ОЛОН УЛСЫН ХУДАЛДААН ДАХЬ БЛОКЧЕЙН ТЕХНОЛОГИ

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Хураангуй: Глобал худалдааны хөгжил нь 21-р зууны худалдааны санхүүжилтийг боловсронгуй болгох, цахим шилжилт хийх нөхцлийг бүрдүүлсэн технологи, инноваци, программ хангамжаас хамаарч байна. Ялангуяа блокчэйн технологид суурилсан шийдлийн (дэд категорийн) нөлөөг танин мэдэх шаардлагатай байна. Иймээс бид энэхүү судалгаандаа худалдааны процесст эрс өөрчлөлт бий болгож буй технологи, программ хангамжийн талаар онцгойлон авч үзэв. Blockchain технологийн төвлөрсөн бус дэд бүтэц нь зуучлагч талуудын оролцоогүйгээр мэдээллээ хуваалцах боломжийг олгох тул экспортлогч, жижиглэн худалдаачин, худалдааны санхүүжилтийн нийлүүлэлтийн сүлжээг бий болгох найдвартай технологи болж чаддаг. Энэхүү судалгаа нь олон улсын туршлага, практикийг судалж, санал дүгнэлт дэвшүүлэх зорилгоор хийсэн болно.

Түлхүүр үгс: технологийн шинэчлэлт, шилжилт, худалдааны санхүүжилт, дэд бүтэц

BLOCKCHAIN TECHNOLOGY ADAPTATION ON INTERNATIONAL TRADE MARKET

Abstract: Blockchain might be valued as a practical example of the fourth industrial revolution over the Internet because it applied to actual transactions in international trade. Since 2000, blockchain technology has expanded because of the reinforcement of digital solutions. “Block” means a static section in which transactions made over time are recorded on the data. That is, “Blockchain” means that the transaction history for some time maintains the dynamic state by interconnecting the individual block recorded in the electronic device for data distribution processing. However, blockchain is characterized by the same distributed storage of accumulated transaction history information on the entire online trade trader computer instead of storing it on a specific financial institution server, such as a central bank. Therefore, if additional online transactions occur, approval from each participant is essential.

Keywords: Technology adaptation, international trade, infrastructure

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I. Introduction

In international trade, the Internet cannot be hacked from time to time because it is verified from time to time. Blockchain developers' logic is that this technology allows individuals to activate trade transactions without state interference or control while building self-trust. Blockchain developers argue that the technology allows individuals to activate transactions without state interference or control while building self-trust based on ledgers. On the other hand, opponents argue that the efficacy of blockchain is overvalued and requires scientific verification. A prominent digital ecosystem built that has never been introduced on the international trading process before. Digitalization of trade finance is something the entire trade industry agrees is vital for trade's longevity. The rapid development of trade technology and its' applications in international trade can be cited to make reporting of environmental, social, and corporate governance (ESG) factors a lot easier for the trade future condition. (Prior, 2020). Blockchain technology is gaining attention on the digital process of international trading. In particular, the controversy over cryptocurrencies using this technology is critical. It will become a new world of international trade, Don Tapscott explained, an applied economist, in his book 'Blockchain Revolution'. Blockchain will drive the transformation of international trading. In 2025, blockchain platforms will reach 10% of the world's GDP (Wass, Sanne, 2020). How does Blockchain change the future of international trade? We can find some examples of digitalization in the trading process in this paper.

The purpose of the study is literature study, and understanding on this new topic.

For this purpose, chapter II will cover the former studies with the analysis of the digital environment with blockchain technology in the international trading sector through studies of the blockchain adoption on the conventional business process by reviewing the research on building the Blockchain. Moreover, it will survey the phenomenon of the bridging between Blockchain and international trade process by an application to reverse transaction data, financial transactions, and method of safety on the international trading payment in respect of digital science challenges, such as U2U network of modern technology and case of implementation of distributed services. Chapter III will concentrate on the cases of digital activation with information and communication through the digital process of trading and market participants and will find an international trade process model. Significantly, the study will review on the transition to electronic trade is complex and successful, and balancing strategy adapted international trade models, the right processes of marketing, and technologies on supply chain management and account relationship management. Furthermore, we will discuss the significant factors of developing the digital process

with data integrity and Digital certificates and signatures. Chapter IV will analyze the trading process's blockchain application by analyzing the trading process of digitalization through logistics environment with blockchain technology and financial platforms and technical certification for export traffic control.

II. Digitalization Adaptation on Business

1. Review of the studies on building of the Blockchain

David Chaum first explained the necessity of developing e-payment, an electronic cash application that aims to preserve a user's anonymity, and introduced many cryptographic protocols like the blind signature, multi networks, and the cryptographers' protocol. In 1995 his company DigiCash, an electronic money corporation, created the first digital currency with e-Cash.: 65—70 His 1981 paper, "Untraceable Electronic Mail, Return Addresses, and Digital Pseudonyms," laid the groundwork for the field of anonymous communications' researches (Danezis and Diaz, 2008; Chaum, 1981). Later, Haber, Stornetta (1991) studied implementing a system where document timestamps could not tamper (Haber and Stornetta, 1991). In 1992, Haber, Stornetta, and Dave (1992) incorporated Merkle trees into the design, which improved its efficiency by allowing several document certificates to be collected into one block (Bayer et al., 1992).

Narayanan (2016), Bonneau (2012), Felten (2009), Miller (2016), Goldfeder (2016) studied a Hashcash-like method to timestamp blocks that Satoshi Nakamoto has conceptualized the blockchain without requiring them to be signed by a trusted party and introducing a difficulty parameter to stabilize rate with which blocks are added to the chain (Narayanan et al., 2016). In the meanwhile, Gartner group (2018) found that only 1% of CIOs indicated any blockchain adoption within their organizations, and only 8% of CIOs were in the short-term "planning or active experimentation with blockchain." (Gideon, 2018).

The term digital technology on trade process was first officially established and recognized by the World Economic Forum in a 2018 white paper, highlighting the importance of technologies such as the internet, Blockchain, and artificial intelligence to facilitate international trade and support trade finance. Wolfgang Lehmacher co-authored the report on their study "Trade Tech — A New Age for Trade and Supply Chain Finance" (2020). In the private sector, the emergence of private companies that typically use the cloud through software to provide applications accelerates the availability of Trade Technology applications. Companies are often

startups founded to modernize the traditionally conservative trade finance market.[4]

In the process of this discussion on previous studies, we are experimenting with the payment system of international trade transactions by building a sizeable blockchain ecosystem that has not been seen before in international trade since 2020. Blockchain service providers ScienceLut and Pluto. ScienceLut builds a massively integrated blockchain platform with scientists, researchers, and scholars from various fields who assist Smart Contracts and the Internet-Planetary File System (ILFS). It means a smart contract is a record of all transactions that are utilized in blockchain technology. The main intention of developers is to combine powerful flatform with the wisdom of scientists, researchers, and scholars from various fields to build a blockchain ecosystem that can cover the entire financial transaction or contracts. It needs to create a 'science token' that one can put into trading to do this. Science Lut officials explain that the digital currency must demonstrate that it can help ensure complete safety through financial transactions. However, the challenge remains to persuade investors to achieve their goals.

2. Bridging between blockchain and international trade process

2.1. Application to reverse transaction data, financial transactions

Many scholars discussed the positive effect of adopting blockchain technology in international trading areas such as finance, raw material, and the environment. In particular, new utilizations are actively developed in the international trade communication sector. Some scientists argue that exchanging data, such as trade documents, can help secure data and facilitate data communication. Joris van Rossum, director of special projects at Digital Science, is a prominent example. The blockchain system builds the confidence of inter-international traders, as well as allows for more appropriate compensation. This idea is shared among developers such as Science Route and Pluto, trying to build the 'Blockchain ecosystem'. Most of all, the Blockchain can be used for international trade transactions.

Gideon Greenspan, founder of Coin Science in London, which developed the multi-chain, said: "It is not appropriate for the scientific archives where blockchain is publishing a scientific thesis." and "If you produce a large number of documents, the costs will accumulate, and as a result, you may instead be more expensive than running an existing cryptocurrency system." A recent report by the European Commission's Joint Research Centre (JRC) found that the introduction of Block-

[4] "How is Tradetech bridging the trade finance gap in ASEAN?", UK ASEAN Business Council."Tradetech 40", Trade Finance Global (https://ukabc.org.uk/).

chain into the existing e-trade system could replace the numerous record paper print metals used in the trade industry.

It is claimed that security processing is possible, including records of personal learning and performance written by companies, various business areas of trade traders, corporate credit ratings, and other patent certificates of various companies. Safety can be maintained without the risk of loss. Managing the transaction data used in trade transactions can also be a long way off.

Blockchain can also be applied in other international business areas, such as the financial management of existing companies. Without banking, the cost of transactions is lowered if remittances and currency exchange are possible, so the use of the internet address now can be quickly popularized as if it had switched to other communication media. For example, if we use cloud storage, we do not need a server, and we do not worry about hackers' attacks, so we can keep our data safer. Most barriers are already technically systemized. The key technology that enabled all this is blockchain technology.

Blockchain is most mentioned when talking about Bitcoin, which is the first example of a bankless global financial system.[5] The cryptocurrency bitcoin has grown to the extent that it has entered the world's top 100 currencies by market capitalization in the five years since it appeared in the world. There is no way to make money that we do not have as if it were there. However, if that $100 is electronic money, things are different. Blockchain demands transparency. Because electronic money exists only as data on a computer without physical reality like banknotes, data can be easily replicated. There is no difference between the original and the copy. It means that we can duplicate our money just like we would copy a computer file. Money that can be replicated indefinitely is not worth it. So if we want to spend money on electronic money, we need to do our device to fix the data. These devices are planted inside the BlockChain. That is the most prominent feature that makes Bitcoin a revolutionary technology in modern global trade procedure.

2.2. Method of safety on the international trading payment

Blockchain is also called the 'Public Trading Place'. It means that we keep our trading book open and managed. If there is a Korean SJ company asks the bank window and ask drawback the 10,000 Dollar, the bank employee will search the trading book to see if there is a record of the client entrusting the money. For

[5] Satoshi Nakamoto introduced Bitcoin as "an electronic currency that travels entirely between trading parties" and explained that it "uses the U2U network to prevent double payments." His idea and technology prevent double payments using the U2U network (https://www.bitcoininsider.org/article/83540/who-satoshi-nakamoto-introduction-bitcoins-mysterious-founder).

example, If the internet book has a record of 10,000 Dollar will be entrusted, as claimed by The SJ company of Korea, the bank employee will take 10,000 Dollar will be taken out of the vault and be contacted by the SJ company in Korea. If there is no transaction history, the bank will reject SJ companies' demands in Korea. If the transaction history is not checked correctly in the trading book, the bank will not do its part.

Trading accounts are at the heart of international financial transactions. Recording the history of money coming and going is because financial transactions are made based on this record. So it is essential to keep our trading place safe. The blockchain system is the safest financial system.[6]

Digital solution is to allow all users using U2U (User to User) network to manage their trading book together. It is a Blockchain system that anyone can easily verify. All U2U network users share copies of the same trading book. It is also up to the user to write the new transaction history in the trading book. They gather once every 10 minutes to update their trading accounts up to date. All network users add to the end of the trading account where they have exchanged money for every 10 minutes. If the book has the number would be duplicated, the fine book has to fill the empty area. Only the transaction history recognized by the majority is recorded in the book so that some people can not manipulate the book at will. Blockchain has been unable to make unholy transactions; for example, it can be managed transparently, such as trade, tax, financial.

If we write down our recent transaction history, all network users will share the newly created trading book, repeating this once every 10 minutes. At this time, the bundle of transactions made once every 10 minutes is called a block. Blockchain is the whole trading place where the block is assembled. Bitcoin has been stacking all transactions made since January 2009, when it was first created in the Blockchain. Therefore, internet connected to the network is handled with care. Users are taking their computers away from maintaining the network.

3. Computer science challenges on trade process

3.1. U2U network of modern technology

Blockchain is the basis for operating the cryptocurrency. Moreover, there was a much greater possibility lurking in it. Blockchain solved the problem of distributed

[6] If a criminal hands out a trading book, he can manipulate the data to get out of the money. Therefore, existing companies such as banks and trading companies take complex human and financial security measures to keep trading accounts safe.

computing that no one has solved in the meantime. U2U is a structure in which users connect directly to and receive data from the Internet. A U2U network is not a one-to-one network but a network where many users link each other like cobwebs. The U2U network itself is well developed modern technology. In addition to downloading data stored on one server through a sharing imports files by other users directly. It is like collecting files from multiple users and putting them on the server. By creating a burdened service by borrowing power from the U2U network, we can implement services that require many resources without fail in the business process.

One crucial problem is that users can connect to the U2U network but cannot trust each other. There is no way to check if everyone connected to the Bitcoin network adds the book's natural transaction history. Someone may use it illegally and manipulate the source to inflate their wealth. It introduces a 'proof-of-work scheme' to provide a way to produce reliable results for all of them who cannot be trusted. Paul Spring, an expert in algorithms and game theory and involved in the development of the cloud memo service Evernote, explains block chain's solutions as the same goes for maintaining and managing blockchain, public trading directory, on the U2U network.

3.2. Implementation of distributed services

Blockchain solves the challenges of distributed computing systems, providing an easy way to get started with the power of the U2U network for services that require significant resources. Bitcoin is a means by which users can exchange value between users without a centralized organization such as banks and trading companies.[7]

International money transfer services such as 'West Union' usually take around 10% of the transfer amount as a fee. The more inferior and less financial infrastructure, the more expensive the fee because of the increased risk. When one sends money from an Asian country to an African country, he pays about 12%. However, the blockchain system makes it easy to send money abroad and costs as little as possible. If a trader residing in the United States sends $10,000 in payments to a South Korean partner, they pay $200 in fees. By halving the fee, accounts can trade more. Bitcoin allows 37coins, a startup that started with only three people, to enter the international money transfer market for a smaller fee without having an international infrastructure. '37coins' that can send and receive bitcoins with just a mobile phone message.

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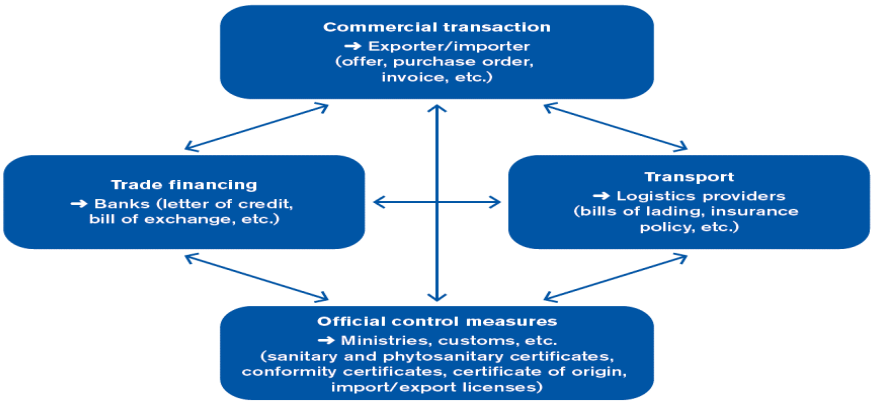
[7] Bitcoin is a prominent example of blockchain technology applied to the financial sector. '37Coins' showed a technology that allows bitcoins to be sent and receive via mobile phone text message (SMS) only in underdeveloped countries where banks and money transfer companies have not entered.

Figure 1. Four processes involved in cross-border trade transactions



Source: Ganne, E. (2018), Can Blockchain revolutionize international trade?, World Trade Organization, Geneva, Switzerland, ISBN 978-92-870-4760- https://www.wto.org/english/res_e/booksp_e/blockchainrev18_e.pdf

Some have used blockchain technology for cloud storage services such as 'Dropbox' and 'Maid Safe'. Made Safe manages the storage space that users give little by little in the U2U way. The data posted in Maid Safe is encrypted using our computer resources and is kept in pieces and around so that no one knows. Only we upload data can decrypt it and use it or share it with other users. Unlike Google Drive or Dropbox, Made Safe does not have a central store, so hackers do not have a point to attack. Even if one tries to launch a distributed service-free (DDoS) attack, there is no place for it.

One trader can also take advantage of others' storage space to use an infinite lot of storage space at no additional cost. The network assembled by Made Safe users manages the system independently, so there is little administrative cost. Bit message, a service that allows users to securely send and receive messages between users without a central server, was also developed using Block Chain technology, which implemented cloud storage services on the network. Bit Message' has implemented a communication service that cannot be eavesdropped on the network (Source: Bit Message website) Bit message, like Bitcoin, works on user-created networks. Not only did encrypt the messages only send and receive, but we also made the address of the party sending and receiving messages un-trackable.[8]

[8] For example, nuribit@bloter.net e-mail address called 'Nuribit,' you can infer that the user ID is 'nuribit' and that the domain bloter.net e-mail service is 'nuribit.'

III. DIGITAL INFORMATION AND COMMUNICATION

1. Digital process of trading and market participants

1.1. Digital process of international trade

A digital process is any international transaction that involves sharing information over the Internet. International trade constitutes the exchange of international products and services between companies, groups, and individuals and may be considered one of the essential activities of all international trade. The digital process of trading focuses on the use of information and communication technologies that enable external activities and relationships with individuals, groups, and other companies with the help of the Internet. The digital trading process is different from typical e-commerce because it not only deals with online transactions for the sale and purchase of products and services but also allows business processes (inbound/outbound logistics, manufacturing, and operations, marketing and sales, customer service) within the value chain through internal or external networks (Beynon, 2004). The term of electronic business was created by IBM's marketing and Internet team in 1996 (Gerstner, 2002 and Amor, 1999). International businesses can be done among a large number of market participants. It may be between international trade and other organizations such as producers, consumers, or public administration. These various market participants can be divided into three main groups: ① International Transactions (B) ② Consumer group (C) ③ Management part (A) All of them can be buyers or service providers within the global market. There are possible combinations of digital business relationships. B2C and B2B belong to the electronics trade, while A2B and A2A are part of the trading sector.

1.2. Developing process of digital commerce and trade process model

One of the founding cornerstones of electronic trading was electronic data exchange (EDI). Electronic trading systems have replaced traditional mail, telex, and fax with digital transmission of data from one computer to another without human intervention. Michael Aldrich connected the television to a transaction processing computer with a phone line and called it "teleshoving," which means remote shopping. Since the mid-90s, there has been significant progress in the commercial use of the Internet. Launched in 1995, Amazon began as an online bookstore and grew into the world's largest online retailer, selling food, toys, electronics, clothing, and more internationally. Other successful stories in the online marketplace include eBay or Etsy. In 1994, IBM, along with its agency Ogilvy & Mather, began establishing itself as a technique for conducting international transactions on the Internet through

the term "e-trade," leveraging the foundation of IT solutions and expertise (Pettit, 2012). Then CEO Louis Gerstner was prepared to invest $1 billion to market this new brand. Since that time, the terms and conditions have been loosely interchangeable and have become a common vernacular (Lowry, Paul, Cherrington and Watson, 2001). According to the U.S. Department Of Commerce, the estimated retail digital sales in Q1 2020 were represented almost 12% of total U.S. retail sales, against 4% for Q1 2010.

The transition to electronic trade is complex and successful, and balancing strategy adapted international trade models of (e-trade, marketplaces), the right processes (sales, marketing), and technology (supply chain management, account relationship management). Once a trading company is online, it is necessary to determine the electronic trade and payment model that best suits its goals (Paul Marson, 2000). The international trade model is defined as a source of revenue and benefits for exporters and importers with organizations of products, services, and information flow.

2. Major factors of development of Digital Process

2.1. Access and data integrity

There are several ways to prevent access to data that is online. They are accommodating in keeping third parties on the network. Trade companies using Wi-Fi need to consider different forms of protection because they are easily accessible to other customers. We should investigate protected access, virtual private networks, or Internet Protocol security. Another option that trading companies have is intrusion detection systems. The system warns if an intrusion may occur. Some companies set traps or 'hot spots' to attract people, and you can tell when someone is trying to hack into the area.

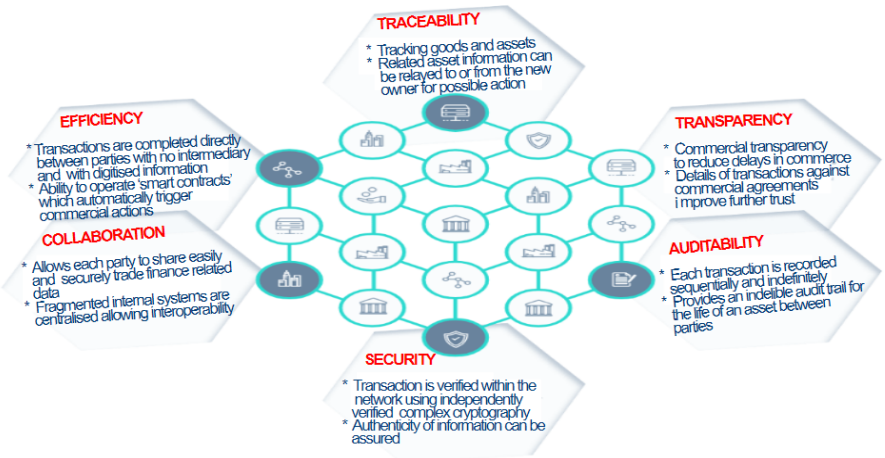
2.2. Encryption

Encryption includes converting text or messages into unreadable code. These messages should be readable or available to others. There is a key to identify the data to the exporter or importer. Public key encryption uses two keys. One is public, and one is private. These keys can be a simple slide of characters or a completely random mix of characters. It is relatively easy to implement because it has dedicated software that trading companies can operate. The company must verify that the key is registered with the certificate body.

2.3. Digital certificates and signatures

The point of a digital certificate is to identify the owner of the document. The Digital certificates ensure that the receiver is a genuine document. International trading companies can use these certificates in several ways. It can replace user names and passwords. Each party can grant these permissions to access the documents they need from anywhere. These certificates also use encryption. However, it is a little more complicated than standard encryption. The last way to protect information online is to use digital signatures. If the document has a digital signature, no one else can edit the information without being retrieved. Digital signatures make it easy to edit and make adjustments for reliability after the fact. To use digital signatures, it needs to use a combination of encryption and message digest. Message digests give a document a unique value that grants a encrypt with the sender's private key. All the parties used important information within the code. They do this not only to ensure the authenticity of documents but also to ensure confidentiality and data integrity with encryption at all times. Digital certificates will be popular because employees of each department of a trading company more use the system continuously. There may be positive effects when using different browsers, which means they need to use multiple certificates. The process can be adjusted with blockchain technology to make it easier to use as we see at the figure 2.

Figure 2. Applying blockchain technology to trade



Source: Trade Finance (2018, January 3), "Benefits of Blockchain in Trade Finance", TRADEIX. https://tradeix.com/benefits-of-blockchain-in-tradefinance/

IV. BLOCKCHAIN ADAPTATION TO THE TRADE PROCESS

1. Cases of trading process of digitalization with blockchain

1.1. Logistic performance case with Danish shipping company Musk

Danish shipping company Musk used Blockchain to develop a ship logistics system. It connects all the processes of product import and export into one chain so that network participants can see all the information in real-time, like the trade process from Producer → Truck or and Train → Loading → Ship → Truck or Train → Warehouse → Truck → End User. Therefore, as of the moment the order is placed, blockchain technology adopts all export processes. As the order moves, data moves in real-time to all involved, including ship owners, customs, ports, insurers, and banks. The exporter does not need to notify the importer of the shipment of the goods. All trade parts need to do is provide the export shipping number. Actually, there is no need to fill out a separate customs declaration form or create a shipping list under a digital process of the ship's logistics system. The blockchain technology of shipping and customs clearance without documentation is already adopted. In the future, blockchain technology can be expanded to marketing, risk management, and Bigdata application.

1.2. Technical certification for export traffic control

In the seven months from May 2020, the Customs Service participated in the "Public-Private Partnership" consortium of 38 institutions and logistics-related companies East Sea, including Samsung SDS, to verify its validity blockchain technical use in the process of export reporting and submission of import lists for export cargo.

Blockchain technology, also known as distributed source technology, has been evaluated as an effective technology that prevents information in order for all participating parties to retain information, unlike traditional centralized information storage methods. When export companies share export traffic documents on the blockchain network, the information's reliability and accuracy are secured as change is inhibited in a wholesale way. The document submission process is getting more manageable, and the re-entry of the data becomes unnecessary.[9]

The correction of report errors disappears, and that one innovation in the export traffic and logistics process will be possible. Shipper and filers have the advantage of

[9] Marketwatch (2020-2025), "Global Blockchain in Trade Finance and Credit Insurance Market Report by Method, Application and by Regions - Industry Trends, Size, Share, Growth, Estimation and Forecast, 2020-2025", (https://www.marketwatch.com).

streamlining the document submission process, and the logistics subject can manage digital documents to ensure transparency in logistics transactions and share real-time cargo forward information. Financial rights can also prevent illegal activities such as trade finance fraud in advance by sharing real-time export report repairs and shipping completion information of cargo. Based on the technical certification results, the Customs Service plans to pilot blockchain-based technologies to administrate tariffs starting next year, such as export customs and logistics services and e-C/O services between free trade agreements (FTA) countries.

1.3. Improvement of work performance of the customs service and payment system

The Customs Service of Korea recruited 60 companies for the pilot project in the first half of 2020, and exporters, warehouses, freight forwarders also applied for the pilot project to secure sufficient operators. The Customs Service conducts the pilot project by building and providing a Blockchain platform. Participating companies can connect to their systems and transmit actual data to handle customs clearance, which led to the promotion of a pilot project to prevent fore-change of reporting information, ensure transparency in trade transactions, and overhaul the country is the trade and logistics system, such as omitting the paperwork process in principle.

The Customs Service expects to save 24 billion won per year by improving the ease of working when creating export declarations.[10] Besides, issuing and auditing certificates of origin has been simplified, and customs clearance reduces logistics costs with Vietnam by 2021 by 103.4 billion won per year. Beyond the potentiality of the blockchain technology to enhance existing traditional trade payment processes, such as letters of credit, that is major leverage of trading process. However the disruptive nature of the technology is leading some companies to develop new blockchain supply sector to adopt on a products and models. While letters of credit payment system remain important for the time being, an increasing number of trade transactions take place on open account terms using supply chain financing. as we see the figure 3 In the European Union, for example, letters of credit are, in fact, little used for intra-regional trade since 2018 officially.

[10] The project is also a pan-governmental project selected for the ICT-based public service promotion project organized by the Ministry of Public Administration and Security and the Ministry of Science and ICT of the Korea.

2. Advantages and disadvantages of SWOT analysis

When evaluating digital trade, we have many advantages, mainly linked to making international business more manageable. The benefits or advantages of implementing the digital trade tool are streamlining the trading process and not much in the use of technology. Here is what it looks like SWOT analysis:

2.1. Strength

① Cheaper than conventional trade: Digital trade process costs less than traditional trade deals, but it is more expensive to set up. Transaction costs are also low.

② No geographic boundaries: The most significant benefit is the possibility of being geographically dispersed. Anyone can order anything at any time.

③ Flexible business hours: With the Internet available to everyone, there are no time barriers to location-based international transactions. Importers can easily access the products and services of exporters with Internet connections.

④ Easy to set up: The digital process is easy to set up even for small businesses, and the only requirements are software, devices, and internet connection.

⑤ Government subsidies: Digitization is essential to the government and provides the support it needs.

⑥ Reduce marketing and sales costs: Global transaction allows industry actors to advertise for product/service offerings, such as home rentals, at a typically lower cost than physically promoting a business.

⑦ Low inventory levels: International businesses enable companies to digitize assets to lower inventory levels. In other words, Netflix no longer sells physical DVDs but instead suggests online streaming content.

⑧ Easy entering new markets: It has great potential to enter previously unknown markets that traditional international trade has not been able to do.

2.2. Weakness

There are also some disadvantages or cost that we need to address. The most common restrictions on the digital process of trading are:

① Lack of personal touch: we cannot inspect the product or feel it before the final purchase. In traditional trade transactions, we have a closer customer

experience and not in the digital process of trading. Another missing factor in an account's contacts may be in online transactions.

② Security concerns: Fraud can be referred to as a factor in an account's distrust of electronic trading. Hackers can quickly obtain corporate finances and information. Some companies believe that the Lack of security, reliability, and integrity issues makes it difficult to activate electronic trade.[11]

③ Problem with the system's reliability: One can delete the bullock transaction history even after verifying that the current transaction history is stored in the block.[12] The problem arises because many computer resources can be deliberately recovered to block a vast network, make transactions inside or outside, and then avoid destroying the contents of transactions called 51% attacks on the state of the network and blockchain.

④ Data modification is complex: If we lose this key, there's no way to find it: In blockchain technology, due to a block contains a history of transactions confirmed that a block of transactions is an online process. The user is the one who determines the transaction history. This block share all participants on the network. Participants will check the validity of the transaction. Only approved blocks are connecting to the existing blockchain. It's not credit-based. The blockchain concept is that a network is a system and that third parties can exchange value between trading parties without guaranteeing the transaction.

2.3. Opportunity (Logistics environment with blackchain technology)

① Essential feature of digital management: Blockchain technology gives end consumers a glance at all the logistics processes of their products. In international trade, digital technology determines how exporters can develop inferior products and ideally identify fake goods.

② Record of an integrated process: The identification table is attached to the raw materials of imported products. The blockchain record of a digital process managed were products in warehouses, product processing stations, refrigerators, transportation trucks, and byproducts in the raw material processing phase. Information about all products under the digital process is updated in real-time on importers and all suppliers' computers.

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11 "Leaving Facebook" (www.facebook.com).

12 If we store transactions in new blocks and connect them to existing blocks, existing blocks have the consent of more than 51% of miners, but due to the nature of connecting blocks through mining every 10 minutes, it is difficult to ensure that the connection information between blocks is gradually propagated through the network, with the currently connected blocks have at least 51% consent.

③ Network can be checked transparently: Anyone involved in the network can transparently determine what was wrong with the product's production and distribution. With this blockchain technique, importers have moved the time spent looking for the cause of the change in the value of imported goods from a week to 2 seconds.

④ Integrated distribution course: Especially, agricultural products trading can be distributed integrated course like from a Farm, to Packing house, Transportation, Border crossing, Processing, Distribution center, and Store, finally to Customer.

⑤ Trade and financial trading platforms: Blockchain-based trade activates a trading platform for handling transactions globally, such as opening and paying for import and export credit cards. As a global blockchain trade finance platform, IBM and shipbuilder Musk have been jointly pursuing business, and multinational companies have formed a consortium to work on the platform.[13]

2.4. Threat

① Privacy fraud: Patent and copyright protection of goods with blockchain technology. In the process of preventing downloads of intangible ideas over the Internet, an individual's privacy can be exposed as consumers automatically enter into unwitting agreements with producers.

② Due to legal restrictions: Buyers cannot transparently verify the process since blockchain information is automatically updated when another customer purchases additional products, making the transaction process exposed. That would result in the enactment of various laws and regulations involved and changes in the social environment that reduce an individual's legal freedom in protecting various copyright rights, such as albums, movies, documentary films, and books.

③ Complexed information and delay matter: After storing related to finance and shipping, such as trade finance, issuance, and transaction processing in the ledger, it is possible to delay the process because several related entities are distributed simultaneously. Centralized trade and financial transaction procedures might delay due to the complexity of the approval phase and the time-to-wait for approval by online procedure.

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[13] In May 2020, HSBC and ING Bank used Koda blockchain technology to process trade finance transactions. At the time, the two banks used coda blockchain technology to support the rapid trading of soybeans between subsidiaries of Cargill, a multinational grain company (http://www.thebchain.co.kr).

V. CONCLUSION

Blockchain technology has been beginning to adapt to international trade during the latter half of the 2010s. The security of information of a blockchain network increases transparency between trade partners and supply chains and reduces fraud or information inconsistency. The blockchain era has opened up yet. It will integrate all decentralized services that influence all the processes of transaction. It also means that centralized power returns to the user's hand. All trading partners manage only one internet address. Just as Bitcoin distributes trading accounts on its network and operates technically, it manages the internet addresses of trading companies. A new ecological environment is just adopted with the use of blockchain technology. It is possible to create a service that changes the world with the 'Blockchain'. The blockchain process of international transactions is a critical technology that will lead international trade in the 'Fourth Industrial Revolution'.

We had literature study on this newest topic in Mongolia. First, we have understand about the digitalization, blockchain technology. Second, we have started in Mongolia Digitalization in international Trade.

This paper concludes that the reasons for the applicability of blockchain technology in international trade are as follows.

First, as digital information technologies become more readily accessible, convenient, and available on the international trade, finance method is getting modernized and digitally transformed, as Blockchain is a name determined by the nature of the data storage method. It is an integrated method that data stores in a central store when trading because trading unit nodes can store it whenever a trade transaction occurs. When the next transaction occurs, the data is stored in block form again.

Second, all export goods are exported to logistics, as a block is connected in a chain by all trading parties connected to the network and has a chain structure. The individual trade process is called ledger information stored as blocks, and blockchain is a 'shared ledger technology that allows each party to share individual information of the overall trade flow. That is why it is called a Blockchain.

Third, the effort to adopt new technologies in each country on their business line is very active. In the future, blockchain technology can be expanded to marketing, risk management, and Big data application. They build a trade process constructively about innovating using this technology and finding new future growth dynamics for trade power positively in America and China.

In conclusion, global trade development refers to technology, innovation, and software to support and digitally transform the trade finance industry in the 21st century. We can recognize a subcategory under blockchain technology. Therefore,

a particular emphasis on the application of technology and software to modernize the trade process. Comparatively low transaction and financing costs can create a reduce the trade barrier to cross border trade with reasonable trade costs effectively with comparative advantages as they maintain exports competitive eventually. The decentralized infrastructure of the Blockchain enables the sharing of information to minimize the involvement of intermediaries, with reliable connecting technology can be the supply chain of trade finance and retail and exporters. This paper estimates that the fourth industrial revolution's digital solution can contain a new generation of international trade with blockchain technology.

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