

FUTURE OF BLOCK-CHAIN TECHNOLOGY: PERCEPTION OF NEW INVESTORS IN BHUBANESWAR

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Abstract

The current conversion of physical to digital world of transaction is the main reason behind the development or inception of Block-chain technology (BCT). It is having the force to change the way of business and transform Indian economy. Maximum current research related to block-chain is concentrating on its applicability on cryptocurrencies like bit-coin and very few are concentrating on the application of BCT on other field. BCT is popular currently because of its own unique features and most important one is it is not possible to imitate. The current study is revealing the current status as well as future scope of BCT with investor's opinion on investment in cryptocurrency. For this the author has taken into consideration different literature to know the current status with future prospect of BCT and the study has also revealed the investor's view point with respect to investing in cryptocurrencies. For this the author has taken into consideration only the response of potential or new investors of Bhubaneswar (Odisha, India) to know the level of understanding and acceptance of digital currency. Addition to this the study is also focusing on the future of Block-chain Technology (BCT) in coming days in India.

Keywords: Digital transaction, Block-chain technology, Cryptocurrency, Bit coin

Introduction

In recent digital phase of peoples' life Block chain has been getting higher attention both in research and practice. BCT is nothing but another type of data which is stored electronically on computer system. The structure of these data base are also unique and difficult or nearly impossible to imitate. These are typically structured in table form and allow easier searching as well as filtering for information required on specific concern. This is also known as

distributed ledger system which enables sharing of a not mutable ledger among the participants of the network¹.

This technology can be applicable or used in various field and the uniqueness is that it cannot be imitable, changed, forgery is not possible, data security is high and human errors are nearly absent (Alexa Böckel, Anne-Katrin Nuzum& Ilka Weissbrod , 2021). The other positive point is that it can applicable for almost in both tangible and non tangible assets. Where tangible assets basically include cash, house, land, car, investment and intangible assets includes intellectual property, copy rights, patents and banding. By analysing the security level of block chain technique it would not be wrong to say that this is going to be the future of all most all value item in virtual mode. The tracking and trading with block chain technology is much easier and most importantly it reduces the concern of risk and costs involved in such transaction in physical or traditional mode².

Objectives of the Study

Here the author is aiming to find out the answer of the following questions by taking into consideration both primary and secondary data.

- i. To find out the Future of Block-chain Technology in Trading
- ii. To identify the Perception of New Investors in Bhubaneswar

Literature Review and Research Background

The current part of the work is concentrating on two different concepts like investors perception regarding cryptocurrencies and future of the base technology used in cryptography i.e. BCT.³Various litterateurs are there to explain the working and use of BCT in different field starting from agriculture to health sector. Vast literature is found in different journals regarding the current use and future of BCT in various fields. The details of some literature and their findings are listed below to draw a valid conclusion by utilizing them⁴. The paper discusses the potential benefits and drawbacks of BCT again another paper by Whitaker explores the implication of BCT in three regards like *“the blurring of the for-profit / non-profit distinction, changes in the ownership structure of art, and potential for new structures of public and*

¹ Adam Hayes , Block chain explained,(5 March, 2022), <https://www.investopedia.com/terms/b/blockchain.asp>, visited on 12/06/2022 at 7.36 am.

² IBM,What is block chain? <https://www.ibm.com/in-en/topics/what-is-blockchain>, visited on 12/06/2022 at 7.39 am.

³<https://www.forbes.com/advisor/in/investing/what-is-cryptocurrency-and-how-does-it-work/>, visited on 15,06,2022 at 7.45pm.

⁴Dingli Xi, et al, Investigating the Investment Behaviors in Cryptocurrency Networks, (2021)

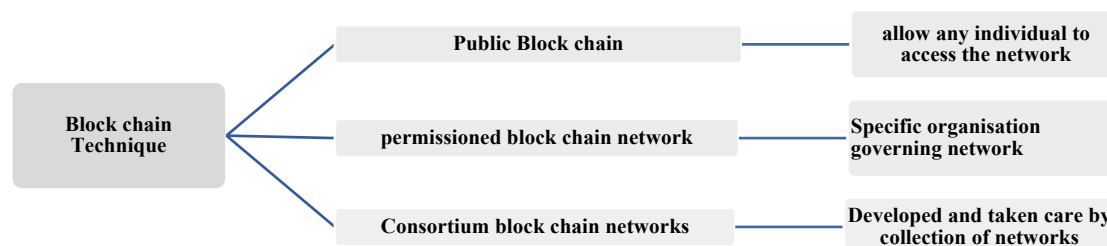
private support and related policy changes.” with a discussion of history, primer and taxonomy of the technology. In addition to this the study of Min Xu, Xingtong Chen and Gang Kou reveals the facts related to BCT on subject areas like business and economics. This work is a systematic review of BCT articles recovered from the Web of Science service, it explored the top-cited articles, most productive countries, and most common keywords. It conducted cluster analysis and pointed out the succeeding research content like *“economic benefit,” “block chain technology,” “initial coin offerings,” “fin tech revolution,” and “sharing economy”*.

Another study explains BCT and its characteristics with challenges. It presents existing studies on BCT as well as discusses different types of research and how these research studies can be useful both for industry and academic purposes. The paper of Yanling Chang et.al., provides a timely and holistic overview of the state of the art, challenges, gaps and opportunities in global supply chain and operation of trade for both private and governmental agencies this has done through blending a wide range of resources from *“business leaders, global international organisations, leading supply chain consulting firms, research articles, trade magazines and conferences”*. The work of literature of paper of Anton Klarin, 2020, depicts the use and importance of BCT in journals to protect misconduct in academic research. The current paper involves SLR i.e. Systematic literature review as well as qualitative analysis that covers 57 different literature and depicted 3 key findings like; *“1) a clear terminology of block chain types, their technical properties and benefits are lacking in research, 2) trust and verification are major potential benefits but a challenge to create, and 3) a closer examination of possible benefits and challenges of block chain technologies for the circular economy with its links to sustainable development is crucial.”* The findings of this work on BCT reveals a holistic picture of BCT research, which helps to clear the base for future direction of research as well as provides implications for both academic and business practice. This research paper highlights the need for a standardized approach built on a public block chain to promote faster adoption and acceptance.

Types of block chain:

There are various approaches of block chain technique exist for the business world to use in their respective world. Therefore to know the technique in a clear cut manner one should know about its different approaches like⁵;

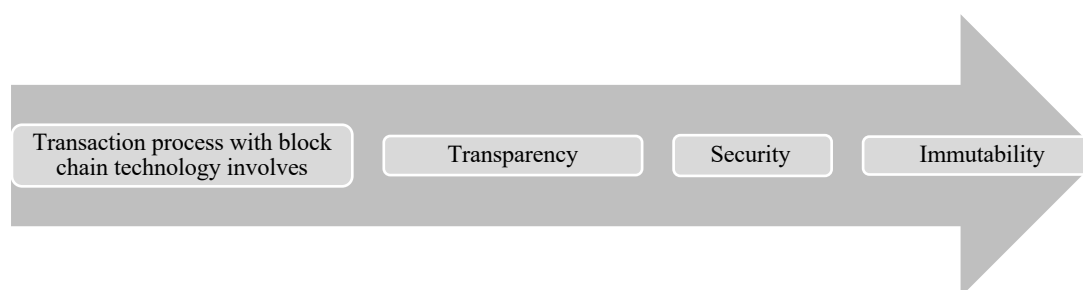
Graph-1



The people as well as organization both are somehow not correctly aware about the use of this technique in their respective field of work. For this reason the block chain technique still now to many of us in personal field as well many of the industries in their functional form. With the increasing publication and research the familiarity as well as the popularity of the concept is growing day by day recently. This popularity is also credited to its successful adoption and application across different sectors around the world. The most important benefit is the perfect documentation with all transaction data or money⁶.

The transaction process involved with block chain technology bears three important properties like;

Graph-2



⁵ Chistine Parizo, What are the four different types of block chain technology, (28 May, 2021) <https://www.techtarget.com/searchcio/feature/What-are-the-4-different-types-of-blockchain-technology>, visited on 12/06/2022 at 7.49 am.

⁶ Macro Lansity & Karim R. Lakhani,(2017), The truth about block-chain, <https://hbr.org/2017/01/the-truth-about-blockchain>, visited on 12/06/2022 at 7.50 am.

Still there is doubt exist regarding its future inclusion in all sectors as well as investment market. So before going to analyse Future prospects of block chain one should know the current popularity and growth rate of the said technology. Therefore to draw a conclusion is possible with a detailed knowledge about the block chain technique as well as future prediction also may possible⁷. So the current status of analysis of BCT like, definition, working, key traits are required to predict about future expectation and growth of the BCT in coming days⁸. By the study of success rate of BCT application on different industries one can draw a strong overview of the significance and practical applicability of the same. After gathering all these required information then the author can turn the attention towards block chain future opportunities and development⁹.

Strongly escalated interest in block chain can be credited to recent days, specifically due to maximum use of digital mode than physical mode and the emergence of covid-19 pandemic. Its demand is increasing day by day due to its unique features. The demand for BCT skill raised up to 2000% in the period ranges from 2017 to 2020. Indicating that BCT as a preferred proficiency over all other traditional techniques. Therefore it is not wrong to convey that BCT is the future of all most all governing bodies¹⁰. BCT is also very much famous for its use in digital currency like bit coins and the technique is famous as cryptography. This is the main reason for rising importance of digital currency in modern era. There is a fine line of difference in between digital currency and cryptocurrencies where all cryptocurrencies are digital but the reverse is not true¹¹. The most important difference in between two is where ***“crypto currencies are managed by a computer algorithm and digital currencies are backed by an authority.”***¹²

The BCT is not only applying to currencies but also to assets, equipment, warranties, artwork, and health care records. The below chart depicts the features of BCT

⁷ Decaskill, the future of block chain technology, <https://decaskills.com/the-future-of-blockchain-technology/>, visited on 12/06/2022 at 7.56 am.

⁸ Ibid.

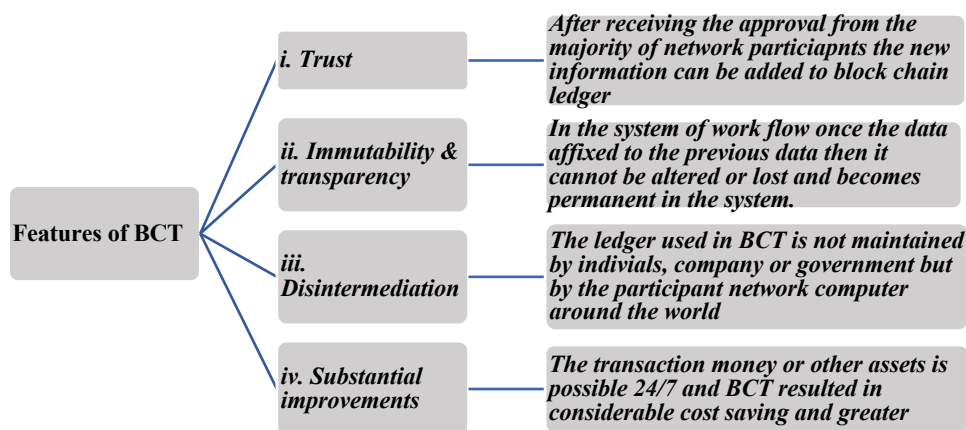
⁹ Ibid.

¹⁰ Ibid.

¹¹ Nathan Reiff & Erika Rasure, Forget bit coin block chain is the future, (July 26, 2021), <https://www.investopedia.com/tech/forget-bitcoin-blockchain-future/> visited on 12/06/2022 at 8.03 am.

¹²<https://timesofindia.indiatimes.com/business/india-business/digital-currency-vs-cryptocurrency-what-the-row-is-all-about/articleshow/87907344.cms>, visited on 13/06/2022 at 1.47pm.

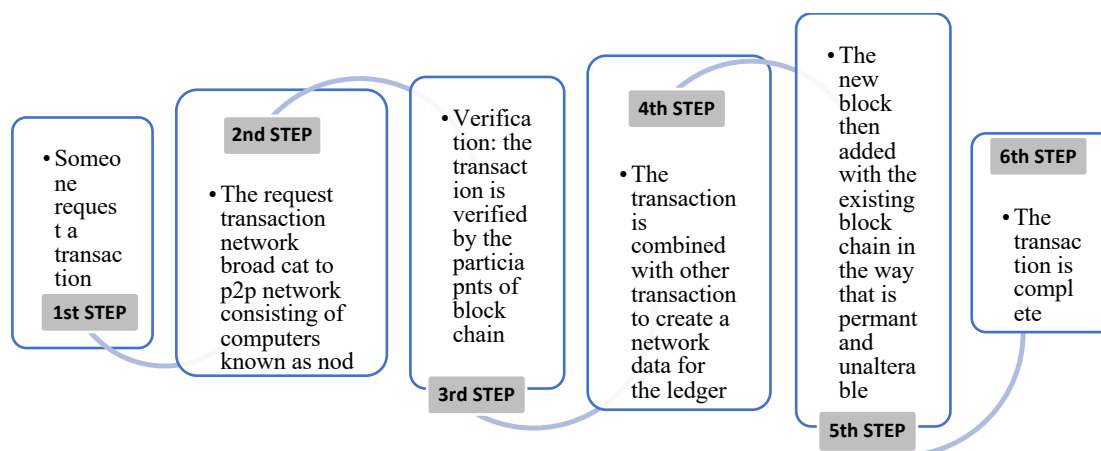
Graph-3



Recently BCT got more popularity among investors and financial institutions because of its successful adoption for cryptocurrencies like bitcoin. It has countless advantages as a distributive digital ledger with which the technology can protect all records of quantitative as well as qualitative information and financial transaction between any two parties in a most secured, not imitable and transparent mode.¹³ During last year BCT started to acquire public attention. Experts from different fields on diverse research paper viewed that BCT will be implemented for various industries and expect the future BCT is to transform the traditional business processes. On the other hand if one analyse the pros and cons of BCT reveals that it is not as easy to do as it seems.¹⁴

Working Structure of BCT: The following chart depicts the working structure of BCT and its secure setting based on ledger system.

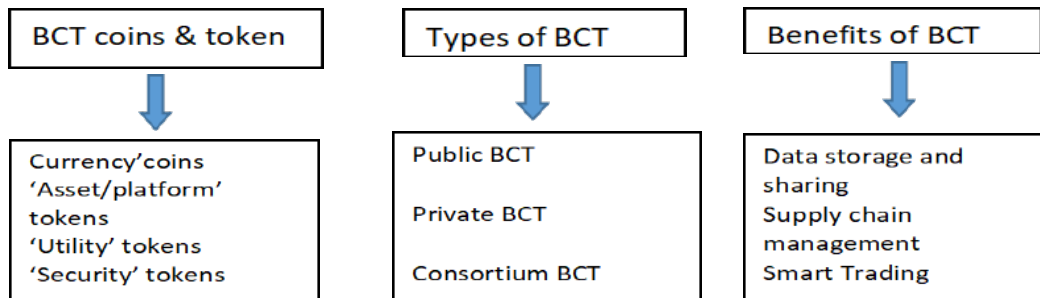
Graph-4



¹³ Supra note 1
¹⁴ Supra note 4

BCT in coins and token: BCT is used not directly with legal tender but with special coins and token which are not physically present but virtually in circulation and used as digital currency. Therefore coins and tokens are two important terms used to explain the unit of cryptocurrency value. These are used to transfer value as a medium of payment similar to money (Michael Spearpoint, 2017). These virtual currencies which are backed up by BCT or Cryptography can be categorized into: “*i) Currency in the form of Coins:* it permits right to another digital currency to holders. *ii) Asset or platform in the form of token:* which grant right to a promised future cash flow linked to an underlying business. *iii) Utility in the form of token:* It grants the right to access a product or service that startup provides usually at some future point. *iv) Security in the form of token:* it confers rights to an equity stake in a business and is used to invest or trade on the market.”

Graph-5



Characteristics of BCT: The BCT is famous and getting popularity because of the listed unique characteristics or features like “*distributed ledger, decentralized data management, data security, transparency and integrity, anti-tampering and anti-forgery, high efficiency, low cost, programmable features that increase flexibility and reliability and no risk of a centralized database failure.*” **Challenges at technical level:** *Scalability of implementation, Performance of block chain network, Interoperability & Data localisation.*

The Future of Block-chain Technology in Trading: The active BCT network continues to bring real trans-formative change to a number of industries. In this regard the IBM BCT team predicted the following trends in the near future, “*i. Prediction of emergence of realistic governing body: ii. Prediction of advancement in realistic inter-connectivity: iii. Prediction of union of close technologies with BCT to create next level: iv. Prediction of introduction of Validation tools which will start to combat fallacious data sources. v. Prediction of expansion of CBDC i.e. central bank digital currencies into whole sale and retail.vi. standardized approach should be built on a public block chain to promote faster adoption*

and acceptance.”

Methodology used in the Study

The current study aims to find out the investors view and their confidence level with perception regarding the future of digital currency. As this is an emerging and very contemporary area for the investors the researcher intends to analyse the understanding as well as applicability of the digital currency in the investment field. Therefore this is an analytical study based on non probability sampling technique. So the data has collected through questionnaire prepared in Google form. The universe of the study is the people of Bhubaneswar who are having interest in investment. Here the researcher has collected the response of 110 respondent aged above 18 years. Another criteria for eligibility as respondent of this study is that the person must have interest and basic knowledge towards investment and investing techniques. Therefore the technique is convenient sampling. For the current study both primary and secondary data are used. Primary data has been collected through Google form from the respondent who is basically inclined to-words investment. The government, RBI, books, journals, websites, online articles, new clips etc. reports are also used as secondary data.

Empirical Findings on the Perception of New Investors in Bhubaneswar

The data has collected from residents of Bhubaneswar through Google from where 110 respondents have given their view. Among 110 respondent 79% were male and rest are female. Again 84% respondents are within 18 to 58 years of age and 11% are above 58 years of age. Maximum i.e. 81% respondent are service holder and income of maximum respondent i.e. 89% ranges in between 1 to 15 lakhs.

Table-1

| Demography of the respondent | | | | | |
|------------------------------|-----|----------------|-----|--------------|-------------|
| Age in years | | Income in Lakh | | Occupation | Sex |
| 18-38 | 45% | 1to 10 | 56% | Service-81% | Male -79% |
| 39-58 | 39% | 10 to 15 | 33% | Business-18% | Female -21% |
| 58 & above | 16% | 15 & above | 11% | Others-1% | Others-nil |

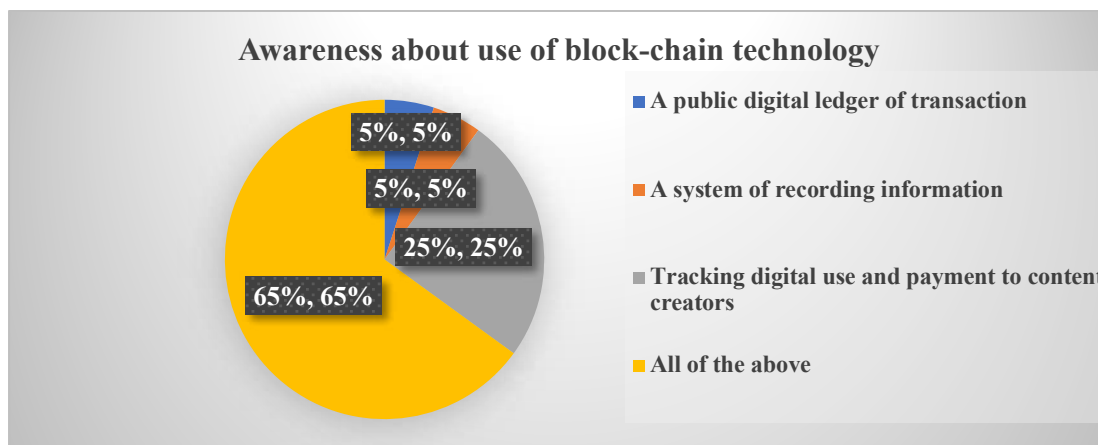
From the analysis of the respondent response the author has pointed out the blow findings;

Familiarity of people with block-chain technology: Each and every technology has been considered fruitful if the new aspiring candidates would know about it. But as per the survey

the author has found that 58% people have only heard about it and only 15% people know how it works and 18% still do not familiar with the concept which meant that people have only heard about the word “Block-chain” but never know it deeply. This is the reason why investors are reluctant to invest in crypto currencies.

Awareness about use of block-chain technology: Maximum of the investors are relate BCT with Cryptocurrencies like Bitcoin, etherum etc. which has been shown in a survey as 65% knows about the advantages of Block-chain technology and they know that it will prosper further.

Graph-6



Future perception of respondent about block-chain technology: As 52% have perception that this technology will improve in the upcoming time and will be the more profitable areas, the investors and upcoming investors have also shifted its investment towards the more profit giving areas. Like 49 % people we are also the same opinion that it has been the most advantageous technology.

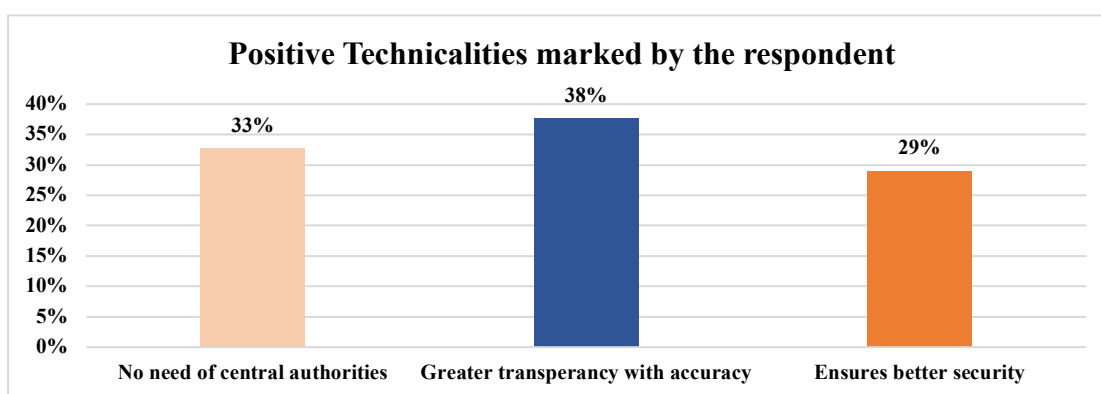
Pros pointed out by respondents: BCT has influence the each and every sector of the country. The block-chain has been really beneficial in ensuring transparency in the work and to reduce the workload. It also helps in bringing the efficiency in the work and eradicates the human errors as it is mostly based on automation and really helps in storing data with very high security.

Cons pointed out by respondents: The main risks involved in this technology data privacy as the data storing is the main benefits. The problem is block-chain protocols are hard to integrate and if some issues will be occurred then it will take lot of time to resolve it. Market is wholly based on risks. There has always been the risk of profit or loss but the main aim of the business is to take as much as the profit.

Perceptions of new investors towards investing in digital currency: As per survey , it found that 60% of the opinion that it may be proved useful for new investors as it ensures the security with greater efficiency and also has data storing as another important asset which could pave the way for more profitable return.

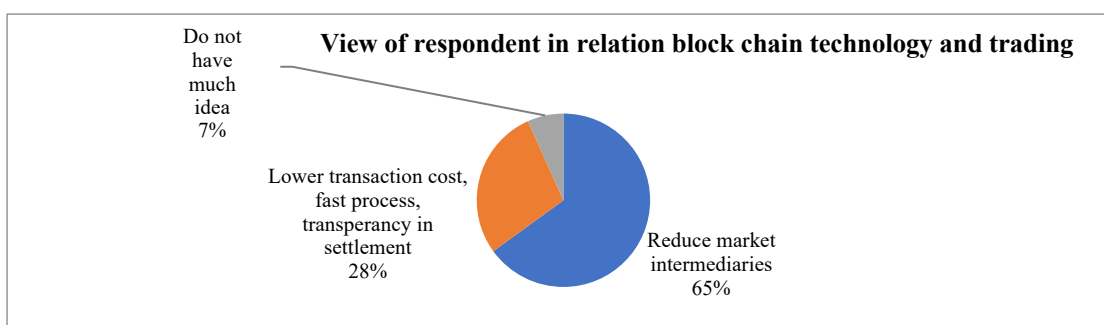
Positive Technicalities marked by the respondent: Another important advantage of this technology is that it is fully end to end encrypted form which helps in securing the transaction. This technology is peer to peer network which shows that there is no broker involved and direct transaction which shows that there is more profit cutting the commission.

Graph-7



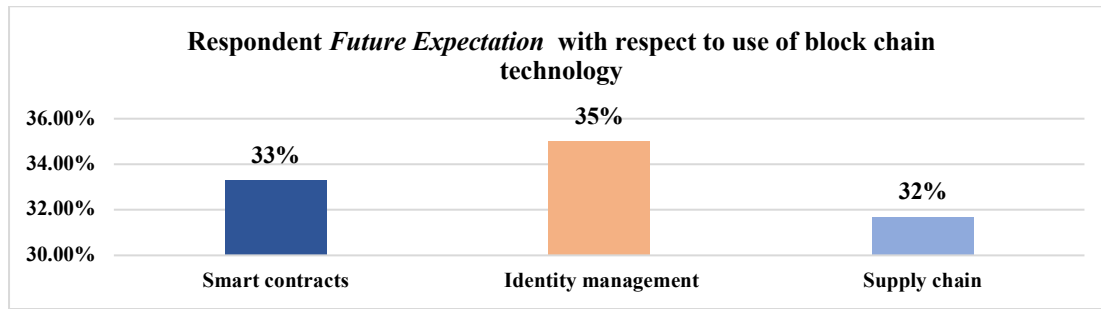
View of respondent in relation block chain technology and trading: This technology may also help in trading as well. We found that 65% of the opinion that it will also help in trading as it ensures lower transaction costs, fast process and ensures transparency in share settlement process whereas only 7% think that It reduces market intermediaries which may disrupt the companies.

Graph-8



Respondent future expectation with respect to use of block chain technology: In the upcoming time as well, the study find 50% of the opinion that it ensures smart contracts which is self-executive and Ensures identity management which helps to hide one's true identity and Ensures supply chain which has been disrupting in the present time.

Graph-9



Therefore it can be stated that the advantages may really help the new investor to gain profit from the block chain technology which in turn may also help the country to develop GDP of the country.

Analysis of the findings of the study

The finding of the study reveals that; (i) Maximum male are interested in investment where women are reluctant towards investing in crypto currency which are backed up by BCT. Even if assurance of security is there with BCT women are reluctant to take risk. (ii) Respondents are familiar with BCT but not confident in investing in the same. (iii) Maximum respondent are aware about and confident about the positive future growth of the Crypto currency. Hence it can be said that in recent days the demand as well as growing use of BCT in all sphere is known to maximum specifically those who are having interest in investment in digital currencies backed up by BCT. (iv) Here it can be said that future of BCT in virtual currency world is prosperous. (v) The pros and cons are very well known to the respondents with interest in investing in the same but the most important barrier in investing in crypto is risk of loss associated with it and it is not backed up by the central authority. (iv) virtual currencies backed up by BCT has successfully attracted a number of new investors but the problem is that they are not aware about the proper steps and structure of investment and return of investing in crypto currencies. They are having confidence of safety and transparency but not secure about the return.

The Future of Block-Chain Technology in India

The block chain council organisation has predicted that the technology has the potential to change the scenario of Indian economy. The BCT is having such potentials to protect all important data and information that it can change the world's scenario in all most all field like companies, individuals, investors and government as well. The following predictions of future prospective for BCT in India are pointed out below;

- i. *The company who are basically engaged in development of block chain would earn a good share in coming days.*¹⁵
- ii. *New innovative companies are going to use block chain technology as their base.*¹⁶
- iii. *The use of block chain by these new businesses would raise their worth valuation to billions of dollars.*
- iv. *“The prediction is that by 2025, block chain technology may add business value worth over \$176 billion, which would further increase to \$3.1 trillion by 2030.” Prediction of Block chain Council*

This is actually revealing the future growth and prospective of block chain technology in India. If these prediction figures are true than it would not be wrong to say that block chain technology is having limitless potential in India. The other areas which hold marvellous prospective for application of block chain technology in India are;

“a) Transfer of land record, b)Automated custom enforcement & compliance, c)Delivery of public services, d) Crypto wallet, e) Health records, f) Digital certificate management, h) e-sign solution, i) Vehicles registration, j) Pharma supply chain, k)Charity donations, l) Agricultural supply chain, m)Smart grid management, n) e-notary services, o) Cross-border transport, p) e-voting, q) Duty payment and many more” pointed out by Block chain Council.

The most important benefit of this technology is that tempering in all these services will be nearly impossible due to involvement of block-chain technology.

Difficulty in implementation of block chain technology in India: It’s true that the technology has potential and required at various level to strengthen the economy but for proper implementation of this technique the government have to remove the challenges associated with its application.

Table-2

| Requirement to overcome the challenges |
|--|
| <i>Raising security data and transaction</i> |
| <i>Constant efforts to develop new product</i> |

¹⁵<https://hbr.org/2017/01/the-truth-about-blockchain>, visited on 15/06/2022, at 7.51 pm

¹⁶<https://www.thehindubusinessline.com/opinion/blockchain-tech-is-the-future/article37999487.ece>, visited on 15/06/2022/at 7.54pm

| |
|--|
| <i>Research must be done to improve</i> |
| <i>Requires focus, intense research and law for the same</i> |

The future research directions for block-chain: The future research direction for block chain includes the following areas like;

“(i) Whether block-chain can resolve the market failures that are brought about by information asymmetry, and whether it can increase market efficiency and social welfare? (ii) More academic research required for better understanding the mechanisms through which block-chain influences corporate and market efficiency will require further academic inquiry. (iii) The future research should pay more attention to privacy protection and security issues and the regulation techniques for crypto currency. (iv) Another promising research direction promotes the academic work on integration of fin tech and BCT.”

Concluding Remark

The current study reveals the importance, use and uniqueness of BCT in recent days as well as its growing future prospects. It would not be wrong to say that it’s the most modern future technique through which data can be store with the assurance of safety, security and transparency. Again BCT can be used for several fields starting from education, arts, investment, businesses, value, asset to virtual currency as well. The current study explained its present status as well as its status among the investors those who are interested in cryptocurrency investment. The positive attributes with the difficulty in execution is the current status of the BCT. The future scope of BCT is countless and it can be executed to any sector, governing body for secure and immutable data storage. If one talks about BCT advantages then it’s enumerable but the most important thing is that the proper execution and use of the technique in other new field should be workout properly. When comes to virtual currency world it has secured high rate of success but not the desired level because many of the investors are not ware about the proper use of these coins and tokens to earn profit. Again as these are not backed up by the central monetary authority investors are reluctant and fearful about the use of these virtual currencies. Therefore further research on BCT is required for securing highest level of success in its execution and outcome of the execution from the specific field. Again more research as well as awareness is required for the use of virtual currency with BCT by normal people as well investors.