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Bitcoin in Indian Context: A study on challenges & future scopes

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Abstract

In this era of economic reforms and globalization, we are in a transitioning phase from conventional to contemporary means of transactions and investments. Further, the adoption of cashless transactions by the Indian Government encourages people towards digital or cryptocurrencies to keep India updated and lift our standard of living. Bitcoins, the world's most famous and well-known cryptocurrency, enables us to carry out transactions without needing an intermediary. It is also unregulated by The Reserve Bank of India. It has been noted that market forces somewhat control the price of Bitcoin. By growing and promoting the economy, virtual money helps to increase the use of paperless transactions. The study's primary goal is to define the many barriers to Bitcoin adoption and give relevant explanations for the Bitcoin-related issues that Indian users face. It also looks at the research on people using Bitcoin as a payment and investing method. A literature review was conducted to investigate the numerous Bitcoins that are now available. Analytical Hierarchical Process (AHP) was utilized to propose a working model and get insights into the world of cryptocurrencies. Bitcoin adoption is still a primarily unstudied topic. This study aimed to look at the core causes of Bitcoin non-adoption in various countries.

Keywords: Bitcoin, cryptocurrency and virtual currency

Introduction

In this age of globalization, we are shifting from traditional to modern means of transactions and investments. We try to combine technology with intent to ease our daily business operations in overall aspect of the firm, whether it is MIS, ERP or superior accounting software similar to SAP, to enhance our method of operations. Further motto of Indian Government's cashless transactions is a move toward a new and developed nation, with the goal of bringing India updated and also to lift up our standard of living. Bitcoin permits us to conduct operations without the use of a middleman and this is also not regulated by a central bank to a certain extent it is observed that the price of Bitcoin is determined by the market forces. Bitcoin may as well be mined. Virtual money contributes to expanding the use of paperless transactions by enlarging the economy and advancing it. On August 16, 2008, an unidentified individual published the first virtual currency, "Bitcoin," however on October 31, 2008, a link to a paper written by Satoshi Nakamoto titled "Bitcoin: A Peer-to-Peer Electronic Cash System" was posted to a cryptography mailing list ^[1]. Bit coin is virtual money that is not controlled by any political body and is the most valuable currency in the world ^[2]. There were 400 crypto currencies, sometimes referred to as alternative Bitcoins, in 2014. There are over 1600 crypto currencies available as of August 16, 2018. According to the market, Bitcoin has the highest allocation. Bitcoin has come across several obstacles in terms of adoption as a means of exchange since its inception, and it continues to do so in many nations. The Bitcoin market imploded in 2016, and the market value of Bitcoin decreased by 65 percent. Bitcoin holders have gone bankrupt. It is unlikely that people in a place like India, where resistance to change is an issue, will accept these kinds of transactions ^[3]. Getting people to accept Bitcoin as a means of payment and maintaining its security has proven to be the most challenging aspects of any venture. Both trust and confidence in the payment system are important accelerators.

Literature Review

[4] It was tried to understand people's opinions on crypto currencies and its issues, as well as to assess crypto currency adoption in different Indian states and the influence of the regulations in these areas on bit coin adoption. According to the research, bit coin is extremely vulnerable to security assaults. Furthermore, there is a demand-supply imbalance that might lead to an economic collapse in the future. The heightened fraud risk associated with unregulated and unmonitored financial flow is one key issue leading to crypto currency's non-adoption. The results suggest that future study should concentrate on establishing the link between financial regulation and the state of crypto currency implementation [5]. Bit coin initial coin offerings for three years following their initial trade record were investigated and it was revealed that 40% of the original coin offerings are commonly overrated. The paper has laid up a path for further research into some of the other parameters that affect the pragmatic return distribution of the Initial Coin Offering market [6]. It was sought to summarize the current status of block chain and crypto currency, as well as the numerous research problems and prospects in the area of crypto currency, and have discovered that due to diverse businesses operate in different ways, adaptable block chain networks are required. They claim that using a consensus process on a public block chain is still a concern that has to be investigated [7]. The topic of money laundering's prevalence in crypto currencies was investigated. Future research should focus on developing tools to prevent money laundering in crypto currencies in order to trace continuing illegal activities in the block chain [8]. It is sought to define the legal concerns that arise when using Bit coin and what remedies could be available. They propose that all facets of the problem be well explored in order to draught legislation that strikes a balance between security and competence whenever bit coins are executed [9]. It is looked at worldwide state of affairs and the probable outcome of bit coin adoption. To address the obstacles in the realm of crypto currencies, other technologies can be employed in conjunction with block chain. In the crypto-currency business, security is a major problem [10]. Cloud computing has the potential to improve block-chain security while still being cost-effective [11]. Network security is an important aspect of every organization, and cyber security is especially important in the crypto currency globe [12].

Research Methodology

This study is based on a case study of Bitcoin acceptance in India. We examined the example of bit coin in this study and discovered important difficulties. Bit coin's advantages and disadvantages in India We recommended various corrective techniques after recognizing the problems. We utilized AHP for the in-depth analysis (Analytical Hierarchal Process). We noticed certain concerns and obstacles after applying the AHP, which we utilized to

present a replica and suggest some techniques.

Problems

- **Unpredictability:** Bitcoin is very unstable that can change at any time. It fell by 65 percent in 2016, after having risen by 200 percent the year before. It is because the process is not derived by a central authority; instead, different market powers determine the bazaar cost. Bitcoin value stand zero if someone with whom we do business does not accept it.
- **Accessibility:** Even after more than a decade people are having trouble utilizing it. Bitcoin might be difficult to use for some individuals. The complicated algorithms and mining are difficult for a layperson to understand and apply.
- **Safety and illegal activities:** The primary problem with Bitcoin is its lack of security. You can't be certain of the security measures in place. The primary reasons for Bitcoins non-acceptance in India are cyber-threats.
- **Tax:** A Bitcoin tax is a foundation of conflict for some time. Any change in Bitcoins value must be declared, and the taxes also have to be paid.
- **Governance:** Any government agency or central bank does not run Bitcoin. People have trust concerns as a result of this. Generally it is a perception that people's money is safe if it is backed by any government agency, and they invest. However, there is no such authority in the case of Bitcoin.

Suggestions

- **Appropriate proposal:** We can secure the transactions if we can put up a platform for bit coin transactions in our nation and regulate the regulations and risk management for bit coin. As a result, people will be more inclined to accept bit coin as legitimate and buy it.
- **Government regulatory body:** The Govt may establish a body to oversee Bitcoin transactions, similar to how SEBI regulates the stock market. Regulatory organizations use influence over individuals in order to maintain investor confidence.
- **Workshops:** Investors and business people should hold seminars to teach individuals on the way to acquire bit coins and to maintain their wallets of bit coin. The biggest issue in our Country is that most individuals are not aware of the methods to purchase bit coin and how to manage the fundamental dangers that come along with it.
- **Anti-Hacking Squad:** Cybercrime is main concern in case of Bitcoin, generally people fear for it being stolen. People's faith in virtual money is eroded as a result of this. The only way to gain it is through establishing a cyber-security section.
- **AHP analysis:** The AHP approach was used to analyze the difficulties and challenges indicated by literature and secondary sources.

Table 1: Analytic hierarchy process

Items	Volatility	Ease of use	Security & criminal activities	Tax	Governance	Weights
Volatility	0.1	0.24	0.11	0.24	0.07	15.20%
Ease of use	0.03	0.08	0.11	0.24	0.07	8.60%
Security & criminal activities	0.52	0.4	0.53	0.33	0.62	48.2
Tax	0.02	0.03	0.08	0.05	0.04	4.30%
Governance	0.32	0.25	0.18	0.24	0.21	23.70%

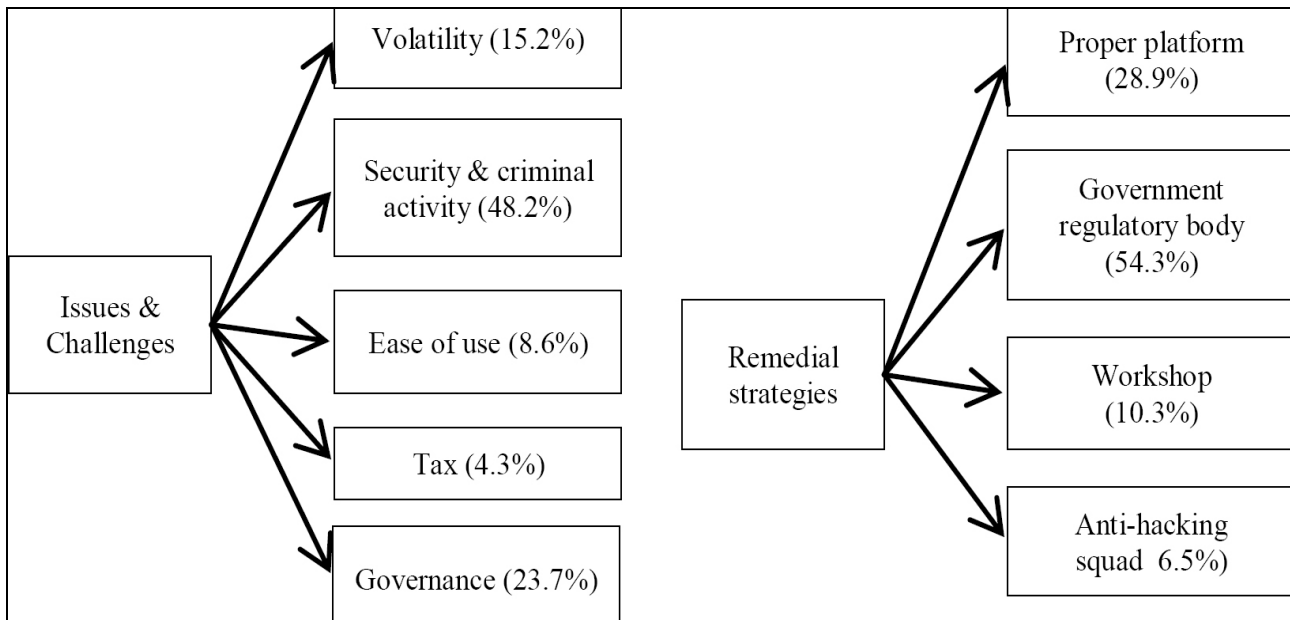


Fig 1: Analytic hierarchy process used for corrective approaches

Table 2: Show items, appropriate policy, government regulatory body, workshops, anti-hacking squad and weights

Items	Appropriate policy	Government Regulatory Body	Workshops	Anti-hacking squad	Weights
Appropriate policy	0.22	0.19	0.38	0.36	28.90%
Government Regulatory Body	0.68	0.59	0.48	0.43	54.30%
Workshops	0.06	0.12	0.1	0.14	10.30%
Anti-hacking squads	0.04	0.1	0.05	0.07	6.50%

Conclusion

The value of the virtual money varies with the size of the virtual community. Because there are no transaction records, there are more risks of money laundering. The most popular kind of virtual currency is loyalty points, followed by peer-to-peer networks and social games [4]. The ICO performance of large organizations is primarily declining. If institutional investors participate in this ICO project, there is a probability that the number of investors may rise [5]. The "Hyper ledger fabric" structure is used to address security problems. It operates on a channel to which only certain people have access. Node pruning on the block chain is a solution to the scalability issue. The two options for strengthening private key security are hardware and paper wallets. Mix nets may be used to protect user privacy using the Coin Join and Monero methods [6]. The risks of money laundering in crypto currencies are relatively significant due to the absence of participation of any government agencies [7]. Crypto currency implementation has led in a slew of complications, including cyber security concerns, tax evasion, and other illicit behaviors [8]. Crypto currency is straightforward and appealing since it is utilized internationally, making cross-national money transactions quick and painless. The issue of national currencies can be overcome with block chains [9]. Women have a lower bit coin literacy level than males Bannier *et al.*, indicating that men are more interested in bit coin. Users are particularly concerned about the volatility nature and risk linked with crypto-currency [10]. Bit coin has the highest rate of growth when compared to other securities, thus it will be a fantastic chance to invest in it. There are certain hurdles ahead of us, including as security concerns and the lack of middlemen, but as reasonable traders and investors, we cannot ignore the rewards associated with bit coins. The adoption of bit coin is

a major source of anxiety, and many people fear being stolen, but the fact is that if we can grasp bit coin, we can enhance our economy. People, particularly women, have a poor degree of understanding of bit coin, which adds to their dread of it. In the case of bit coin, the risk-reward trade-off is immense. There are a variety of obstacles and drawbacks with bit coin, but the security danger outweighs all other concerns. Security and criminal activities were deemed to be the most significant concern in Bit coin adoption (48.2%) which is trailed by governance (23.7%) & unpredictability (23.7%). To overcome these issues, the development of a government regulating agency (54.3 percent) and an appropriate platform (28.9%) must be prioritized.

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