

Blockchain in Service of NGOs and Charities

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Abstract. Since its creation, charity and NGOs have been growing exponentially. Between 2019 and 2020, the sector is estimated to have an annual growth of 5.1% from \$448 billion to \$471 billion. Due to its enormous size, the world's NGO and charity sector has been facing various issues. These issues include fraud, lack of transparency, and high costs. Even more so, due to COVID-19, many forms of donations went utterly digital, resulting in high scams and transaction fees. After in-depth research on blockchain technology, the hypothesis is that this technology can necessarily eliminate many of these concerns. In a world of data and artificial intelligence, blockchain technology has become mature enough for many practical applications outside the world of cryptocurrencies. The characteristics of the blockchain make it a perfect fit for NGOs and Charities applications.

Keywords: Blockchain; Cryptocurrency; Stable Coin; Coinbase.

1. Introduction

According to the American Psychological Association, there are approximately 40,000 NGOs and Charities worldwide. Many organizations rely on donations to carry out microfinancing, while others provide free services locally. Living in the age of technology, the internet has become an essential part of our lives. "Around 6 in 10 people around the world are now online", Kepios analysts say. As a result, most NGOs and Charities have shifted their form of donations online, which is more accessible to everyone. Many new forms of funding, such as crowdfunding and peer-to-peer fundraising, also emerged due to the expansion of the internet. Donors can easily view thousands of projects and charities and choose to donate to any of them. However, many donors have become distrustful of NGOs and charities due to recent charity scandals, such as the Red Cross Scandal. According to Financial Planning Ministry, the average cost of raising \$1 can range from \$0.05 to \$0.25, depending on the method used to collect the donation.



Fig 1. The graph shows the increase in donations between the period 2019 to 2020 by category

In 2008, a new form of technology, blockchain, came into the world's eyes. Blockchain quickly became very popular because this system of recording information is very secure, making it impossible to alter the already stored data. It tracks information across a network of computers by placing blocks one after another, each block holding a series of transactions. Each block is assigned a hash code, a 64-digit value produced by the algorithm SHA 256. If a hacker alters the content of one block, the final hash will be different than its original, which helps the network detect the person and stop the attempt. The blockchain system is also decentralized and transparent to all users; the famous cryptocurrency, Bitcoin, rose to fame because it uses blockchain technology which gives its users complete control. Since its launch in 2009, Bitcoin has attracted more than 160 million users worldwide.

2. Blockchain in Service of NGOs and Charities

The blockchain system can also be put into use for charity activities. First, I would develop a blockchain system where each donor can see where their money went after being received by the charities. This encourages donations while minimizing the risk of donation fraud. Secondly, in addition to making a system that prevents fraud, I would like to use this system to reduce transaction fees. For example, charities should start to accept cryptocurrency payments such as Tether, a stable coin whose tokens are pegged 1 to 1 by fiat currency. Most cryptocurrency exchange platforms charge low fees for transactions. For example, the world's largest venue, Coinbase, only charges 1% on every transaction made. This is a lot less than when it is compared to the traditional method, as mentioned above.

Tier	Maker	Taker
\$0-10K	0.50%	0.50%
\$10-50K	0.35%	0.35%
\$50 - 100K	0.15%	0.25%
\$100K - 1M	0.10%	0.20%
\$1 - 10M	0.08%	0.18%
\$10 - 50M	0.05%	0.15%
\$50 - 100M	0.00%	0.10%
\$100 - 300M	0.00%	0.07%
\$300 - 500M	0.00%	0.06%
\$500M - 1B	0.00%	0.05%
\$1B+	0.00%	0.04%

Fig 2. This chart shows the different type of fees that Coinbase charge for different amounts of money. When compared to traditional methods of fundraising, these fees appear to be very minimum

Dezhou, a city in China, has been actively using blockchain technology in its charity activities. The city government values the functions such as safety, irreversible, and transparency that blockchain can create. Therefore, it encourages local charities to develop a blockchain app that records a donor's personal information, the amount donated, and the destinations of the funds. Through the app, donors can quickly locate all their information, including a certificate. This system is also very transparent to government organizations such as tax firms, allowing many donors to have adequate proof of tax deductions.

Thirdly, I would like to bring US lottery tickets such as the Mega Millions and Powerball to other 3rd world countries. The whole objective of the project is to help the people, thereby giving them a chance to become a millionaire, or possibly a billionaire, depending on the amount of the lottery. So,

the question arises, "Why would anyone trust you?" This is where the blockchain system comes into play. Each ticket we purchase for the individual/group will be documented on the blockchain and encrypted with hash codes so no one will have access to change the content. Every individual will therefore see the numbers they selected and whether they win a prize or not. In the end, if anyone does hit the prize, I will take 1% of the win. For this project, I need to hire a programmer to create and maintain the network. I will make a website on my own informing people about the project and introducing them to the lotteries in different languages. I will create a Coinbase account for the payment system to receive funds. I will go to the lottery stations and buy the numbers that people in other countries choose. I will then record these tickets on the network where the buyers can see them.

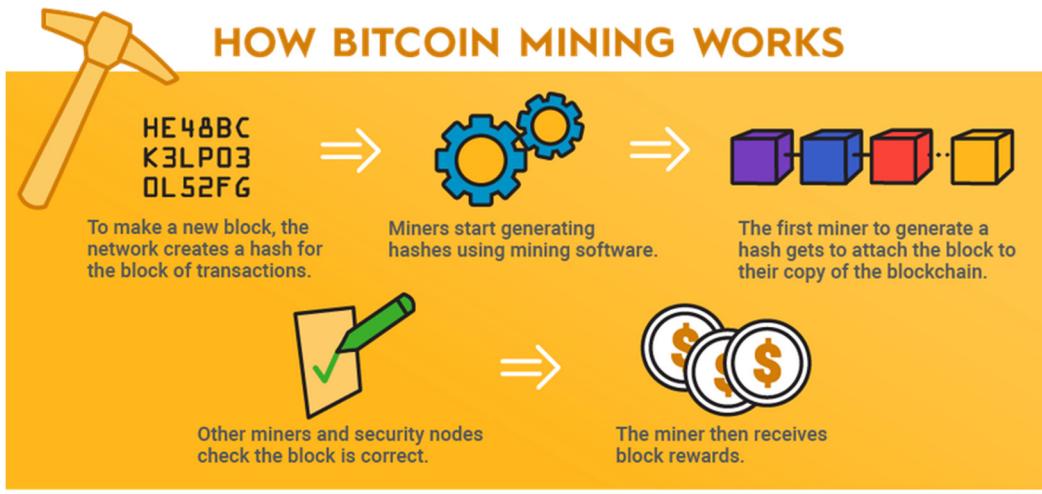


Fig 3. The diagram explains how bitcoin mining works with visual representations

3. Conclusion and Suggestions

Blockchain technology is still a relatively new idea that people worldwide have not been in close contact with. There are only 170 million blockchain wallets worldwide. Through exploring the ideas presented in my publication, Blockchain can not only be used in corporate and financial settings but also be used in NGOs and charities' operations. It serves a very high value in data processing and security. Through my network, people in 3rd-world countries will have a chance to gain wealth at no risk of fraud. The nature of my system will also protect data from their nations' governments, ensuring their data is secured.

Another implication of the technology is to record NGOs and charities' information and statistics to inform the public when deciding which charities, they would like to donate to. This method can have a system of reviews where verified donors or professionals can leave comments and ratings on different NGOs and Charities, adding to the security of each guided decision.

Lastly, the developed countries should teach developing countries this technology as it can significantly cut costs and improve transaction speeds and security. Hence, making the world a better place for everyone.

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