulation, but new procedures have made it possible to provide data access and information exchange, identity protection, payments, transaction tracking, and so on. (See Figure 2.)

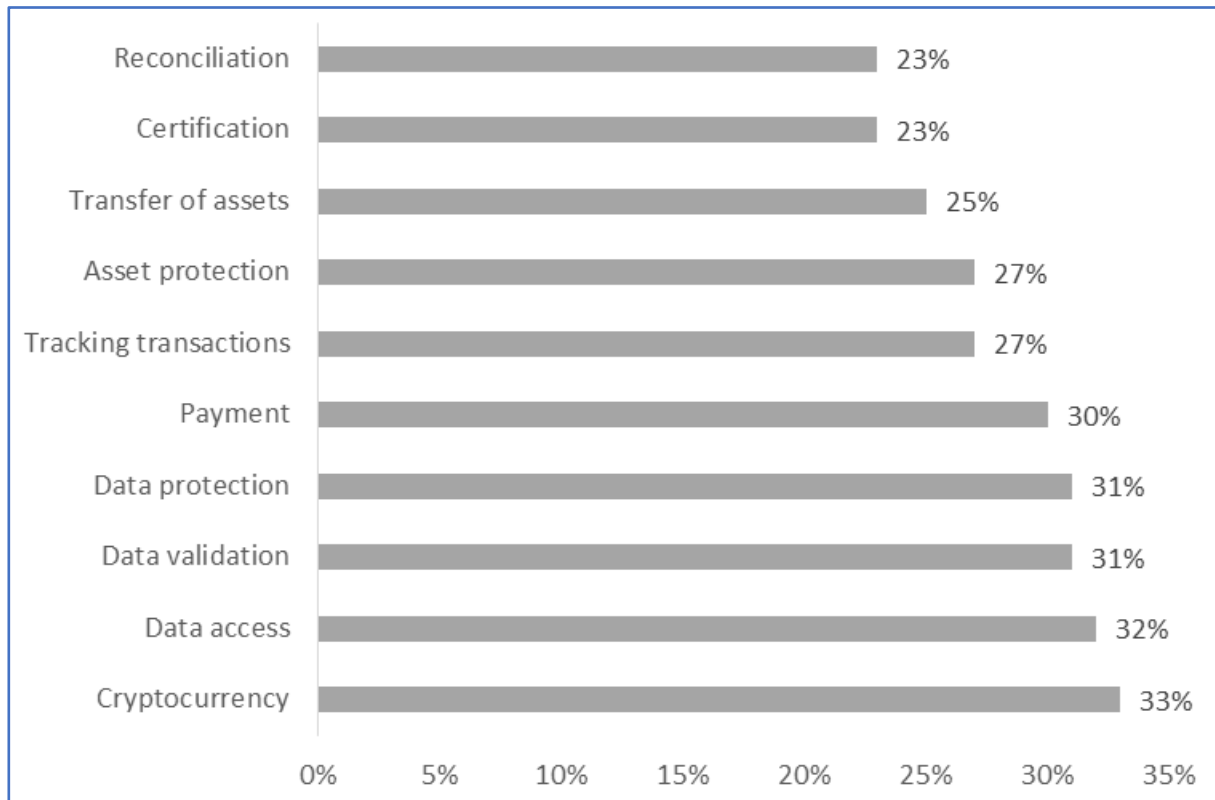


Figure 2. The primary blockchain technology's objectives implementation [8]



We can therefore conclude that technology's primary functions are also to arrange mutual settlement blocs, offer additional information flows, and protect data. As a result, of that kind developments are scarce in the financial and trade industries, particularly during a global epidemic that severely disrupted logistics flows (Fig.3).

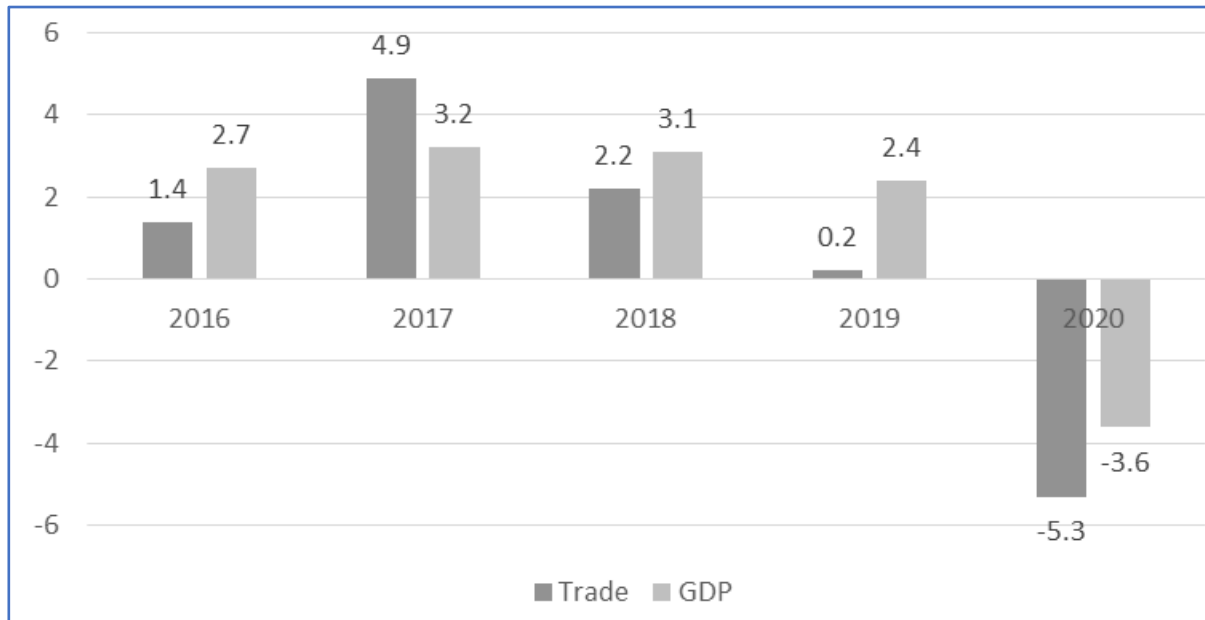


Figure 3: Annual growth in international trade and Gross domestic product indicators from 2016 to 2020, in percent [9].

Effect of blockchain on cross-border transactions

In terms of increased cross-border transactions following the adoption of the respective technology in the international forum, blockchain is regarded as a holy grail. By the end of 2022, international cross-border payments are expected to total approximately US\$156 trillion. The graph below depicts the increase in cross-border transactions over the last few years as a result of digitisation and streamlining payment processes.

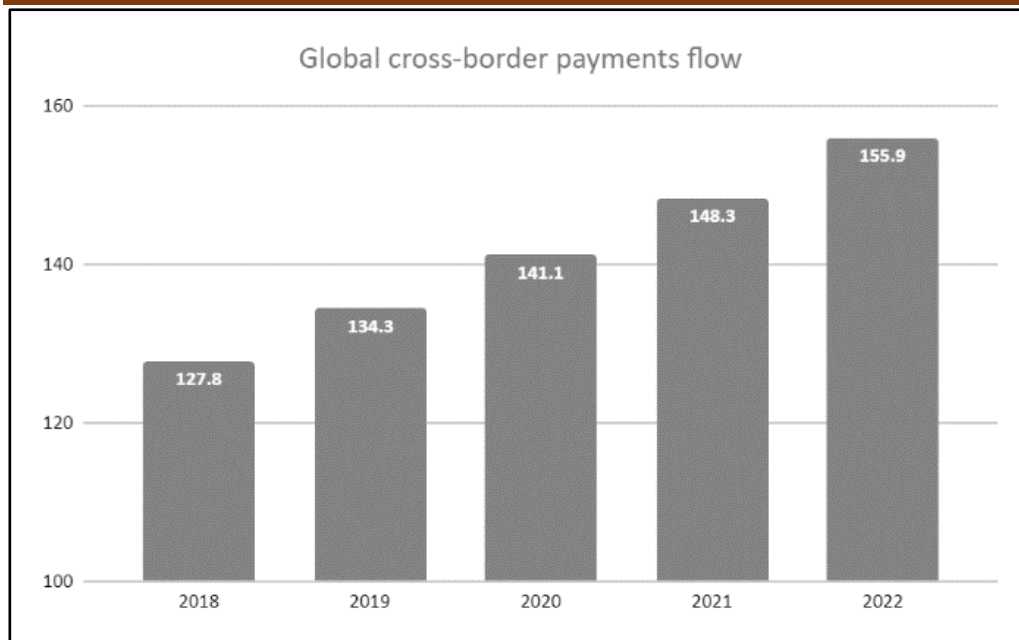


Figure 4: Flow of Global Cross-Border Payments [10]

As shown in the graph above, cross-border transactions were valued at US\$ 127.8 trillion in 2018, but have since increased to US\$ 156 trillion, indicating tremendous growth. The G20 countries' adaptation to market trends is the reason for the significant growth.

Blockchain is an online document system that employs encryption to make transactions auditable. The Blockchain can be used to monitor and control each transfer of funds, the set of transaction data is verifiable, and the data in Blockchain cannot be edited without the user's knowledge. Isn't it amazing that there are more than \$25 trillion in market account holders for sending and receiving capital, goods, and services between different nations and territories? Approximately 75% of commodities are shipped via shipping crates or transportation, according to the Review of Maritime Transport.

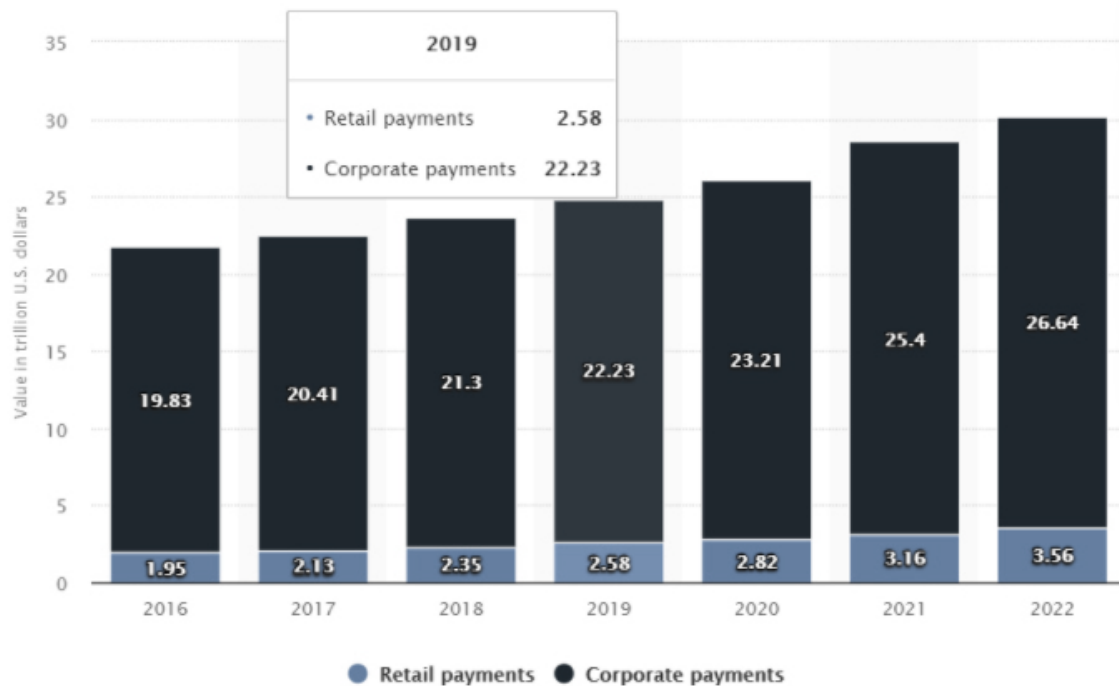


Figure 5: Blockchain Technology in International Business

As a result, the trading process has been relatively difficult in terms of security, openness, trust, and co - ordination between both the exporter and importer. Because trading is so reliant on human capital, there is a problem with operational activities. As a result, the trading industry has become more complex and inefficient.

And including emerging innovations like AI (Artificial Intelligence) and IoT (Internet of Things), Blockchain has the potential to change the way international business is conducted, operated, and regulated.

Conclusion:

Finally, blockchain technology has the possibility of changing how goods are traded globally. Because of its ability to simplify processes and reduce costs, block chain technology has the possibility of making global trade more efficient and thorough. The total cost for employing the system is expected to fall as more businesses adopt blockchain technology.. As a result, those having to look to automate their international trade operations may find blockchain to be a more viable option. This Paper also discusses regulatory challenges and assessments that must be taken to encourage the creation of a regulatory framework enabling environment to technological development, as well as the responsibility that the WTO could play in this regard. The chapter contends that the WTO is ideally positioned to play a critical role in enabling blockchain to achieve its full potential in international trade.



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