

An Empirical Approach to the Market Efficiency that influence Indian Investors' Perceptions about Bitcoin: The Case of India

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Abstract

This research study's goal is to assess the empirical study of Bitcoin adoption based on market efficiency and factors that affect investors' perspective. Empirical research is the focus of this study. India was chosen as the study's location because of the nation's remarkable advancement in the banking and investment sectors, despite its comparatively late entry into these sectors relative to other nations. As a result, an adoption model was examined using an expanded version of the market efficiency model that included new factors. Individual investors of various ages (n=383) made up the sample. The analysis and assessment method for the model was decided upon as structural equation modelling (SEM-AMOS) as well as One Way ANOVA and reliability analysis. The findings revealed that the perceptions of market efficiency, supply, demand, and rival crypto currencies influence Indian investors' decisions to buy Bitcoin. On the other hand, it was discovered that the desire of Indian investors to invest in Bitcoin was not significantly impacted by simplicity of use, profitability, awareness, subjective norms, or trust.

Keywords: Bitcoin, Crypto currency, Market Efficiency, Structural Equation Modelling, Investors Perception, Market Demand.

1. Introduction

A brand-new digital currency with significant media and academic attention is called bitcoin. As a result, many Bitcoin potentials are investigated. Several evident indications, such as transaction velocity, have been identified in a previous study as significant influencing factors for how digital money is seen to be used (Yang et al., 2019).

Currency cannot be ignored in this period of rapid technological development, when everyone is talking about the "Internet of Things" and we are supposed to connect everything. Paper money will eventually become a thing of the past as virtual currencies start to dominate, and Bitcoin is perfectly positioned to accomplish this accomplishment. Not only will it transform how payments are made, but it also has the potential to have an impact on the future of global currencies like the USD, which is already up against competition from the Euro or the Chinese Yuan Renminbi (CNY). This issue for the US Dollar will take on a new dimension with the rise of cryptocurrencies (USD) (Seetharaman et al., 2017).

As a result of the development of the cryptocurrency known as Bitcoin, blockchain technology was created. Cryptocurrency known as Bitcoin is based on a peer-to-peer payment system. Although some publications have treated Bitcoin and blockchain as if they were one and the

same technology in recent years, Bitcoin is actually just one use of the new digital technology known as blockchain (Palos-Sanchez et al., 2021).

The most recent cryptocurrency to be utilised to support smart contracts on the web market is bitcoin. Bits, which are intangible, make up the entirety of the Bitcoin money. Bitcoin is often referred to as a decentralised digital money, or currency of the internet, which is used worldwide but has no physical form or governmental support (Shahzad et al., 2018).

Due to the lack of government or organisation regulation of Bitcoin, which is regarded as the most innovative and disruptive technology among current financial systems, significant uncertainties still exist over how user behaviour and preferences will effect it. Thus, by utilising four user-oriented theories—the theory of planned behaviour (TPB), transaction cost theory, innovation diffusion theory (IDT), and the benefit-cost concept—we attempt to investigate the significant aspects influencing consumers' propensity to use BTSs (Yoo et al., 2020).

The virtual money Bitcoin offers a cheap, safe foundation for electronic transactions. Nakamoto established it (2008). The bitcoin network was started in 2009 and has grown dramatically in recent years. The last years have seen a considerable increase in the bitcoin network's growth. Governments are taking notice thanks to the bitcoin network's rapid expansion and unique currency characteristics. Beyond payment systems that rely on fiat money (currency), the growing use of digital facilitates more adaptable, creative, and quick methods of payments in the financing of services and goods (Almarashdeh, 2018).

An alternative to central bank-controlled fiat currency, bitcoin provides an effective way to transmit money over the internet and is governed by a decentralised network with open rules. We set out to investigate what the price of the cryptocurrency may entail in the event that it continues to experience widespread acceptance because there has been a lot of discussion about how to price Bitcoin. But it's helpful to take a step back first. As alternatives to fiat money, Bitcoin and other digital currencies have been promoted. But what lends value to any kind of currency? (Kelleher, 2021)

Although bitcoin is currently regarded as a currency that could surpass the restrictions of fiat money, there are some concerns about its sustainability. Bitcoins can be regarded from various perspectives in this regard, including the economic, social, and environmental ones. The sustainability of bitcoins must first be precisely defined. Bitcoins must be viewed as objects existing in a distinct ecological habitat, the digital ecosystem. All the gear, software, and data files that a user need and shares with other users make up a digital ecosystem (Giungato et al., 2017).

Bitcoin is also known as the "virtual network currency" or "digital coins," allowing users to send and receive digital currency. Transferrable coins are those with a unique chain of digital signatures that will be kept in a user's installed digital wallet on a computer. The digital wallet will generate a number of keys, and these keys enable the transfer and receipt of coins. In making a transfer, owner of \sbitcoin employs private digital key for providing the approval to the additional request from the receiver's \skey for a stringing of preceding transactions. The coin will then be transferred and appear in the recipient's wallet with a history of transactions that includes the most recent one (Almarashdeh et al., 2021).

The ability to use Bitcoins without connecting them to any sort of real-world identity distinguishes them from other forms of online money. Without linking the owner's name to the

Bitcoin address, it is difficult to determine who the owner is. Bitcoin does not keep track of its users; instead, it keeps track of the addresses where the money is and maintains a public log of all the transactions that have been completed. Governmental and monetary factors that determine their quality and operation are in control of advanced coinage, such as the dollar and the euro (Jose et al., 2017).

2. Literature Review

This research paper examines whether Common wealth courts might recognise bitcoins and other cryptocurrencies as the subject of property rights and, if so, what those rights should cover. This article (Low & Teo, 2017) also discusses the specific legal issues that bitcoin's underlying code raises.

(A. M. Ayedh et al., 2020) analyze the variables that could boost Bitcoin investment among Muslim communities. A survey questionnaire was utilised in the study to gather information from a sample of 200 respondents. The gathered data was then examined using one sample t-test, basic descriptive statistics, and structural equation modelling (SEM). The results showed that elements like perceived usability, compatibility, awareness, and enabling circumstances have a big impact on the Omani community's inclination to invest in bitcoin.

The study of (Pelucio-Grecco et al., 2020) results showed that elements like perceived usability, compatibility, awareness, and enabling circumstances have a big impact on the Omani community's inclination to invest in bitcoin. Here, in order to elaborate on the accounting treatment recommendation, the characteristics of bitcoins are compared with the principles and ideas of IFRS. This suggests that the most appropriate procedure would be that of foreign currency, which would be contrary to the tax treatment used up until now by the Brazilian Internal Revenue Service. The Internal Revenue Service (IRS) of the United States of America (USA) or (Receita Federal) advise handling virtual currencies as things rather than as money.

According to the (B Eshwari & Ahamed Adeeba, 2018) present study, asset management company investors are aware of bitcoin and its effects. Asset management firms deal with a variety of investments for their clients. The study aids in determining the potential effects of Bit coins on portfolios if they are added to those managed by Asset Management Companies. The researcher discovered that Bitcoin has an impact on investors' portfolios at asset management firms in Bangalore.

(Akshay, 2019) examined the cryptocurrency has not established a reputation as a new age currency system among the majority of countries in the world, and people are still dubious about its value despite being loaded with numerous cutting-edge technologies and having a sizable market presence everywhere. Cryptocurrencies have been around for almost ten years, but it is still unclear whether they will ever become a legitimate form of payment or whether they will stay a component of investment portfolios. The survey was conducted in Bangalore because it is a cosmopolitan city to learn more about the level of awareness and perception of cryptocurrencies there.

(A. Ayedh et al., 2020) investigate the elements that can encourage Malaysian Muslim populations to invest more money in the Bitcoin market. The purpose of this study is to investigate the elements that can encourage Malaysian Muslim communities to invest more money in the Bitcoin market. The gathered information was then examined using structural equation modelling, fundamental descriptive statistics, and one sample test.

The results demonstrated that conditions for compatibility, awareness, and facilitation had a substantial influence on investments made by Malaysian Muslim populations in the Bitcoin market.

In this research, the relationship between Bitcoin price and search interest since 2014 is examined. (Arratia & López-Barrantes, 2021) investigated the effectiveness of ARIMA and Neural Network models improved with this social sentiment indicator, performed linear and nonlinear dependency tests, and questioned the predictive accuracy of Google Bitcoin Trends for the behaviour of the Bitcoin price. We develop a set of statistical features common to financial returns for Bitcoin, Ethereum, Ripple, and Litecoin on which our analysis and models are based.

The technology readiness factors of optimism, innovation, discomfort, and security are employed in this study (Alharbi & Sohaib, 2021) to analyse the reasons for people's acceptance of cryptocurrencies. PLS-SEM, or partial least squares structural equation modelling, was carried out using multiple approaches. This study demonstrates that adoption of cryptocurrencies has significant links with the technological readiness aspects of optimism, inventiveness, discomfort, and insecurity.

(Aggarwal, 2019) exploring bitcoin returns from a financial asset perspective. The market efficiency of daily bitcoin returns is examined during the period of July 2010 using a number of reliable tests. There is substantial proof of market inefficiency, which is characterised by the lack of the random walk model. Market inefficiency was determined to be caused by the existence of volatility clustering with asymmetries. To further understand the temporal dynamics of bitcoin, more research is required.

(Yang et al., 2019) described on an empirical study that looks at variables related to Bitcoin's potential use in a B2C e-commerce setting. In 2016, more than 100 internet retailers were questioned. The analysis's findings, which are based on a structural equation model (SEM), indicate that Bitcoin's potential advantages in B2C e-Commerce are primarily influenced by its low transaction costs and acceptability. The study offers suggestions for other indicators that might be useful.

(Seetharaman et al., 2017) comprehend the numerous forces that are influencing Bitcoin (BTC), which is gaining traction in a number of areas of global finance, and how disruptive it would be if it replaces major fiat currencies in the financial system, which would primarily affect the USD. The most recent statistical software, ADANCO 1.1.1 by Henseler and Dijkstra (2015), was utilised in this study to evaluate the data by creating a partial least squares structural equation model (PLS-SEM). The findings of this study will aid in understanding the future of global finance from a variety of perspectives, particularly those related to regulation, cryptocurrencies, and fiat currencies.

(Palos-Sanchez et al., 2021) examined an adoption model, the technology acceptance model (TAM), which was expanded with new variables, was used. Business executives from companies and commercial establishments made up the sample (n = 248). The analysis and assessment method for the model was decided to be partial least squares structural equation modelling (PLS-SEM). The authors showed that perceived utility is significantly influenced by privacy, and perceived utility is significantly influenced by trust, which in turn indirectly affects the inclination to use cryptocurrencies.

(Yoo et al., 2020) study proposes a thorough user acceptance model for Bitcoin transaction services and statistically illustrates how four user-oriented theories—innovation diffusion theory, benefit-risk concept, theory of planned behaviour, and transaction cost theory—contribute to the comprehension of user intent with regard to using these services. Results from more than 1,300 samples indicate that behavioural intent is significantly influenced by both perceived benefits and service compatibility, whereas perceived risk, cost, and complexity had no significant effect on user adoption.

2.1 Research Gap

The previous research covered the concrete the idea of temporal dynamics of market efficiency about the bitcoin. It has not taken into account the investors perception, market demand, supply and competing crypto currency. However, there is a dearth of research that examines the effects of investor's perception toward bitcoin which results in capital appreciation, high liquidity, high return and security.

2.2 Objectives

- To study the association between market efficiency and investors perceptions with annual income of the investors.
- To analyse the supply, market demand, competing crypto currency that influence on investor's perception about bitcoin.

3. Research Methodology

The study's participants are Indian investors who believe in Bitcoin investment. The focus was primarily on people who had prior investment experience as opposed to people who knew the least about investing.

The sample size estimated using the following formula:

$$n = (z\alpha/2)^2 / 4e^2$$

n is sample size

z score when α is equal to 5% under 2 tail test

e^2 times the square of the marginal error

Based on the above-mentioned formula we derived **Sample size as 383** for the unknown population.

The purpose of the survey questionnaire was to gather data regarding the respondents' their opinion of the market efficiency of Bitcoin as well as their future investment perception.

Likert type scaling was employed to measure this data (1 being strongly disagree and 5 being highly agree). This section contained 25 items, the most of which were taken from earlier studies carried out in other nations, as mentioned above, as well as from recent investing and cryptocurrency literature, with any necessary modifications made for the particular setting of this study.

The study utilized Simple Random sampling technique. The study sample comprise of investors from different region of India.

The Data was collected from February 2022 to July 2022 through personal interview and through online by using well administered questionnaire distribution.

Following the collection of the data, SEM, Frequencies statistics, and One Way ANOVA were used to analyse it. These methods were picked based on previous research and other related works in the field.

4. Data Analysis and Interpretation

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.712	9

The Cronbach's Alpha value of the investors perception about bitcoin is 0.712 which is > 0.7. Hence the reliability of the question is proved i.e the questionnaire is reliable for the purpose of data collection.

Table 2: Frequencies Statistics

Demographics	Categories	Percentage
Age	Upto 30	33.7
	31 - 40 years	24.0
	41 - 50 years	24.0
	Above 51 years	18.3
Gender	Male	50.7
	Female	49.3
Occupation	Private Employee	30.3
	Government Employee	34.2
	Self Employeed	21.1
	Business	14.4

Source SPSS

The demographic information from the table 2 indicates that in terms of age grouping, 33.7% are up to 30 years, while 24% are aged between 31-50 years old, and 18.3% are above 51 years old. Regarding the gender 50.7 % are male and 49.3% are female. In terms of Occupation, 34. 2 are government employee, 30.3% are private employee, 21.1% are self employee and 14.4% are business man.

Table 3: One way ANOVA with age group

H1: There is an association between age group of the investors and market efficiency of bitcoin. H1 is rejected because the p-value for the variable 'Market efficiency' is greater than 0.05 according to the Table 3.

H2: There is an association between age group of the investors and perception about bitcoin. H2 is rejected because the p-value for the variable 'Investors Perception about bitcoin' is greater than 0.05 according to the table Table 3.

Table 3: One Way ANOVA with age group

		Sum of Squares	df	Mean Square	F	Sig.
Market Efficiency	Between Groups	89.371	4	22.343	2.219	.066
	Within Groups	3806.530	378	10.070		
	Total	3895.901	382			
Investors Perception about Bitcoin	Between Groups	1.563	4	.391	.385	.819
	Within Groups	383.356	378	1.014		
	Total	384.919	382			

Source SPSS

Structural Equation Model (SEM) on Market efficiency that influence on investors perception about bitcoin.**Basic Introduction on SEM**

A group of statistical methods known as structural equation modelling (SEM) are used to quantify and examine the connections between latent and observable variables. It explores linear causal links among variables while concurrently taking measurement error into account, making it similar to but more effective than regression analysis. The goal of this work is to

explain SEM to researchers in the medical, health sciences, social science and provide examples of how it is used in practice.

H3: The hypothesized model of investors perception about bitcoin has a good fit.

The variables used in the structural equation model are

I Observed, endogenous variables

1. Efficiency
2. Perception

II Observed, exogenous variables

1. Demand
2. Supply
3. Competing

III Unobserved, exogenous variables

E2 error terms for supply

Hence number of variable in SEM is

- Number of variables in your model: 7
- Number of observed variables: 5
- Number of unobserved variables: 2
- Number of exogenous variables: 5
- Number of endogenous variables: 2

Figure 1: Structural Equation Model (SEM) based on Standardized Coefficient on market efficiency that influences on investors perception about bitcoin.

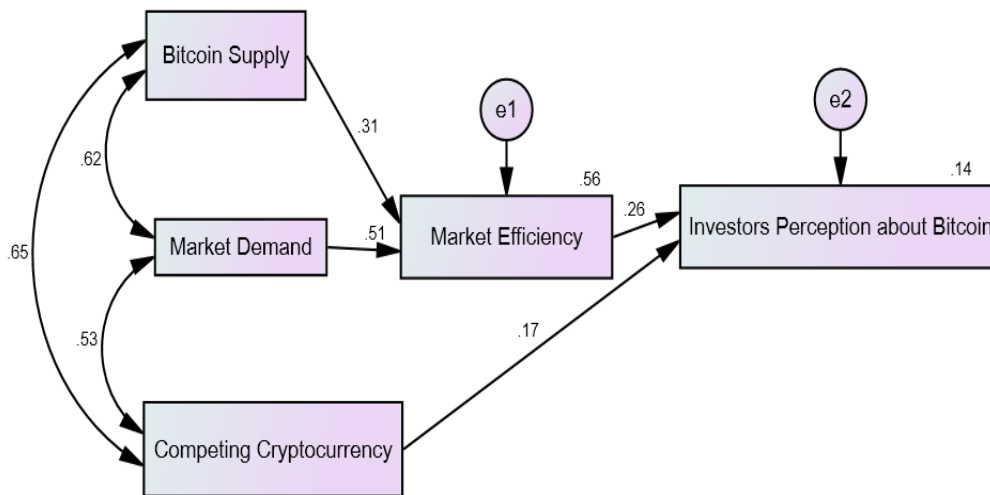


Table 4: Variables in the Structural Equation Model Analysis

Variables	unstandardized coefficient	S.E. of B	Standardized Coefficient of Beta	C.R./t value	P
Efficiency	0.391	0.033	0.51	11.733	<0.001**

Efficiency	<-- -	Supply	0.374	0.0 52	0.314	7.235	<0.00 1**
Perceptio n	<-- -	Efficien cy	0.082	0.0 17	0.26	4.818	<0.00 1**
Perceptio n	<-- -	Compet ing	0.035	0.0 11	0.171	3.171	<0.00 1**

Note: ** denotes significant at 1% level

From the above table, unstandardized coefficient of demand on market efficiency is 0.391 represents the partial effect of demand on market efficiency, holding the other path variable as constant. The estimated positive sign implies that such effect is positive that market efficiency would increased by 0.391 for every unit increase in demand and this coefficient value is significant at 1% level.

Unstandardised coefficient of supply is 0.374 represents the partial effect of mrket efficiency, holding the other path variables as constant. The estimated positive sign implies that such effect is positive that market efficiency would increase by 0.374 for every unit increase in Competency and this coefficient value is significant at 1% level.

Unstandardised coefficient of efficiency is 0.082 represents the partial effect of perception, holding the other path variables as constant. The estimated positive sign implies that such effect is positive that perception would increase by 0.082 for every unit increase in Source and this coefficient value is significant at 1% level.

Unstandardised coefficient of competing is 0.035 represents the partial effect of perception, holding the other path variables as constant. The estimated positive sign implies that such effect is positive that positive would increase by 0.035 for every unit increase in Source and this coefficient value is significant at 1% level.

Based on standardized coefficient, demand on efficiency (0.51) is most influencing path in this SEM model, followed by supply on efficiency is (0.314), efficiency on perception is (0.26) and competing on perception is (0.171).

Table 5: SEM Model Fit Summary

Indices	Value	Suggested Value
Chi-square value	6.987	
DF	1	
P Value	.072	>0.05 (Hair et al., 1998)
Chi-square value/DF	2.329	<5.00 (Hair et al., 1998)
GFI	.993	>0.09 (Hu and Bentler, 1999)
AGFI	.964	>0.09 (Hair et al. 2006)
NFI	.991	>0.09 (Hu and Bentler, 1999)
CFI	.995	>0.09 (Daire et al., 2008)
RMSEA	.059	<.08 (R et al., 2012)

From the above table it is found that the calculated P value is 0.072 which is greater than 0.05 which indicates perfectly fit. Here Goodness of Fit Index (GFI) value (0.993) and Adjusted Goodness of Fit Index (AGFI) value (0.964) is greater than 0.9 which represent it is a good fit. The calculated Normed Fit Index (NFI) value (0.991) and Comparative Fit Index (CFI) value (0.995) indicates that it is a perfectly fit and Root Mean Square Error of Approximation (RMSEA) value is 0.059 which is less than 0.08 which indicated it is perfectly fit.

5. Discussion and Conclusion

Examining the variables that can affect Indian investors' perception to invest in Bitcoin was the goal of the current study. The results of the SEM technique showed that perceptions of market efficiency, supply, demand, and rival cryptocurrencies influence Indian investors' decisions to buy Bitcoin. On the other hand, it was discovered that the desire of Indian investors to invest in Bitcoin was not significantly impacted by simplicity of use, profitability, awareness, subjective norms, or trust.

These findings have important ramifications for theory, policymakers, regulators, and practitioners alike. This study lays the groundwork for the behaviour of Indian investors when it comes to investing in Bitcoin, highlighting certain characteristics that these investors may find inconsistent with the currency's accessibility, security, and other features that have been closely linked to Bitcoin investment. The results of the current study will thus undoubtedly contribute to the corpus of information on Bitcoin investment behaviour going forward.

Contrarily, the current study is an application of the theories of planned behaviour, market efficiency, and technological acceptance to a new field of study that has not yet been empirically investigated.

The report also offers policymakers and practitioners insights on the points that can be emphasised to increase Bitcoin investment and usage among Indian investors. Indeed, this will benefit not only investors but also the health of the economy as a whole. Bitcoin and other similar systems, on the other hand, should be carefully researched and taken into consideration since they might be a more suitable medium of trade (A. M. Ayedh et al., 2020). To improve the functions of money, it would be wise to research additional cryptocurrency types.

Last but not least, those who engage in the financial markets, like financial advisors, must have a working understanding of the newest investment assets as well as the corresponding expertise and technologies.

This is especially important in the current climate of rapid innovation in financial technology, where a wide range of financial alternatives have been developed to successfully compete with more established financial instruments.

Financial advising and wealth management platforms that are easily accessible online and offer more effective, flexible, and affordable services in a variety of personal finance and wealth management areas will attract clients away from financial advisors who fail to adapt to the most recent financial technology trends.

6. Limitation and Scope for Further Research

Only India was used for this study. This work is constrained to an in-depth examination of just one (core) latent variable, which is backed by a review of the prior literature. The aforementioned indicates that there is a tonne of room for additional research in this field, including additional investigation into new variables.

Reference:

- Aggarwal, D. (2019). Do bitcoins follow a random walk model? *Research in Economics*, 73(1), 15–22. <https://doi.org/10.1016/j.rie.2019.01.002>
- Akshay, A. (2019). *Original Research Paper Management A STUDY ON THE AWARENESS AND PERCEPTION OF CRYPTOCURRENCY Swati Shukla.* 4, 15–25. [https://www.worldwidejournals.com/indian-journal-of-applied-research-\(IJAR\)/fileview/April_2019_1554118483_1220084.pdf](https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/fileview/April_2019_1554118483_1220084.pdf)
- Alharbi, A., & Sohaib, O. (2021). Technology Readiness and Cryptocurrency Adoption: PLS-SEM and Deep Learning Neural Network Analysis. *IEEE Access*, 9, 21388–21394. <https://doi.org/10.1109/ACCESS.2021.3055785>
- Almarashdeh, I. (2018). An overview of technology evolution: Investigating the factors influencing non-bitcoins users to adopt bitcoins as online payment transaction method. *Journal of Theoretical and Applied Information Technology*, 96(13), 3984–3993.
- Almarashdeh, I., Eldaw, K. E., Alsmadi, M., Alghamdi, F., Jaradat, G., Althunibat, A., Alzaqebah, M., & Mohammad, R. M. A. (2021). The adoption of bitcoins technology: The difference between perceived future expectation and intention to use bitcoins: Does social influence matter? *International Journal of Electrical and Computer Engineering*, 11(6), 5351–5366. <https://doi.org/10.11591/ijece.v11i6.pp5351-5366>
- Arratia, A., & López-Barrantes, A. X. (2021). Do Google Trends forecast bitcoins? Stylized facts and statistical evidence. *Journal of Banking and Financial Technology*, 0123456789. <https://doi.org/10.1007/s42786-021-00027-4>
- Ayedh, A., Echchabi, A., Battour, M., & Omar, M. (2020). Malaysian Muslim investors' behaviour towards the blockchain-based Bitcoin cryptocurrency market. *Journal of Islamic Marketing*, 12(4), 690–704. <https://doi.org/10.1108/JIMA-04-2019-0081>
- Ayedh, A. M., Omar, M. M. S., & Echchabi, A. (2020). Factors Influencing Bitcoin Investment Intention: The case of Oman. *International Journal of Internet Technology and Secured Transactions*, 1(1), 1. <https://doi.org/10.1504/ijitst.2020.10030071>
- B Eshwari, & Ahamed Adeeba. (2018). *Volume 3, Issue 1, May 2018, ISBR Management Journal ISSN (Online) - 2456 -9062 A Study on Perception of Bitcoin and Their Awareness and Impact among investors in Asset Management Company With Reference To Bangalore Volume 3, Issue 1, May 2018, IS. 3(1), 1–9.*
- Giungato, P., Rana, R., Tarabella, A., & Tricase, C. (2017). Current trends in sustainability of bitcoins and related blockchain technology. *Sustainability (Switzerland)*, 9(12). <https://doi.org/10.3390/su9122214>
- Jose, J., Kannoorpatti, K., Shanmugam, B., Azam, S., & Yeo, K. C. (2017). A critical review of Bitcoins usage by cybercriminals. *2017 International Conference on Computer Communication and Informatics, ICCCI 2017*. <https://doi.org/10.1109/ICCCI.2017.8117693>
- Kelleher, J. P. (2021). Why Do Bitcoins Have Value? *Investopedia*. <https://www.investopedia.com/ask/answers/100314/why-do-bitcoins-have-value.asp>
- Low, K. F. K., & Teo, E. G. S. (2017). Bitcoins and other cryptocurrencies as property? *Law, Innovation and Technology*, 9(2), 235–268. <https://doi.org/10.1080/17579961.2017.1377915>

- Palos-Sanchez, P., Saura, J. R., & Ayestaran, R. (2021). An exploratory approach to the adoption process of bitcoin by business executives. *Mathematics*, 9(4), 1–23. <https://doi.org/10.3390/math9040355>
- Pelucio-Grecco, M. C., dos Santos Neto, J. P., & Constancio, D. (2020). Accounting for bitcoins in light of IFRS and tax aspects. *Revista Contabilidade e Financas*, 31(83), 275–282. <https://doi.org/10.1590/1808-057x201909110>
- R, R., S, B., ran, & K, G. (2012). Customer perception towards banking sector: Structural equation modeling approach. *African Journal of Business Management*, 6(46), 11426–11436. <https://doi.org/10.5897/ajbm12.445>
- Seetharaman, A., Saravanan, A. S., Patwa, N., & Mehta, J. (2017). Impact of Bitcoin as a World Currency. *Accounting and Finance Research*, 6(2), 230. <https://doi.org/10.5430/afr.v6n2p230>
- Shahzad, F., Xiu, G. Y., Wang, J., & Shahbaz, M. (2018). An empirical investigation on the adoption of cryptocurrencies among the people of mainland China. *Technology in Society*, 55, 33–40. <https://doi.org/10.1016/j.techsoc.2018.05.006>
- Yang, X., Sherratt, S., Dey, N., & Joshi, A. (2019). *Advances in Intelligent Systems and Computing 1183 Fourth International Congress on Information and Communication Technology* (Vol. 1).
- Yoo, K., Bae, K., Park, E., & Yang, T. (2020). Understanding the diffusion and adoption of Bitcoin transaction services: The integrated approach. *Telematics and Informatics*, 53, 101302. <https://doi.org/10.1016/j.tele.2019.101302>
- Karthikeyan, M., S. Karthik, And S. Muthupandi. "The Perception And Attitude Of The Mutual Fund Investors In The Chennai City." *International Journal Of Mechanical And Production Engineering Research And Development* 8 (2018): 876-882.
- Dhayalan, V., Et Al. "Saving Habit And Investment Preference Of Government School Teachers In Vellore District." *International Journal Of Mechanical And Production Engineering Research And Development* 8.3 (2018): 922-926.
- Chavan, Amrita B., And K. Rajeswari. "The Design And Developement Of Decentralized Digilocker Using Blockchain." *International Journal Of Computer Science Engineering And Information Technology Research (Ijcseitr)* 9 (2019): 29-36.
- Thirumagal, P. G., And S. Suresh. "Payoff And The Impact Of Various Investment Attributes On Frequency Of Investment In Stock Index Futures." *International Journal Of Mechanical And Production Engineering Research And Development (Ijimperd)* Vol 8 (2019): 8-15.
- Kumar, Rajesh, Et Al. "Resource Use Efficiency And Constraints In Production And Marketing Of Tissue Culture And Sucker Propagated Banana." *International Journal Of Agricultural Science And Research* 5.5 (2015): 1-10.
- Gill, Rupinder Kaur, And Rubeena Bajwa. "Study On Behavioral Finance, Behavioral Biases, And Investment Decisions." *International Journal Of Accounting And Financial Management Research* 8.3 (2018): 1-14.