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Effect of Blockchain on E-commerce and Law

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Abstract-

In today's business world. Two of the most important parts are security and effectiveness .Much of the world's total population is actually moving towards into e-commerce since for their effective and easy ; But ever since, security has been the most crucial concern which actually breaks through the development of progressing business. One of the solutions is called as blockchain security which could really improve the integrity of the e-commerce utilities. Block chain also being called as Distributed Ledger Technology (DLT), is a tamper-resistant and tamper-evident digital ledger consumed in different and scattered fashion. This arousing technology, which actually enables straight through transactions within a ledger till the requirement for indulgence in trusted intermediary or central authority , had ability to re-assemble the economic models which actually enables the development of products and markets which were previously not available or non-profitable through the growing markets. But taken into consideration of the possible advantages of blockchain, firms should also taken into the account the inbuilt risks associated with it and through what are the methods they could be managed. The work thereby presented elaborated the bitcoins along with different aspects which are related to bitcoins together with mostly the bitcoins used in e-commerce has been demonstrated with entire of the side walls of outlook of the bitcoins along with e-commerce.

Keywords—*Bitcoin, Cryptocurrency, e-commerce, transection, Ledger, Legal.*

I. INTRODUCTION

Through the continuous growth in security and communication technologies, blockchains have been aroused as digital creations that will change the forms of numerous businesses and industries. A block chain is basically a secured , shared ledger, which has been dispersed through and over a chain of devices. After that these devices go through the verification of arrangement in disguised mass inside of network participants, which does not just confined to the form of crypto currency however also to any result of value. E-commerce is actually an computerised business the place at which buying and selling transactions were being made on the internet. The Ecommerce has undertaken different types of commerce manufacturing through trading services and goods along with utilities in between various organizations. The ecommerce system gets supported by extremely secured websites in order to go for financial transactions and web payments. But since then , the method of cryptocurrency has been able to brought revolutionary changes in both financial as well as commercial transactions . Block chain is basically a technology the place where most of the transactions are made through not a centralized currency along with no central intermediaries such as bank along with authorities. The top most likely -looking factor is called as tracking system along with the system of publicly ready for making use unchangeable transaction entry. Blockchain technology is basically a scattered ledger for different types of financial and

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economic transactions which performs continuous chain of calculations together with making a secure method for the e-commerce.

In an e-commerce, the carrying away of blockchain techniques is specifically predicted; Regardless, the study of blockchains remains as constrained because to the built-in performance and scalability issues pertaining in crucial blockchains like Ethereum and Bitcoin. On an average, the power usage for certain Bitcoin proceedings is actually from 3 to 4 a times bigger than the power usage for the number of 100,000 VISA proceedings. Hence, this investigation shows blockchain applications, methods, and techniques for identifying the advantages and struggles associated with it so far in e-commerce. Ever since, the two blockchain-based upon applications including detailed implementation and design of loyalty program and social shopping are being proposed by us. On the basis of the survey in different blockchains, the investigation thus adding up to the cumulative making of blockchains and e-commerce. But though it has been able to figure out many insights along with results for developers and academic bodies located in social computing.

II. BLOCKCHAIN SYSTEM

A. What is Blockchain System

Blockchain technology is a technology which was among primarily introduced in the form of mechanism and underlying structure of Bitcoin, so called a digital cryptocurrency which was released in the year 2009 in the form of an open-source system set by a person as well as by a group of people which were nicknamed as Satoshi Nakamoto.

While the adding up in so called computing power, global expansion and affordability of internet authority of accessing have fixed foundations mandatory for the upliftment of cryptocurrencies, their a forcible escape, into the overall public circumference also which has to be merely get digested in the relevance of a robust public reaction for the cons of institutions and centralised systems which thereafter the 2008 time of financial crisis (Narula ,Ali and Ito in the year 2017). This type of crisis, to which few of the economists take into account as being one of worst from the time of the huge Depression, that actually shaken and undermine the people's reliability in old fashioned financial intermediaries (as stated by Uslaner in the year 2010).

Bitcoin managed to propose to go a technological response: this happens for the initially time ever, that people will be capable enough for carrying out immense monetary transactions with not so necessary the requirement for rely or trust making upon intermediaries. Therefore the word block chain which is being built on the disciples of interdependent and interconnected series of blocks – with every block that are being one of the entry of a transaction which are being cryptographically signed,– the trust or the reliability being shifted apart from legacy institutions and third parties making pathway towards code along with an open-source,peer-to-peer , community-based system of accountability and transparency.

In its easiest form of words , the word blockchain is actually a distributed accounting book or digital ledger. Inspite of trusting on a bank or a lawyer or for attesting that money which was being exchanged ,it can be, that a con- tract was came into the existence, every transaction in between sections, or end parts, of the blockchain which is actually securely shown the outcome through robust cryptography in the form of an extra section included in a database, of which the entire whole nodes must had a replica. Because of how the blockchain actually works along with its designing , not even a sole node exists which can deceived or distort with the content .For making assurance that each one is consuming the exact similar version of the blockchain together with no contradictory versions evolving, the design includes a system of group of consensus along with mining done for verification,which is a method for establishing proof of the task.

In its easy term , blockchain is actually consider to be a technology which is being called as decentralised or a kind of distributed ledger upon which proceedings are unknowingly feeded. This actually means that the transaction ledger is corroborated simultaneously through the network of not so related servers or computers known as "nodes", such as a spreadsheet which is being copied thousands of times through a chained series of computers. The ledger which actually comprises of a daily basis along with full record (the series) of whole transactions being performed which were combined in the form of blocks: a block is only added up to the series only if the particular nodes, which are actually parts in the blockchain series of network with preferably top levels in computing power, that reaches out to the consensus on the immediate following 'valid' block which are to be in cooperated with the chain. A particular transaction could only be verified together with forming segment of a participating block if whole nodes located on the network which fixes that transaction is actually valid. The "miner" nodes which are struggling to resolve a very crucial complicated algorithm for its verification, for determining the validation of a participating block (in the case of the Bitcoin Blockchain, this is called as 'Proof of Work'). The primarily node for solving the algorithm along with the validation of the block which must be awarded as – upon the Bitcoin Blockchain in which earned amount transform into Bitcoins along with this which is being called as "mining for Bitcoins."

A block which mostly comprises of four pieces inclusion of information such as: time stamp , the 'hash' part of the earlier block, a little description of the done transaction and the Proof specification of Work that gone into developing the completely secured block. Once information is being feed onto the blockchain, it becomes very difficult to change it: basically a blockchain chain series suffer behind a focused centred point of attack prone for hackers to utilize and every block takes the earlier block's 'hash'if few of the applicability to change sort of transaction through the blockchain which were casually identifiable.

In another words, a blockchain is a own self-managing collection of data which could typically had a "functionality wrapper", it can be app development stage, on above of all. Blockchain may be considered resembling an operating systems considering for them some sort of meaningful applications or "intelligent contracts" could thus be made . Forte and knowledge regarding transactions could be saved along with monitored in spite of the participation of a particular mediator, likewise a bank, it can be a middle authority it can be few another relied third party.

A blockchain chain series might be general along with clear (permission less) such as the internet ,it can be made inside a private collection such as an intranet (allowed). The blockchains which have been accommodated the perceptions of more than few financial educational academies which are called as "private" it "allowed" blockchains since only few earlier approved candidates might attach them. Of all of these blockchains which are properly making use of different mediums for confirming the particular recognition of parties for the proceedings along with for gaining consensus for the validation of proceedings .to achieve consensus as to the validity of transactions. The body developing the considered "private" blockchain accepts on protocols that are making over as to what type records are being recorded along with what are the if conditions for which they could be changed.

B. How Blockchain Technology Works

One could thought of regarding the blockchain as a record book of proceedings. A physical record book is conditionally maintained through a centralized command, and therefore not through market candidates. Each person replica is being modified through when a proceeding it can be set of proceedings being finished. The term block chain but is actually a distributed record book which is placed on every individuals devices, that are going to participate. Every participant or user's device is majorly called as a "node", actually forming segment of series of chain of nodes . Of which one cannot require to trust the third party in the means of authenticity and transparency. The kind of proceeding differs fixed upon the implementation of blockchain technology. In the course of term Bitcoin, for example, every proceeding which is a form change of a few specified monetary

value regarding of Bitcoin in the mid of participants, along with each proceedings is being feeded upon Bitcoin blockchain. But , the proceedings which can also there be among different consumptions, such as "it shall be" money proceedings or it can be real estate possession, which was mentioned afterwards being included this paper.

The blockchain is distinctive since each node should be validate each proceedings in the chain series . This is due to which through a fresh node, which is actually making of the series of chain , the whole entry of proceedings are being saved and used onto individuals system (example -: 24 hours will be taken by bitcoin). After that , it will then be able to add up into the another nodes in modifying the record book through which new proceedings which are authorised. The method of authentication which are the basis of advanced cryptography which are being globally considered in order to be in secured mode and including of itself.

C. Public and Private Blockchains

Both type of private along with public blockchains which do have resemblance in the way which makes them distributed network securely through the use of consensus rules along with both generally will be unchangeable . But ever since , the two typical words namely "private " and "public" shows and implicates , that there must be vital differentiation among which one can be permitted for participating in the series of chains , implementing the consensus rule, along with maintaining of the shared record book. One of the great example of considered public blockchain was that the Bitcoin blockchain, at which place anybody can , at any place in the globe who can write and read raw data upon it.Only well-known joined participants which are permitted for reading and writing upon it that the ones in a private blockchain .depicting for example s consortium belonging to financial academy thereby the block chain could be consumed through a limited set of candidates used for participation.

Private blockchains which are generally but just a distributed record book along with might not had decentralization advantages of blockchain through such . Few people has shown the hatred towards private blockchains because of not been a creation, however rather an execution of so far-stabilising technology.Few of the blockchains shall be following a model which are hybrid in nature.For example, XinFin which was built upon both of the Ethereum, which is a public blockchain, along with Quorum, which is considered to be private blockchain unchangeable.

III. BLOCKCHAIN AND E-COMMERCE

Blockchain technology which are considered to be a digital record book that combines blocks of unchangeable proceedings which then happens in the given system. A use of the proceedings details, time stamp, earlier hash private ,public key is then used whenever a transaction are being processed which though emitting a hash which has been shown inside given **Fig. 1**. Basically, public key considered to be fruitfully a path or the address which permits participants for identifying each other along with private key which are being saved for validation. The earlier hash is kept for the linking up of blocks along with each other.

Since its broadcasting for the other nodes in order to consensus which are on scattered system to system network, before proceedings that are being stored inside a block . However , these particular nodes would be able for verification of the proceedings which will not been changed has along with once which will be approved through the maximum of nodes , after that it will gets added up to the corresponding block.

This kind of Blockchain technology helps and magnifies the e-commerce since they need for saving typically secured entry along with speedy transactional methods through which are being referred along with not changed entries for order processing and web payments . However this kind of technology which could modify traditional e-commerce factories which

includes online shopping virtual markets such as Amazon,EBay and so on and so on. It provides which cannot be denied the protection along with truthful services applying for the entry maintenance in mid of marketplace, seller , and buyers.

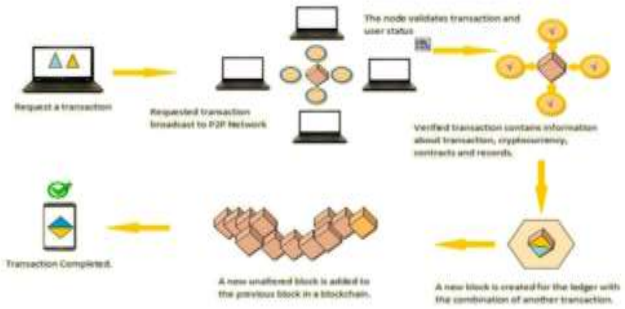

Fig. 1. Implementation of Blockchain Technology.

I. How Blockchain be used in e-commerce?

A. Allow for Faster and Cheaper Transection

There must be certain types of digital payment ways which can facilitate proceedings, that are including banks and payment processors. These mediators come taking along heavy transaction fees along with confined payment options. Either usage of blockchain technologies that were for the payments, likewise with cryptocurrencies, no such requirement of financial mediators. For users , the sort of solutions navigate (major of) fees included with them , decreasing prices.The direct authorised access to whole related documentation and details are being by the above stated transactions, which are actually lessening downtime consumers which will spend a lot of time requesting for all kind of knowledge from mediators .

Typically, blockchain based payments which will not need clients for giving sensitive information in any form to third-parties.

- **Comfortable authorised indulgence to Warranties and Receipts :** Ecommerce firms have, since for their online nature also historically given digital nature of copies containing warranties and receipts . These are actually the digital replica which are being sent to client through email. Through the use of blockchain technologies which will permit for the warranties and receipts along with storing of record book in a shared manner. If the information is necessary yto be get transferred for that Both merchant and customer were being able to straight forwardly update knowledge. Though these could be making prevent ecommerce firms and their administrative task , in the case client could be able to give back products it can be need for using a particular set of warranties . however , this could be easily made follow up , after making an observation of product undeniable value along with terms of warranty. This could be finally prevent ecommerce firms money and time along with the simplify the method in accordance for the clients.

- **Confirming of Legitimate and Reviews:** Earlier particular reviews of single service or product effect sales which are considered to be of potential in nature. For directly effecting the decision of purchasing something are based on reviews of that product which 90 % of the Americans focused upon. But , the incremented worries facing the legal authorisation of reviews of particular products along with services. The trustworthy nature of posted reviews could be correct only stated by 13 % of customers.

- **Supply Chain:** Due to the scarcity of transparency and tracking including the supply chains , thereby ecommerce firms are facing incremented issues with account of counterfeit or it can be of the bad and low grade products. They are also suffering an incremented need from customers side that needs to know much more about particular product's evolution.

- **Secure Data:** United states of America which is being the major targeted nation including for cyber- attacks, taken into account for greater than 50% of whole attacks . E-commerce platforms which are mostly focused from time they need specifically sensitive data from clients, likewise payment information , credit card , address , contact details . Cyberattacks could be expensive in more ways, both reputationally and financially. In which Target has to payable for 18.5 MUSD for large number of customers including of about 40 million that was actually effected through cyberattack.

IV. HOW BLOCKCHAIN REVOLUTIONIZED TRADITIONAL E-COMMERCE?

Blockchain technology, which are being a public scattered record book, makes and manages the record including all of resulting transactions manner of regularly expanding series of blocks that are able to brought marketing people for tracking the digital proceedings. The main advantage of blockchain existing in e-commerce that is to secure proceedings in duration with online purchase. Clients could be able for buying online without taking out their personal details of credit card and bank account. The Blockchain cryptocurrency is being leading forward in case of needed resources for the clients for overwhelming traditional e-commerce methods, instead of so many security and technical challenges.

A. Common Differences

Table1. Traditional e-commerce Payments Vs Payment via Cryptocurrencies

	Payments of Traditional e-commerce	Payment done by the medium of Cryptocurrencies
1.	Slow Payment process	Payment through crypto currency method is comparatively speedy and secure since it do not save customer's payment details, that are known as "push" proceedings existing within blockchain technology.
2.	Higher Processing fees	The typical exchange crypto currency or Processing fees which are changed into USD/CAD/GBP/EUR structure of fees is digestible.
3.	Negative impact of Disagreements resolution system in case of future customers.	The Payments of Cryptocurrency earned customer's rely for building up the robust affinity within e-commerce marketplace.

B. Architecture of Blockchain Business Process

The Blockchain hints and shows the chain of typically hack free blocks which are there for carrying large number of digital proceedings. It is carrying away the major information regarding user addresses starting first block until the last finished block. Every block is carrying away hash pointer which are being linked up towards hash pointer of the earlier block of corresponding chain. These being authenticated transactional timestamp and data . After the finishing up of all tasks , aforesaid block is then being amended to the blockchain. After that fresh block is being developed along with the replica of whole blockchain along with relayed upon sequentially along with the blockchain as in the form of distributed database. The feed up data which are actually transactional within aforesaid block is unchangeable since it requires huge computing power for the purpose of capturing the entire network of attached devices. These are few reasons why Blockchain has becoming more strong with the increment of devices within the network. The e-commerce application based upon block chain gives decentralization process in which no mediator that are being included between merchants and consumers. Entire proceedings that are being performed through the customers which are being then are saved in blockchain, unaltered and encrypted. The algorithm which actually makes database which is open in nature containing checked and verified quality products, customers review and list of prices that are being involved inside Blockchain e-commerce platform. The number of sales of a particular product actually evaluates the parameters.

C. Challenges in Traditional E-commerce and impact of Blockchain on It

Few of the challenges are being faced against traditional e-commerce are Transaction Rate, Frauds,and Reliability.

1. **Reliability:** purchasers can trust upon seller if only if that are being made by the third party that can assures them in order that applicable in fair transaction on the basis of few compensation for upholding the record book.

2. **Frauds:** today many firms encounter much more isuues with vendors that are dealing with false products that are directly affecting the brand or the nature of quality.

3. **Transaction Rate:** Toady due to which E-commerce are suffering from huge expenses that are inhibited in delivering products , ordering ,and shipping by various suppliers that are making the supply chain inexpensive rather than also making up of maximum time for doing the transaction. In place of that also, proceedings got late by their allocated time.

But ever since , blockchain technology could be capable of resolving up of all the above stated issues by making the proceedings much inexpensive and faster .

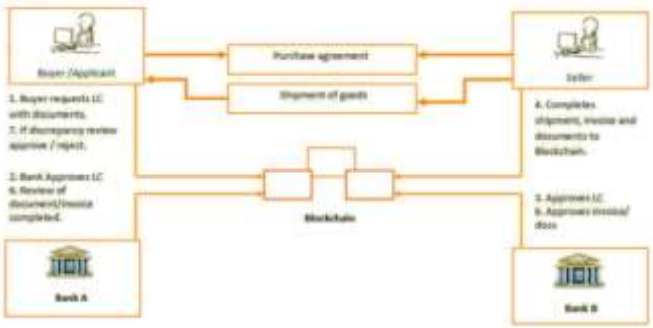

Fig. 2. Easy and Faster Transactions

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V. LEGAL ASPECTS OF BLOCKCHAIN

The new version of Blockchain has been developed and changed from version 1.0 to 3.0. "Blockchain 1.0 only focuses on virtual

Currency, Blockchain 2.0 aims at separating the technology and protocol applications as to the contracts, and Blockchain 3.0 is the growth of the technological applications beyond finance and markets."It depends upon the use of blockchain. Novel and different attributes shows regulatory and legal challenges. Therefore, the use of blockchain tokens and command regarding the issuance and taxation of crypto currency give raise to important questions like: How digital assets can be categorized? Smart contracts might ask for other treatment from traditional contract law. Disputes related with transfer of real property could be nearly removed.

The present acceptable possibilities about bit coins are as under:

- *Cryptocurrency Regulation and Taxation*
- *Smart Contracting*
- *Real Property Records*
- *Financial deals*

A. Government resistance

The government did not pay lots of observation when the internet was introduced for the first time. Later, when it starts affecting the businesses, offices, media and communication etc it become important for the government to put some restriction on it and to control the access use of the internet. As it was playing a vital role in impacting the trade. (Schneider 2013) [10].

Thus, the blockchain technology being on its development stage can be considered under the same. It is comparable on internet in early 1990's. Some governments are working on identifying the needs of the blockchain and its uses (IBM Corporation 2017). The government took several actions to jot down the efficiency of blockchain whereas others were not so interested in knowing the range of economic and social activities. The U.S. regulators' have rejected the Bit coin exchange traded fund (Hunnicutt and Chavez-Dreyfuss 2017) [11]. The government did not praise the peer-to-peer process which was used earlier. In fact, the authority carries out the human rights abuses for the people who aim at holding the financial knowledge and information sectors.

It is very essential for not providing the deduction to the lawful examination that many governments may have when it comes to possible uses of cryptocurrency transactions to launder money (Stokes 2012) [12], evade taxes (Torpey 2014)[13] and carry out illegal activities in the black market. While many steps have already been taken to find the technique to mitigate such abuses (Barber et al. 2012) [14], the risk was high and had a bad impact on environment.

- **Forecasting Legal Issues:** As there is not such a big support from the legal authority on blockchain technology till date, various questions are raises in this concern and it should be considered. It is basically the process of identifying the legal issues that comes in front in blockchain. This is because Bit coin is only one specific use case of blockchain technology, whereas blockchain technology can be applied in almost any context.

- **Bogus and Legal Enforcement:** Still there are many people who consider bit coin as criminal activity. They take it as illegal purchases of banned substances and guns, and financing terrorism.The blockchain follows the same

properties as Bit coin. Therefore the question arises about how regulators and counterparties will hold participants accountable, and enforce legal, tax, and contractual obligations.

- **Privacy and Cybersecurity**

  - **Privacy:** It means that protecting the information or data available. The information needs to be secured in such a way that it can't be leaked. It is a type of security or protection of the data.In case of blockchain some private keys are allotted to the customer so that they can use it for unlocking it. Blockchain participants can use the keys for seeing the transactions and every transaction can be seen by every participant (this is an essential feature of blockchain technology). As the blockchain is a latest technology, so most of the existing privacy laws around the world, including the Indian IT Act, would not view privacy protections for blockchain participants in such ways.

  - **Cyber security:** Cyber security is very important for security purposes. It plays a very vital role in recording the large transactions. If the data violated than its being declared on daily basis, and number of hacks done shows the implementation of blockchain technology is not error-free(even it states that technology widely used is to be robust and secure). For instance, participants' private keys (stored on their devices and/or on the cloud) can unlock their entire holdings, making private keys a definite target,and often a 'single point of failure.'

- **Jurisdictional Questions:** Many questions have been popped up on the internet on how to conclude that when the authority will rule such situation. For example, Indian courts will see if the websites are accessible in the country "with a motive of doing commercial agreement" with Indian users.In the case of an ultra-decentralized technology like the blockchain, the issues related with such questions were solved.This is because of the reason that there are no identifiable 'hosts' or 'operators' as there are for ordinary websites and apps (even if there is an identifiable blockchain operator, its role would likely be very different from a website/app operator's). It became difficult for multi-stakeholder, global approaches to ensure the harmony of international rules. In this layer of associations like the Chamber of Digital Commerce and the Digital Currency and Ledger Defence Coalition have participated and it plays an important role.

B. ***Legal Issues***

- **Jurisdiction:** Blockchain are capable enough to break the set line as its essence can be found all over the world. This puts up very complex power issues which are needed to take into consideration while making relationship. A different concept of contracts and title is allotted depending upon the power. It is important to sum up with the appropriate laws. It is effective in traditional banking transaction. We can understand it with an example: if the bank is found guilty of doing any fault than the bank can be sued for such doings and the current authority will take strict action against it. However, it is quite difficult to examine convenient set of rules which are enforced in decentralized environment.

- **Service levels and performance:** The vendors eagerness to carry out the performance assertion is generally depends upon the following three considerations:

  i. Their portfolio related with risk/reward ;
  ii. Service rendering model and
  iii. The "multiplication factor" of accepting significant liability for multiple customers – on a "one to many" approach – at the same time.

This means that vendors normally wishes to provide the technology and service to the customers with limited warranty period, very few service availability, and put the customer in dicey situation i.e. no assurance is given to the consumer regarding warranty and services as per the chances in the technology and leaves the customer without making any surety whether the technology will run as discussed or not. And also did not take any responsibility of reliable services. However, the users refuse to take such proposal. The balance of performance risk will result as a critical issue.

- **Accountability**: The trades are settled correctly or not but the risk related with the fundamental issue to the set of customers during trading in terms of infrastructure (blockchain) might be material. Therefore, risk in concern with the safety is on the top of the risk issues of any prime customer. There are various risk attached with Blockchain as a result of the technology and the way it runs: the main reason behind the public blockchain is the failure in controlling and stop the working of it. If we talk about the private blockchain than the functioning of such path can't be controlled. Therefore, it will result as a liability to an organization.

- **Intellectual property**: Blockchain consider IP as a natural value and ownership of it is considered as a loophole for the business and the path follow by such organizations (some of the relevant issues were brought into light in U.K). However, on the basis of the amount invested the financial capabilities are examined according to its returns on the basis of the technology based blockchain. And after that on that examination, vendors have to decide their IP strategies such as: a vendor likes to take the advantage by funding the commercial activities related with blockchain and gets the financial benefits from the available data. Thus, the data is based on the capable users and it is used very carefully.

- **Data secrecy**: It means that keeping the data safe and private. At the same time, it shows the capabilities of storing the data for long period of time. The stored data cannot be changed later as it is the USP of the blockchain. This is basically for placing the data secure. It keeps the data safe so chances of sharing personal information of a person are very less. In the same way the transparency of transaction made is not easily comparable with the banking sector personal details. Therefore, the banking privacy is kept by the laws as no bank would like to share it details with its competitors in the market. Hence, the data is kept very safely and privately.

- **Decentralised Autonomous Organisations (DAOs)**: DAOs are basically online, digital organisations that gradually runs following the pre-describe rules and regulations. These firms do not require any input and they are used to execute smart contracts, recording activity on the blockchain. Thus, it allows people, firms to participate through the current legal. This process is used by several legal systems by granting some powers to the organisations as such real people have – e.g. the power to enter into legal contracts, to sue, and to be sued. But what legal status will attach to a DAO? Are they simple corporations, partnerships, legal entities, legal contracts or something else?

- **The enforceability of smart contracts**: With the introduction of Blockchain it becomes easier to use the "smart contracts". Basically, Smart contracts are blockchain based contracts which are undoubtly completed based on the stated guidelines. Thus, the requirement for the middlemen involved comes to an end when blockchain is used. And it leads to self-completing fair provisions. Whereas, it is accepted the cost and efficiency gains will be seen soon. It also gave rise to some questions related with the applied rules and laws.

- **Conformity with commercial services rules**: Number of sources are required which includes providing the use of valuable and effective techniques, coordinates the firm so that a valid contact source series will be provided in order to take the steps for controlling the exert control. And it seems to grab the operational continuity in terms of providing the services to the related contracts. This can be more challenging in the case of blockchain. It becomes important to go

through the contracts and overall agreement for getting the confirmation as needed. For getting the information very clear an analysis was done: "The Blockchain revolution: an analysis based on the activities related with the settlement and technology used for the distribution of ledger technologies."

C. Jurisdictional Problems

The decentralized ledger covers the number of areas all over the world. It is quite hard to make laws and regulations and apply them to the provided application. Hence, there are some risk associated with such transactions which end up as introduction of new laws and rules. Thus, such laws are emended while making the transactions on the basis of system followed in blockchain.

It is very necessary to acknowledge what all laws to be applied on transactions and how risk management should be done in a public blockchain system. However, it is essential to make some legal rules and regulations with permission and make the rules for the governing law that will apply on transactions. In private systems it is very beneficial to undertake some form of agreed dispute resolution process.

1. Crypto assets
2. Privacy and data protection
    - Transfer of data
    - Data security on blockchain
    - Risk of cyber-attack
    - Double spending and DDoS attack
    - Smart contracts
3. Governance Impacts
    - Accountability
    - Taxation challenges
    - Regulators working with the industry
    - Meeting governance objectives
4. Others
    - Cybersecurity
    - Widespread Adoption
    - Necessity
    - Teething Problems
    - Privacy
    - Energy Consumption

VI. CONCLUSION AND FUTURE DIRECTION

Blockchain is basically a string of blocks. It shows us public records and keeps it safely by making sure that critical information can't be shared. And also avoids the manipulation of transactions. Thus, I can conclude that it is an unfamiliar technique which eliminates the faith with number-based security at a very large extent. However, many cases were pointed up by the Scholars to see if they really use blockchain's key innovation i.e., decentralization. Centralization can lead to enhance its ability and responsibilities, and whereas decentralization might end up with some discussion and communication related to this. It can be seen that decentralization is a tool used for transactions by number of people amongst themselves. As it is a way of creating trust and maintain proper records. Blockchain applications are normally used by the e-commerce industries that changes crypto currency for financial transactions, contracts and business development which also assist in creating their own digital signature. The smart contracts are arranged, organized, clearly defined, and unchanged etc. It is obtained as an allotted ledger which eliminates all mediators in order to make transactions cheaper. It is quite difficult to understand and face many challenges so, customers might consume some time for getting into this. Thereby, such platforms help in creating a modernized e-commerce and financial organizations with the increase in time and experience. The major portion which the blockchain system covers in the e-commerce system is about the regulatory bodies over the block system. In many ways the companies are required to form a particular cipher for the use of block chain. There is a great scope for blockchain in e-commerce. Blockchain is proved to be beneficial for both customers and sellers in terms of increased security, lower costs and improved transparency of the supply chain. As the blockchain and crypto currencies are Jargons one who is the online customer needs to have a strong knowledge about it in order to understand the benefits out of it. The work by me reflects the importance of the blockchain in e-commerce scenario and focuses on the various legal challenges faced in that such case. The study is done in order to understand the work that can be directly picked to understand and evaluate the legal and formal challenges and working scenario of the blockchain system in e-commerce industry.

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