Reduction in Poverty of India with the Help of Blockchain Technology

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Abstract

Being one of the fastest developing sector, the technology sector, internet has always shown fastest rate of progress and will continue to do so in the future. Predicting the future of internet, is not an easy task. Of course, it is nearly impossible to predict the features, services and the sort of opportunities, internet will provide us in the coming time but due to the fact that the rate of progress is increasing each coming year, we can imagine a positive vision for internet and the digital technology. The concept of block chain fits here very well describing the future of internet which explains the distributed, decentralized and transparent version of internet. Block chain is a distributed technology which works on decentralized networks, containing distributed digital ledger which is transparent to all. Another thing to focus on its trust and security, it almost finds its applications in every field hence, contributing a great role in the faster progressive rate of internet. In this paper, we present the review of the block chain technology and its contribution in technology sector, hence making it the future of internet. This paper tries to comprehend the block chain technology features, applications and coming opportunities and how it is going to be the future of internet.

Keywords: Blockchain, Cryptocurrency, Poverty, Financial Inclusion

Introduction

Being one of the most disruptive digital technology, having the potential of enhancing the existing technology with the promising features of trust, security and transparency, block chain is absolutely the choice when it comes to the future of internet. Block chain, shifted from the eventual migration from end-to-end principle to trust-to-trust principle[1]. As per this trust-to trust principle, user is having full control of trust in relation with his data being travelling in the online environment. Starting with its decentralized nature, due to lack of central authority it is not limited to political governance but block chain networks are governed by everyone who participates in it. In its place, the trust issues are being governed by decentralised unspecified participants in the block chain. In other words, there is no role of any third party or intermediate authority in block chain network. Block chain is a progressive technology which works on a distributed peer-to-peer network where there is no central authority. Instead,

everything on the network is transparent. In block chain, the blocks are the digital ledger which contains transaction records which are immutable. Since, the records are unchangeable and each transaction is recorded and updated over the block, it's nearly impossible to attack and break security over block chain. The transactions taking place are usually crypted and are visible to the users. One having access to it can only view it.

Blockchain
Block chain was invented by an unknown person, named Satoshi Nakamoto in 2008, to serve as the public transaction ledger of the cryptocurrency Bitcoin [2]. The invention of block chain made bitcoin to be the first digital currency hence solving the issue of double spending and lead to a virtual currency with no central governance or middle man. Speaking about computer networks, the two main biggest issues arises of privacy and security. Block chain's features of security, trust and transparency solves these issues that take place in information systems. It's decentralized helps in creating the environment of trust and security. Block chain finds its applications in variety of fields such as healthcare, voting, product tracking, smart contracts etc. The below figure shows decentralized nature of blockchain:
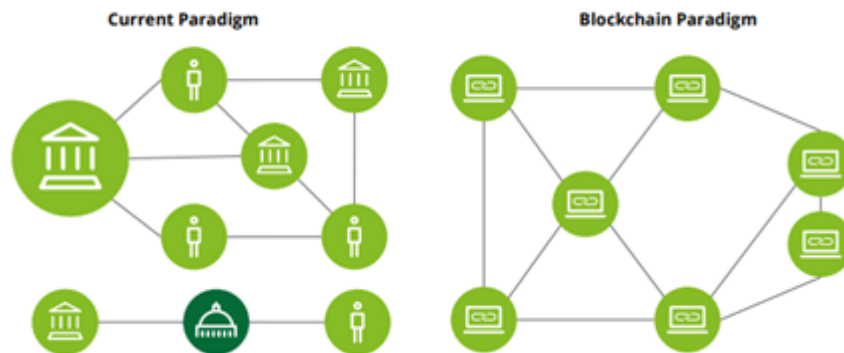

Figure: Traditional Database vs Blockchain based Distributed Ledger

Before further proceeding, it is important to define that blockchain is a disruptive technology that has made a huge change in the existing traditional approach. It is a distributed ledger technology(DLT) which defined the distributive approach in blockchain and how the data once stored remains immutable in record book or ledger.

Blockchain's Important Features
In ways that were unimaginable a decade ago, blockchain technology has the potential to transform how governments, businesses, and citizens interact with one another.
Businesses across a range of sectors are experimenting and exploring new ways to:
• Complete transactions more quickly for improved customer service;
• Guarantee cost effectiveness in its operations; and
• Provide transparency to consumers and regulators.
• Record-keeping on a fault-tolerant, time-stamped ledger
• Digitalization of assets and new economic models; Smart Contracts enabling decentralised, corruptibility-proof, self-triggering applications

Given the scale, diversity, and complexity of the systems required to deliver a wide range of public services, governance in India faces particular difficulties. Blockchain presents special opportunities for

tackling problems pertaining to better governance. India may make significant progress in increasing the "Ease of Doing Business" in the business world by allowing "self-regulation," which enables companies to communicate over a reliable channel with less reliance on onerous regulatory oversight and compliance. Blockchain would aid in enhancing comfort of life by empowering citizens through qualities like transparency, decentralisation, and accountability.

Common Roots of Poverty

It is extremely difficult for people to establish their ownership of the land due to inadequate record-keeping practises and erroneous registries. People living in poor nations lack a safe place to keep track of and save their important data. People are unable to purchase or sell real estate, obtain loans, or use other financial instruments needed to enhance their financial situation without the capacity to authenticate deeds. Their property records are frequently susceptible to discrepancies, tampering, destruction, and data loss because they continue to rely on third-party middlemen to manage their paperwork. One of the main factors contributing to poverty in developing nations is a lack of legal land ownership.

The rate of economic development in India is far below what is required for a good level. As a result, there is still a gap between the level of availability and the demand for goods.

The population has grown at a staggering 2.2% per year over the last 45 years. Every year, approximately 17 million people are added to the population, significantly increasing demand for consumer goods.

To eradicate poverty, the distribution channel must be robust. The poor should be the first to benefit from mass consumption of goods and food grains, for example. The country's current public distribution system must be reorganised and extended to rural and semi-urban areas.

Literature Survey

Blockchain and other distributed ledger technologies can be used in creative ways to address several issues.

- Leveraging a blockchain to store transactions makes them impervious to manipulation. Records kept on the distributed ledger are practically impossible to change because Blockchain records a clear history of revisions, including who did what and when.
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- By using this technology for property ownership registration, the owner's rights are protected, disputes can be settled quickly if they arise, fraud is avoided, and the right transfer is made. Hence, credit can be established via technology, enabling owners to open bank accounts and conduct financial transactions, enabling greater financial inclusion and opening the door to stable futures.
- Identity loss is yet another major problem in developing nations. A quarter of the world's population lacks access to banking services, which prevents them from opening bank accounts and using other financial services, according to the World Bank's global financial index. Blockchain can solve this issue by offering a digital identity powered by the blockchain that anyone without valid identification

can use. Since these identities may be used anywhere in the world, they give low-income individuals access to financial institutions and transactions

Licensing disputes are nothing new in the music industry. Many companies have faced lawsuits as a consequence of incorrect media attribution or failure to pay composers. Spotify, the world's largest music streaming service provider, for example, previously settled a licencing dispute with the National Music Publishers Association (NMPA) in the United States over unpaid royalties. Later, to address the attribution issues, Spotify acquired blockchain startup Mediachain Labs, which assisted the company in developing solutions through a decentralised database to better connect artists and licencing agreements with tracks on Spotify's service.

Another example is Walmart, which has effectively used blockchain technology to establish a food traceability system. Each blockchain node displays the entity that has handled the transaction.

Objective

Blockchain aims to make it possible to share and record digital information without editing it. A blockchain serves as the basis for immutable ledgers, or records of transactions that cannot be changed, removed, or destroyed. By offering a secure, cost-effective alternative for cross-border transactions, blockchain can promote financial inclusion for business owners in underdeveloped nations, enabling them to fully participate in the global economy. Afghanistan forbade girls and women from attending schools, therefore many turned to online courses to finish their education.

- Blockchain, with its openness to the public and pseudonymity, could assist them in obtaining widely accepted, impermeable, and portable credentials. By addressing the infrastructure and institutional expenses generally experienced by less developed and geographically remote areas, it has the potential to improve education.
- It makes cross-border payments to small business owners reasonable and effective, and it can provide women access to financing that was previously unavailable to them.
- Female micro-entrepreneurs without resources for securities can turn to virtual currency to finance their business.
- In nations where women are still not allowed to own property, women can use blockchain or cryptocurrency to get around constrictive cultural norms and gain access to money outside of the conventional banking system.

Research Methodology

Financial inclusion can come before the reduction of poverty in India through the application of blockchain technology.

Due to blockchain's decentralised structure, it can function as a central financial system. Due to the high transaction records fees charged by traditional banking systems, it can aid in reducing remittance fees.

Blockchain facilitates the movement of money back home. Virtual currencies can reduce expenses and increase transactional efficiency in several ways.

The financial system is susceptible to regional and international economic problems. The advent of blockchain technology has made it simpler to protect property rights and make secure investments.

With blockchain, buyers and sellers may communicate in a secure setting while keeping track of transactions and fraud.

The potential for consumers are also larger with increasing financial inclusion.

- Fighting corruption and holding people accountable.
- Insurance provision is made simpler by transparency.
- Giving and carrying out charitable endeavours can also become safer and more dependable.
- A greater number of people will have access to the global market.

Blockchain technology has applications outside of the finance sector as well, such as in networking, digital advertising, and cyber security. Blockchain technology can be used for a variety of tasks, including money transfers, supply chain management, data sharing, digital voter registration, real estate transactions, and the transfer of vehicle titles. Moreover, copyright and royalty protection might be entrusted to it.

With the use of blockchain technology, women can become financially independent and develop their own businesses. It makes cross-border payments to small business owners reasonable and effective, and it can provide women access to financing that was previously out of reach.

The following steps make up the methodical approach's overall process:

- Determine the necessity for the review, create a plan for the review, and create a process for the review.
- Identifying the research, choosing the studies, evaluating the quality, taking notes, extracting the data, and synthesising the data.
- Summarize the review's findings.

Conclusion

In ways that were unimaginable a decade ago, blockchain technology has the opportunity to transform how businesses, governments, and citizens interact with one another. While being frequently lumped together with other technologies like artificial intelligence (AI) or the Internet of Things (IoT), the technology is distinct due to its fundamentals. Blockchain has the capacity to restructure currently in place processes to open up new sources of efficiency and value, in contrast to other technologies that have the potential to provide citizens and other stakeholders entirely new services. Given the size, diversity, and complexity of the systems required to deliver a wide range of public services, governance in India faces particular difficulties. Blockchain presents special opportunities for tackling problems pertaining to better governance. By permitting "self-regulation" in business, India may significantly advance.

Blockchain can create socioeconomic opportunities by creating jobs on a large scale and ushering in a new era of innovation economic growth.

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