

Behavioural intention towards investment in cryptocurrency: an integration of Rogers' diffusion of innovation theory and the technology acceptance model

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Abstract

Despite being one of the fastest-growing digital assets in the present day, investment in cryptocurrencies is still a matter of questionable interest. Therefore, the present study intends to study the behavioural intention of Generation Z Indians towards investment in cryptocurrencies. With the integration of Rogers' Diffusion of Innovation Theory and the Technology Acceptance Model, the study analyses the behaviour of respondents aged between 18 and 23. Data was collected from 392 respondents using the street-intercept data collection method, which was further tested using structural equation modelling and associated tests. The study finds that complexity, compatibility, and observability influence perceived usefulness and perceived ease of use, which further influence behavioural intention. Besides offering practical implications for crypto exchanges and online trading platforms, it is also found to be novel as it integrates the two most significant theories of technology adoption, contributing significantly to the existing literature.

Key words

Cryptocurrency, Rogers' diffusion of Innovation Theory, Technology Acceptance Model, behavioural intention, generation Z.

DOI: 10.23762/FSO_VOL9_N04_7

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Introduction

The future evolution of cryptocurrency and blockchain technology centres around the world will depend entirely on the organi-

sational, technological, and other talent capacities of each blockchain hub (Lim et al., 2019). India, a country with over 1 billion

people, has been experiencing an economic renaissance in recent years. Moreover, 40% of India's population has access to internet and telecom services. In 2012, a limited number of bitcoin transactions began to take place in India. Within a brief period, the amount of cryptocurrency exchange transactions began to increase rapidly within the country (James and Parashar, 2018). Currently, there are no particular rules and regulations in India for cryptocurrencies. The Reserve Bank of India initially opposed trading in cryptocurrencies; however, in 2014, the Reserve Bank began to pay attention to blockchain technology and used cryptocurrency in India to lower the physical circulation of paper money (Jani, 2018). Observers assume that the government of India will regulate bitcoin cryptocurrency in stages. The bitcoin industry welcomes these new changes because the more widespread acceptance of cryptocurrency will support the cryptocurrency needs (Singh and Singh, 2018). The investment behaviour of investors in cryptocurrency is influenced by a general attitude which means those attitudes are in part explained by the theory of planned behaviour. Subjective norms refer to the perception of an individual or a group of people that a certain behaviour will be carried out and accepted. Determining whether one should invest in bitcoin is a difficult decision, as there are both considerations for financial risk and perceived benefits which must be taken into consideration (Gazali, 2019). In the referred context, social influence (SI) is one of the vital components, whereas effort expectancy (EI) is of least influence as summed up by end-users (Gupta et al., 2020). Structural models find that awareness, compatibility, and facilitating conditions could significantly impact investors' decisions pertaining to bitcoin cryptocurrency. Blockchain technology is a peering network of detailed particulars of technology that retains data from digitalised asset business transactions

by using appropriately distributed ledgers outside the control of authorities such as governments, banks etc. As a result, it minimises the risks connected with intermediaries' interventions such as vulnerability, hacking, and enhancing the supply chain resilience in cryptocurrencies such as Ripple, Bitcoin, Litecoin, Ethereum, etc. (Min, 2019). Bitcoin has received a great deal of attention in terms of coverage, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Having a target and using it to manage the link between PEOU and the cryptocurrency's purpose is productive and beneficial. Additionally, the authors demonstrate the significance of transaction processing in influencing PU (Nadeem et al., 2021). Social Influence (SI) is one of the most significant components behind investment in cryptocurrency, whereas effort expectancy is a minimal influencing factor for investors (Gupta et al., 2020). According to one study, if Bitcoin takes the form of the Lakshmi Coin, individuals will be greatly inspired to become investors, resulting in rapid advancement in the use of cryptocurrencies. It will assist India in extending the upcoming technology platform, i.e. e-commerce in the economy (Jaideep and Yyoty, 2019). Entrepreneurs in India view the current situation as a spontaneous opportunity to rapidly increase the footprint of bitcoin and other various types of cryptocurrencies in India. Singh and Faisal (2019) highlighted the various challenges in cryptocurrency adoption in the minds of Indians, among which are security threats, money laundering, absence of internet knowledge, and differences in cryptocurrency market value. The technical or mechanical features of a cryptocurrency and technology awareness are presumed to be vital and have a direct effect on attitude. This type of investment technology reflects a lower level of awareness among the older generation as they are less educated in terms of using the latest technology. Both trust and perfor-

mance expectancy have a major impact on behavioural intention to use cryptocurrency (Gil-Cordero et al., 2020). Blockchain technology is expected to impact the tourist sector in the Asia-Pacific region significantly. The term 'blockchain' describes a technical concept which records data on the different systems of all associated users in cryptographic mode in a predetermined way (Hofbauer and Sangl, 2019). As many tourism salespeople have been receiving cryptocurrency in the tourism industry, its usefulness has been thoroughly documented in the Asia-Pacific region (Treiblmaier et al., 2020). Cryptocurrency is claimed to be one of the most profitable investments in the long run for several reasons: easy availability, no involvement of middlemen, minimum transaction fees, speedy payments, and information privacy (Banwari, 2017). Electronic currencies, the internet, and mobile phones play a crucial role in the new technology. In India, virtual currency is an emerging market that increases both risk and investment (Puneet et al., 2017). There are three most common risk factors which pertain to cryptocurrencies: market capitalisation, market return, and encouragement of cryptocurrency. Most cryptocurrencies and their portfolios are significantly exposed to these three factors (Liu et al., 2020). Financial technology (FinTech) is one of today's most important topics in the emerging markets as it provides the economy with increased growth opportunities. Extensive use of technology adoption requires users to be accustomed to how technology operates (Mazambani and Mutambara, 2019).

FinTech is likely to disrupt and generate a new variety of risks. Regulators around the world are working hard to provide protection to the consumer and to maintain sound financial stability, and at the same time to create an environment for guarded FinTech innovation (Jagtiani and John, 2018). Cryptocurrencies additionally constitute ecological risks because of their ex-

tensive energy demands. The social risk associated with financial technology intersects significantly with technical threats; for example, the use of consumer data to distinguish a group of consumers (Horn et al., 2020). Knowledge of FinTech services and perceived security in laptops and mobile devices influence investors' PU.

There is a significant relationship between PU, satisfaction, confirmation, and continual intention to use a service (Wang et al., 2019). FinTech innovation will be prevalent in everyday day-to-day transactions as their adoption increases and an all-inclusive, open regulatory or governmental framework permits them to grow (Mention, 2019). Factors influencing the users to make adoption decisions pertaining to cryptocurrency are divided into four categories: technical, social, economic, and personal (Alzahrani, 2019). Hedonic motivations have the most significant influence on members of Generation Z and their preparedness to use artificial intelligence devices (Vitezić and Perić, 2021). The intended and unintended effects of PU, PEOU, and subjective norms as a result of the risk probability of COVID-19 are being assessed to see how they affect Generation X's behavioural goal of using digital payment transactions (Daragmeh et al., 2021). The changes in financial services and technology innovation leverage the implementation of cryptocurrency, blockchain technologies, etc. Deposit and lending services and peer-to-peer (P2P) lending, investment, risk management, and the financial markets are all affected by FinTech innovation and cryptocurrency blockchain technology in India (Gomber et al., 2018).

Generation Z, i.e. the youngest generation in India, is more passionate about online behaviour than other generations (Thangavel et al., 2021). When it comes to having an influence on the intention to use cryptocurrency, there is an important relationship between trust and awareness

(Alaeddin and Altounjy, 2018). Therefore, the foremost objective of this present study is to investigate the Behavioural Intention (BI) of Generation Z Indians towards investment in cryptocurrency, as Generation Z is the powerhouse of investors in India.

1. Literature review

Fintech

Digitalisation has a powerful influence on various financial service industries worldwide, influencing many spheres of every-day life and work (Małkowska et al., 2021). Financial technology, or FinTech, represents the expansion of an enormous transformation in terms of information technology. Electronic channels have increased over the preceding years, which has resulted in changing consumer behaviour in the context of information technology (Puschmann, 2017). According to Philippon (2016), its operations have brought difficult advances to specific services, but the primary advantage is the customer base. Its role has become advantageous as it shows how far computers, automation, and technology can develop in the future (Philippon, 2016). Lee and Shin (2018) identified six dimensions of FinTech business models that characterised its success or failure, namely payment, wealth management, crowdfunding, lending, the capital market, and insurance services. The authors suggested that the six business models attracted an increased number of customers by focusing on greater trust in the organisation, convenience and economic mobility. Gai et al. (2018) identified five essential characteristics, namely data orientation, facility and equipment, applications, service models, and security and privacy dimensions. The concept is associated with financial community networks, various procedures of business development, or strategy revolutionisation.

However, this concept also brings with it a variety of risks from technological contexts, such as privacy matters, safety and uncertain-

ty. The cyber risk may occur due to unknown participation, unreliable trust, and an unforeseen number of users in the system. There are also challenges related to the technical weaknesses of newly introduced systems due to wireless networks (Gai et al., 2018). The acquisition of financial technology innovation is significant for the enlargement of financial markets. Consumers' attitude is one of the main factors in BI in terms of cryptocurrency use. As financial technology advances, the above elements should be considered for behavioural considerations (Mazambani and Mutambara, 2019). With the expansion of FinTech, blockchain has gained significant investment awareness because it provides guidance into two of the riskiest areas: faith in e-commerce and trust in e-commercial ventures. If universities offer a course curriculum on the domain, then it has the potential to provide skilled careers and growth opportunities for an entire generation of businesses and students of various technologies. Such innovations are becoming more prevalent in day-to-day transactions as their acquisition is becoming more thorough and less regulated, allowing them to grow on a daily basis (Mention, 2019).

Generation Z, Technological Adaptability and Investment Behaviour

Generation Z means those individuals who were born in the age of the virtual world and the emergence of widespread technological innovation, between 1997 and 2015. Such people are always at the forefront of digital technology. They also place a premium on financial stability in the market. The younger generation looks forward to continuous development with a clear need for safety and security (Desjardins, 2018).

Because of the technological aspects of cryptocurrency around the world, which expands the scope of the volume of technology consciousness, it is expected to have a significant impact on investor attitudes. Several issues contribute to the difficulty of

trading cryptocurrencies among Generation Y (an older generation), including their lack of technological education (Vogels, 2019), the lack of government regulation of cryptocurrency, and the high level of trust as the major medium for attitude. In order for Generation Z to embrace cryptocurrencies, ensuring customer satisfaction with positive effects is a vital component. FinTech technology occupies an extensive market share in the economy, which shows that the number of FinTech services consumers and the degree of transactions have been rapidly increasing (Alaeddin and Altounjy, 2018). Significant factors which positively effect consumer satisfaction among Generation Z when using FinTech services are exchange options, low cost, legal governance, insurance facilities, crypto coin facilities, etc. (Dospinescu et al., 2021). Structural equation modelling proved that facilitating conditions, compatibility of technology, and awareness in using technology substantially impact the level of investment in bitcoin. As Generation Z has a broad understanding and awareness of technology, it is essential to increase awareness of cryptocurrency among every age group to expand its market (Ayedh et al., 2020).

Theoretical basis

Rogers' Diffusion of Innovation Theory

In 1962 Everett M. Rogers coined the Diffusion of Innovation (DOI) theory, which is also one of the oldest theories in social science (LaMorte, 2019). *Diffusion* is how individuals communicate new or existing innovation through definite channels within a given time period amongst different individuals in the social system. In general, the word *diffusion* constitutes organisation and the spread of innovative new ideas. The four leading elements in diffusion of innovation are: innovation, which is the process of introducing an innovation, idea and product; communication, or the process through which it transmits information, such as computer science or radio channels; time, which

refers to the point in time when anything should be done — for example, a plan, schedule, etc; and lastly the social system, which indicates the network of relationships between or among individuals, institutions, etc. (Rogers et al., 2019).

Individuals are divided into five groups, each of which describes how imaginative they are and where they fit in terms of timing when it comes to obtaining innovation. “Innovators,” who are known for being virtually possessed by fresh ideas, face a dilemma. They view it as a dangerous and terrifying experience to be adopted.

Bitcoin investors are more likely to be independent and have liberty. In the social system, “early adopters” are identified as opinion makers. In 2017, the bitcoin market attracted a large number of investors and traders. As per Rogers, these opinion-makers and leaders can be viewed as progressing from the first stage, i.e., innovators, to the second stage, i.e. early adopters. The “early majority” are hardly leaders, but they acquire new ideas before regular people. They must look at proof of how innovation works before adopting it. The “late majority” are those who will only acquire an innovation after the it has been tested by the majority. “Laggards” are constrained by tradition and are very traditionalist or conservative (Norupp, 2021).

Technology Acceptance Model

The technology acceptance model (TAM) describes how consumers receive and use technology. This theory is mainly for information systems consisting of end-users. Consumers' use of technology is aided by BI. TAM reveals that PU is the most significant enticement in adopting information technology (Al-Maatouk et al., 2020). On the other hand, PEOU has also been found to reduce the cognitive effort in technology adoption (Al-Maatouk et al., 2020).

Based on the theory of reasoned action (TRA), Davis introduced TAM to understand or forecast technology consumption and ac-

quisition (Davis et al., 1989). There is a common language and operation of application programming interface (API) in PEOU when using TAM to build bitcoin as developers in PU. Furthermore, the excessive speed in the movement of bitcoin and economically efficient transfer contributes positively towards its perceived use (PU) (Folkinshteyn and Lennon, 2016). PEOU established a strong effect upon PU, which builds cryptocurrency operations (Agustina, 2019). When employing the TAM model, it describes that nearly 85% of consumers aim to acquire crypto-

currency. PEOU exerted considerable productive effect in South Korea, encouraging the continued use of blockchain technology. Similarly, PU influenced employees of information technology businesses to continue using blockchain technology (Lee and Kim, 2019).The TAM model is suitable for examining the level of acceptance of technology. PU, PEOU, and level of knowledge are three factors that predict what people may want to do with blockchain. This has led to blockchain's success (Kern, 2018).

Table 1. Consolidated list of independent variables and dependent variables and definitions

Variables	Definition
Relative Advan- tage	The level at which innovation transformation is superior than the concept from which it is replaced (Lou and Li, 2017).
Complexity	The perceived difficulty of end consumers in recognising advancements and utilising technology (Lou and Li, 2017).
Compatibility	The degree to which innovation is judged rational and consistent in light of previous consumer experiences, the existence of value, or the necessity of the product (Lou and Li, 2017).
Trialability	The level at which innovation can also be an experiment with certain parameters and boundaries (Lou and Li, 2017).
Observability	The degree to which the effects of inventions may reveal themselves in the lives of other people (Lou and Li, 2017).
PU	The degree at which an individual considers that using a specific technology will do strengthen his/her respective job performance (Davis, 1989).
PEOU	The point at which people believe that using systems won't require them to work hard (Davis, 1989).
BI	It is the motivating factor that influences a certain behaviour; the more effective the goals for executing the behaviour, the more likely that behaviour will be carried out (LaMorte, 2020).

Source: own elaboration

Research Framework

Relative Advantage, PU and PEOU

Relative advantage has a beneficial effect on students' decision to enrol in massive virtual online courses, since students believe that ongoing technological advancement is far superior to older methods (Al-Rahmi et al., 2019). To investigate cryptocurrency acquisition, the authors looked at the aspects

that use cryptocurrency, and discovered that the benefits of the cryptocurrency payment mechanism had an impact on PEOU (Lou and Li, 2017). In business-to-business commerce, variables from TAM had a negligible effect on PU when it came to the relationship between two elements: relative advantage and availability of information (Hussein et al., 2019). Correlational and regression analysis determined that PEOU significant-

ly influenced e-learning acquisition (Chung, 2019). The researchers have emphasised the following hypotheses as a supplement to the current literature:

- H1: The relative advantage of investment in cryptocurrency has a positive influence on its PU among Generation Z Indians.
- H2: The relative advantage of investment in cryptocurrency has a positive influence on its PEOU among generation Z Indians.

Complexity, PU and PEOU

There are a variety of barriers to acquiring blockchain technology, which affect not just supply chain organisations but also individuals involved with the supply chain and other critical stakeholders (Saberi et al., 2019). A structural model found that PU has a significant impact on trust in emerging markets when it comes to online purchases of goods and services via virtual feedback (Ventre and Kolbe, 2020). PEOU has been shown to have a significant impact on client decision-making when it comes to technological automation purchases. According to the study, there is a scarcity of data on the factors that influence students' attitudes towards online learning in schools (Huang et al., 2020). End-users perceived mobile electronic wallets and bitcoin as somewhat problematic, but other end-users perceived them as readily available, significantly impacting PEOU. They are concerned that Generation Z will be in command of bitcoin and related technologies. Buyers value security and safety above all else, and as a result, bitcoin cryptocurrency clients may be just as helpful (Baur et al., 2015). As a complement to the current literature, the researchers have emphasised the following hypotheses:

- H3: Complexity in investing in cryptocurrency has a negative influence on its PU among Generation Z Indians.
- H4: Complexity in investing in cryptocurrency has a negative influence on its PEOU among Generation Z Indians.

Compatibility, PU and PEOU

The goal of online mobile commerce in Central Asia is directly driven by the innovation culture in society, which is heavily influenced by compatibility aspects of innovation (Chung, 2019). Numerous uncertainties have a significant impact on technology acquisition. Compatibility and PEOU have a beneficial effect on PU (Sugandini et al., 2018). PU and security productivity affect users' willingness to utilise e-filing to access detailed information technology (Tahar et al., 2020). PEOU has a significant positive effect on perceived behaviour toward company goals when using social media networking for commercial purposes, as proved by TAM (Hansen et al., 2018). As a result, the researchers have presented the following hypotheses as a supplement to the current literature:

- H5: Compatibility in investing in cryptocurrency has a positive influence on its PU among Generation Z Indians.
- H6: Compatibility in investing in cryptocurrency had a positive influence on its PEOU among Generation Z Indians.

Trialability, PU and PEOU

According to previous studies, PU and PEOU have the greatest impact on an end-purpose user when using an e-wallet, whereas trialability has the greatest impact on an end-intent user when using an e-wallet (Savira and Chotiyaputta, 2020). Furthermore, when consumers choose autonomous vehicles over electric vehicles, PU has a positive impact on and influences their BIs. PU is also influenced by novelty and trialability qualities (Yuen et al., 2021). The effect of trialability on the variable PEOU is substantial in terms of students' willingness to use an e-learning framework, according to a synthesis method that connects both Rogers' Diffusion of Innovation Theory and the Technology Acceptance Model (Al-Rahmi et al., 2019). End users' willingness to adopt breakthrough 3D printing technology is heavily influenced

by trialability. As a result, trialability is quite important (Marak et al., 2019). As a result of broadening the scope of the available literature in the referred context, the researchers have emphasised the following hypotheses:

H7: Trialability in terms of investing in cryptocurrency has a positive influence on its PU among Generation Z Indians.

H8: Trialability in terms of investing in cryptocurrency has a positive influence on its PEOU among Generation Z Indians.

Observability, PU and PEOU

Observability has an impact on the BI's ability to obtain data (Lou et al., 2017). Observability and social influence positively affected consumers' attitudes towards utilising Uber's mobile services and purchasing intention (Min et al., 2019). PU has a significant impact on customers' decisions to utilise FinTech services for payments (Alwi et al., 2019). End users' trust in various FinTech acquisition apps was significantly harmed, reducing customers' capacity to determine whether or not to acquire FinTech (Nangin et al., 2020). The researchers have emphasised the following hypotheses based on the current literature:

H9: Prior to investing in cryptocurrencies, observability has a positive influence on its PU among Indian Generation Z.

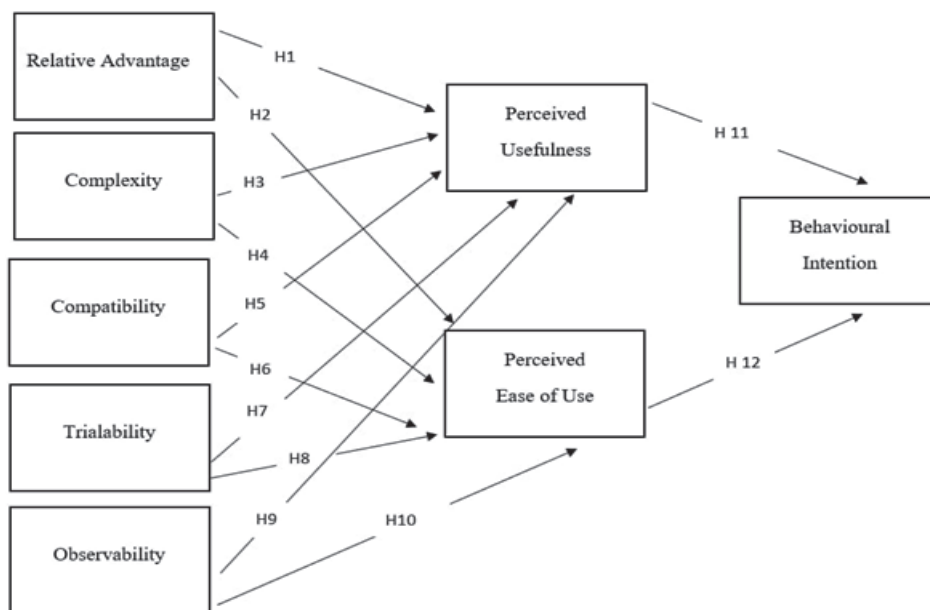
H10: Prior to investing in cryptocurrencies, observability has a positive influence on its PEOU among Indian Generation Z.

PU, PEOU and BI

Uncertainty and shame both have a negligible effect on PEOU. Both PEOU and PU affect technology acquisition and the contribution of blockchain technologies to supply chains in India, therefore influencing behavioural intent (Kamble et al., 2019). Previous studies discovered that PU and PEOU have a beneficial effect on consumers' BIs when obtaining a mobile wallet (Jin et al., 2020). When it came to using online banking services, trust was shown to play a modest effect in influencing BI. However, when it came to using FinTech services, trust was found to have a major influence (Kaur and Arora, 2020). PEOU, relative advantage, and trialability all have a significant impact on customers' BI to use virtual banking facilities, which are quite useful to bankers, FinTech suppliers, and other service providers as incentives for consumers to buy online banking systems (Tiong, 2020). When using online banking services, it was revealed that both factors, as well as trust, have a direct impact on customers' BIs (Bashir and Madhavaiah, 2015). The researchers have emphasised the following hypothesis to supplement the current literature:

H11: PU influences BI towards cryptocurrency adoption among Generation Z Indians.

H12: PEOU influences BI towards cryptocurrency adoption among Generation Z Indians.

Figure 1. Research Framework

Source: Own elaboration

2. Methodology

The study involves a quantitative cross-sectional survey design that analyses the BI of Indians aged between 18 and 23 years old towards cryptocurrency investment. This group of people broadly falls under the category of Generation Z (Gaidhani et al., 2019).

Because the total population of Generation Z was unknown, the formula $n = \frac{p(1-p)z^2}{E^2}$ (n = Sample Size, p = Population Proportion, z = z -score, E = Margin of Error, Confidence Level=95%, z -score=1.96, Margin of Error=5% and Population Proportion=50%) was used to calculate the required sample size of 384, rounded off to 400 for convenience. Based on its geographical qualities, India was divided into four zones: north, east, west, and south. Following that, a contact point for each zone was formed, with New Delhi representing the North Zone, Kolkata representing the East Zone, Bengaluru representing the South

Zone, and Mumbai representing the West Zone. Each contact point was assigned one field investigator, who was then given the task of collecting 100 responses from their respective cities within one month. The field investigator was employed on a paid basis, earning Rs.10/- for each completed questionnaire. The street-intercept method of data collection was applied as the method to approach potential respondents. Prior studies suggested the street-intercept method is best suited to studies focusing on specific population sectors and exclusively on categorical problems (Miller et al., 1997). Also, the intercept method has previously proven to be an efficient way of collecting local data within a short period at the lowest possible cost (Bharadwaj and Bezborah, 2021). The authors highlight the fact that this data collection technique touches upon the potential target's specific needs and evaluates their perception of the situation. However, the respondents had to fulfil three inclusion criteria to be eligible for the survey:

- (a) The respondents should be aged between 18 and 23.
- (b) The respondents should have a minimum qualification of higher secondary education (10+2).
- (c) The respondents should be able to use the Internet.

The researchers developed a structured questionnaire with both open and close-ended questions. It consisted of two sections, whereby the first part focused entirely upon knowledge assessment questions that investigated the respondents’ demographic

constructs and inclusion criteria, while the second part focused upon the various variables used in Rogers’ Diffusion of Innovation Theory, the Technology Acceptance Model, and BI. Each item in the second section of the questionnaire was analysed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement items in the questionnaire are presented in Table 2. After removing the erroneous and incomplete surveys, the final analysis yielded 392 responses, representing a response rate of 98%.

Table 2. List of measurement items

BASIS	VARIABLE	MEASUREMENT ITEM	SOURCE
Relative Advantage	RAD 1	Cryptocurrency enables me to invest more quickly	(Moore and Benbasat, 1991; Zolait and Sulaiman, 2008)
	RAD 2	Cryptocurrency would improve the quality of my investment portfolio.	
	RAD 3	Cryptocurrency would give me greater control over my investments.	
	RAD 4	Investing in cryptocurrencies is easier.	
Complexity	CPX 1	Learning to invest in cryptocurrency would be difficult for me.	(Moore and Benbasat, 1991; Zolait and Sulaiman, 2008)
	CPX2	Overall, if I were to use cryptocurrency, it would be difficult to use.	
	CPX 3	Investing in cryptocurrency requires a lot of mental effort.	
	CPX 4	Investing in cryptocurrency can be frustrating.	
Compatibility	COM 1	Investing in cryptocurrency is compatible with my present situation.	(Moore and Benbasat, 1991; Zolait and Sulaiman, 2008)
	COM 2	Cryptocurrency suits the way I like to manage my finances.	
	CPM 3	Investing in cryptocurrency suits my investment behaviour.	
Trialability	TR 1	I want to be able to invest in cryptocurrency on a trial basis.	(Moore and Benbasat, 1991; Zolait and Sulaiman, 2008)
	TR 2	I want to be able to properly try out investment in cryptocurrency.	
	TR 3	I know where I can go to satisfactorily try out various uses of cryptocurrency.	
	TR 4	I do not have adequate opportunities to try out different types of cryptocurrencies.	

BASIS	VARIABLE	MEASUREMENT ITEM	SOURCE
Observability	OBS 1	I have seen others investing in cryptocurrency.	(Moore and Benbasat, 1991; Zolait and Sulaiman, 2008)
	OBS 2	It is easy for me to observe others investing in cryptocurrencies.	
	OBS 3	I will invest in cryptocurrency if it becomes popular.	
	OBS 4	I will invest in cryptocurrency when other people have successful experience of using it.	
PU	PU 1	Using cryptocurrency as an investment option would improve the performance of my investment portfolio.	(Johnson and Howard, 2019; Wu and Wang, 2005)
	PU 2	Using cryptocurrency as an investment option would make it easier for me to take investment decisions.	
	PU 3	I find cryptocurrency useful in my investment behaviour.	
PEOU	PEOU 1	I think learning to invest in cryptocurrency is easy.	(Johnson and Howard, 2019; Wu and Wang, 2005)
	PEOU 2	I think becoming skilful at investing in cryptocurrency is easy.	
	PEOU 3	I find cryptocurrency flexible to invest in.	
BI	BI 1	I intend to invest in cryptocurrency in the near future.	(Karahanna et al., 1999)
	BI 2	In the near future, I plan to experiment with cryptocurrency as a part of my investment decisions.	

Source: Own elaboration

Table 3 is a tabular representation of the technical details of the adopted methodology.

Table 3. Technical details

Universe	Generation Z Indians
Sample unit	Respondents aged 18-23 years old
Data collection method	Offline survey with field investigators
Data collection tool	Structured questionnaire
Contact points and respective zones	New Delhi (North Zone), Kolkata (East Zone), Bengaluru (South Zone), Mumbai (West Zone)
Margin of error	±5%
z-score	1.96
Confidence level	95%
Sample size	392
Sampling technique	Street-intercept method
Period of information collection	5 September 2021 to 5 October 2021
Language	English

Source: Own elaboration

Results and Discussion

A pilot survey was conducted with 50 Generation Z Indian respondents to check the reliability and validity of the questionnaire. The Cronbach's alpha values, which

ranged from 0.843 to 0.979, revealed a high level of reliability. Because the Cronbach's alpha value should be above 0.70, it meets the requirement in this case (Cortina, 1993).

Table 4 presents the results of the reliability test:

Table 4. Reliability test

Sl. No	Study Variable	No. of Items	Cronbach's Alpha	Remarks
1	Relative Advantage	4	0.922	Excellent
2	Complexity	4	0.865	Good
3	Compatibility	3	0.977	Excellent
4	Triability	4	0.935	Excellent
5	Observability	4	0.876	Good
6	PU	3	0.961	Excellent
7	PEOU	3	0.911	Excellent
8	BI	2	0.931	Excellent

Source: own elaboration based on pilot survey

Structural Equation Modelling (SEM) was chosen as the preferred method for analysing the actual survey since it helps to analyse complex, multi-faceted constructs that are more prone to errors, especially in the context of psychological research. To conduct SEM, however, the Kaiser-Meyer-Olkin (KMO) Test and Confirmatory Factor Analysis (CFA) are essential stages.

As a result, the Kaiser-Meyer-Olkin (KMO) test was used to determine the acceptability of each variable and the entire model for Factor Analysis and sample adequacy. The test calculates the KMO value at 0.830, which satisfies the conditions forwarded by Kaiser and Rice (1974) as it falls under the category of being 'meritorious'.

The adequacy of the KMO Test sets the stage for Confirmatory Factor Analysis (CFA), which will aid in determining the measurement quality of the structural equation model's latent constructs. However, before conducting the CFA, the chi-square test from the factor model was calculated to measure the absolute fit index of the mod-

el. However, results presented a chi-square value of 564.174 with a p-value of <0.001, thereby making the model non-significant as it is expected to have an absolute fit index of minimum discrepancy chi-square > 0.05. Previous study has suggested that this fit index be ignored, as it is erroneous (Bentler, 1990). Accordingly, results of the additional fit measures found a Comparative Fit Index (CFI) of 0.923, a Tucker-Lewis Index (TLI) of 0.975, and a Bentler-Bonett Normed Fit Index (NFI) of 0.951, all of which lie above the minimum threshold of 0.9. Additionally, the Root Mean Square Error of Approximation (RMSEA) is calculated at 0.009, and the Standardised Root Mean Square Residual (SRMR) is 0.051, both of which are below the maximum threshold of 0.08. The additional fit measures thereby revealed the model fit to be good (Lee, 2015, p. 357). Subsequently, the respective factor loadings calculated for each indicator are presented in Table 5.

Table 5. Factor loadings

Factor	Indicator	Estimate	Std. Error	z-value	p	Lower	Upper	Std. Est. (All)
Relative Advantage	RAD1	0.756	0.043	17.737	< .001	0.672	0.840	0.756
	RAD2	0.714	0.047	15.083	< .001	0.621	0.807	0.714
	RAD3	0.764	0.044	17.268	< .001	0.677	0.851	0.764
	RAD4	0.260	0.035	7.485	< .001	0.192	0.328	0.260
Complexity	CPX1	0.485	0.043	9.029	< .001	0.301	0.569	0.485
	CPX2	0.541	0.044	12.196	< .001	0.454	0.628	0.541
	CPX3	0.742	0.046	16.126	< .001	0.652	0.832	0.742
	CPX4	0.890	0.045	19.716	< .001	0.802	0.979	0.890
Compatibility	COM1	0.983	0.234	4.633	< .001	0.625	1.542	0.983
	COM2	0.409	0.034	12.132	< .001	0.343	0.475	0.409
	COM3	0.477	0.011	1.232	< .001	0.010	0.523	0.477
Observability	OBS1	0.686	0.050	5.689	< .001	0.188	0.785	0.686
	OBS2	0.454	0.051	8.823	< .001	0.353	0.555	0.454
	OBS3	0.426	0.055	7.729	< .001	0.318	0.534	0.426
	OBS4	0.567	0.052	10.944	< .001	0.466	0.669	0.567
Triability	TR1	0.855	0.031	11.534	< .001	0.295	0.916	0.855
	TR2	0.662	0.039	17.164	< .001	0.586	0.737	0.662
	TR3	0.475	0.033	14.333	< .001	0.410	0.540	0.475
	TR4	0.733	0.037	3.546	< .001	0.059	0.806	0.733
PU	PU1	0.599	0.048	12.563	< .001	0.505	0.692	0.599
	PU2	0.719	0.044	16.174	< .001	0.632	0.806	0.719
	PU3	0.636	0.044	14.462	< .001	0.550	0.722	0.636
PEOU	PEOU1	0.586	0.041	14.144	< .001	0.505	0.667	0.586
	PEOU2	0.806	0.050	16.151	< .001	0.708	0.904	0.806
	PEOU3	0.792	0.040	9.873	< .001	0.315	0.870	0.792
BI	BI1	0.540	0.057	9.390	< .001	0.427	0.653	0.540
	BI2	0.524	0.057	9.122	< .001	0.411	0.636	0.524

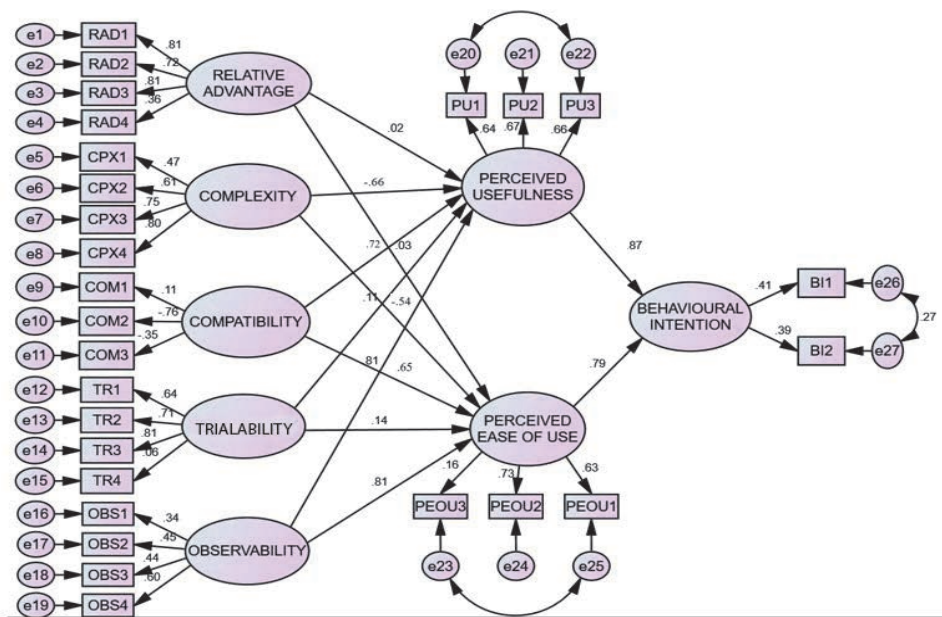
Source: Own elaboration

Table 5 demonstrates that every indicator has a p-value of <0.001, which indicates that each indicator is significant. Additionally, it reveals that every indicator has a standardised factor loading ranging between the

acceptable range of 0.4 to 1.0, further validating the indicators.

Figure 2 and Table 6 present the path diagram for the structural model and the associated regression weights.

Figure 2. Path diagram



Source: Own elaboration

Table 6. Regression weights

Variable	Path	Variable	Standardised Estimate	S.E.	C.R. [t-value]	P
PU	←	Relative Advantage	.020	.106	0.474	.635
PEOU	←	Relative Advantage	.026	.095	0.596	.551
PU	←	Complexity	-.660	.040	-7.893	***
PEOU	←	Complexity	-.541	.036	-7.272	***
PU	←	Compatibility	.724	.015	2.119	***
PEOU	←	Compatibility	.651	.046	1.981	***
PU	←	Trialability	.110	.970	1.001	.317
PEOU	←	Trialability	.136	1.046	0.127	.304
PU	←	Observability	.806	.099	8.687	***
PEOU	←	Observability	.809	.088	8.696	***
BI	←	PU	.868	.634	2.369	***
BI	←	PEOU	.794	.682	2.166	***

Source: Own elaboration

The study finds that relative advantage plays no role in influencing both PU and PEOU towards cryptocurrency investment among Generation Z Indians. The standardised direct effect shows that when relative advantage rises by 1, PU and PEOU in turn rise by 0.020 and 0.026 standard deviations. Table 6 shows that the probability of obtaining a Critical Ratio (C.R.) is 0.474 for PU and 0.596 for PEOU, both of which are less than the standard norm of $|1.96|$ and the p -value >0.05 , thereby presenting an insignificant relationship between them. Therefore, both H1 and H2 are not significant.

The second variable, namely complexity, plays a significant role in influencing both PU and PEOU towards cryptocurrency investment among Generation Z Indians. The standardised direct effect reveals that when complexity rises by 1, PU and PEOU decline by -0.660 and -0.541 standard deviations respectively. Table 6 shows that the probability of obtaining a Critical Ratio (C.R.) is -7.893 for PU and -7.272 for PEOU, both of which are more than the standard norm of $|1.96|$ and the p -value <0.05 , thereby presenting a significant relationship between them. Therefore, both H3 and H4 are significant.

The third variable, compatibility, also plays a significant role in influencing both PU as well as PEOU towards cryptocurrency investment among Generation Z Indians. The standardised direct effect presents that when compatibility rises by 1, PU and PEOU rise by only 0.724 and 0.651 standard deviations. Table 6 also shows that the probability of obtaining a Critical Ratio (C.R.) in the case of PU is 2.119 and 1.981 for PEOU, each of which is more than the standard norm of $|1.96|$ and the p -value <0.05 , thereby presenting a significant relationship between them. Therefore, both H5 and H6 are significant.

In the context of trialability, the results reveal that this variable does not influence PU and PEOU towards cryptocurrency investment among Generation Z Indians. The standardised direct effect shows that when trialability rises by 1, PU and PEOU rise by 0.110 and 0.136 standard deviations respectively. Furthermore, the probability of obtaining a Critical Ratio (C.R.) for PU is 1.001 and 1.027 for PEOU, which are less than the standard norm of $|1.96|$ and the p -value >0.05 , thereby presenting an insignificant relationship between them. Therefore, H7 and H8 are not found to be significant.

Observability plays a significant role in influencing PU and PEOU towards cryptocurrency investment among Generation Z Indians. The standardised direct effect reveals that when Observability rises by 1, PU and PEOU rise by 0.806 and 0.809 standard deviations respectively. Furthermore, the probability of obtaining a Critical Ratio (C.R.) is 8.687 in the case of PU and 8.696 for PEOU, both of which are more than the standard norm of $|1.96|$ and the p -value <0.05 , thereby presenting a significant relationship between them. Therefore, both H9 and H10 are significant.

Furthermore, PU and PEOU are found to play a significant role in influencing BI towards cryptocurrency investment among Generation Z Indians. The standardised direct effect reveals that when PU and PEOU rise by 1, BI rises by 0.868 and 0.794 standard deviations. Table 6 finds that the probability of obtaining a Critical Ratio (C.R.) for PU is 2.369 in the case of PEOU and 8.696, which is more than the standard norm of $|1.96|$ and the p -value <0.05 , thereby presenting a significant relationship between them. Therefore, both H11 and H12 are significant.

Table 7. Results of hypothesis testing

Hypotheses	Result
H1: The relative advantage of investment in cryptocurrency has a positive influence on its PU among Generation Z Indians	Not Significant
H2: The relative advantage of investment in cryptocurrency has a positive influence on its PEOU among Generation Z Indians	Not Significant
H3: Complexity of investment in cryptocurrency has a negative influence on its PU among Generation Z Indians	Significant
H4: Complexity of investment in cryptocurrency has a negative influence on its PEOU among Generation Z Indians	Significant
H5: Compatibility of investment in cryptocurrency has a positive influence on its PU among Generation Z Indians	Significant
H6: Compatibility of investment in cryptocurrency has a positive influence on its PEOU among Generation Z Indians	Significant
H7: Trialability in terms of investment in cryptocurrency has a positive influence on its PU among Generation Z Indians	Not Significant
H8: Trialability in terms of investment in cryptocurrency has a positive influence on its PEOU among Generation Z Indians	Not Significant
H9: Prior to investing in cryptocurrencies, observability has a positive influence on its PU among Indian Generation Z.	Significant
H10: Prior to investing in cryptocurrencies, observability has a positive influence on its PEOU among Indian Generation Z	Significant
H11: PU positively influences BI towards cryptocurrency adoption among Generation Z Indians	Significant
H12: PEOU positively influences BI towards cryptocurrency adoption among Generation Z Indians	Significant

Source: Own elaboration

Conclusions

The present study contributes significantly to the existing theoretical base of the domain as it paves the way for newer dimensions in context to the cryptocurrency adoption intention. Although most previous research, such as that by Lou and Li (2017), highlight the fact that relative advantage positively influences PU and PEOU, the present study violates the trend when investment in cryptocurrencies is studied in context to Generation Z Indians. The results suggest that relative advantage does not play a pivotal role in this regard. Furthermore, while authors such

as Savira and Chotiyaputta (2020) and Al-Rahmi et al. (2019) claim that trialability has a positive influence on adoption intention via PU and PEOU, the current findings contradict this trend by demonstrating that trialability has no decisive role in influencing PU and PEOU in relation to the cryptocurrency adoption intention among Generation Z Indians. Writers such as Saberi et al. (2019) and Ventre and Kolbe (2020) indicated that the variable of complexity has a negative effect on technology adaptation; when the current findings were compared to earlier research, they were shown to be consistent

with past findings. Similar conclusions were drawn when the findings of Roussou and Stiakakis (2016) and Tahar et al. (2020) were examined, whereby compatibility was determined to be a significant factor impacting both PU and PEOU. When compared to Rogers' Diffusion of Innovation Theory, authors such as Lou et al. (2017) confirmed that compatibility affects technological adaptation. As a result, it was determined that the current findings follow a similar pattern. Finally, the conclusion that PU and PEOU are strong predictors of BI toward cryptocurrency investing among Generation Z Indians matches those of Kamble et al. (2019) and Jin et al. (2020). The study thereby clearly draws attention to the fact that the dimensions of the Diffusion of Innovation Theory do not influence the dimensions of the Technology Acceptance Model in the context of cryptocurrency. On the one hand, the aspects of complexity, compatibility and observability were found to be strong predictors of the dimensions of the Technology Acceptance Model; on the other hand, Relative Advantage and Trialability were found not to play any role.

From a practical standpoint, the study advises that bitcoin trading platforms should focus more on the notions of simplicity in their user interface to increase the intensity with which Generation Z Indians adopt cryptocurrency. Because trialability is a quality that potential Generation Z investors value less, crypto exchanges should ignore offers and trials in order to attract them. Instead, crypto exchanges should concentrate their efforts on expanding their customer base by considering other factors such as compatibility, ease of use, and the utility of their online investing platforms, among others.

Despite its challenges, authors such as Gai et al. (2018) have mentioned that the acquisition of financial technology innovation is essential for the expansion of financial markets. The attitude of consumers is one of the main factors towards BI in the context

of cryptocurrencies. In the referred context, Mazambani and Mutambara (2019) identified factors that should be considered for behavioural purposes in terms of progress in financial technology. As an addition, this study sheds light on the BI of Generation Z Indians toward cryptocurrency investment. Because Generation Z has a stronger grasp and awareness of technology, it should have a greater comprehension and awareness of bitcoin (Ayedh et al., 2020). The study finds that, even though a significant number of studies have been performed in the area of cryptocurrency in India, no work had yet been undertaken from the perspective of Generation Z Indians, thereby making this study novel in nature with the potential to make significant contributions to the existing literature. The study could be beneficial for contemporary researchers in terms of analysing the investment behaviour of Generation Z Indians towards cryptocurrencies. Also, the novelty in integrating Rogers' Diffusion of Innovation Theory and the Technology Acceptance Model in the context of BI towards cryptocurrency investment is believed to add resources to the existing literature.

In conclusion, the study primarily ponders the aspect of the BI of Generation Z Indians. The study undertook efforts to integrate Rogers' Diffusion of Innovation Theory and the Technology Acceptation Model in the context of BI towards cryptocurrency investment. Most of the components of both models played a decisive role in influencing the BI in the defined area, according to the tests conducted in the study. Only relative advantage and trialability failed to meet the criteria for the significance of the hypotheses under consideration.

However, there are certain drawbacks to the current study, such as the study's exclusive focus on Generation Z respondents, which limits its generalisability to other generations. Furthermore, the survey solely includes Indian respondents, limiting its scope from a global perspective. However,

the present study opens up avenues for future researchers to conduct similar global studies by focusing upon the BI of other generations such as baby boomers, Generation X, and Generation Y.

References

- Agustina, D. (2019), Extension of Technology Acceptance Model (ETAM): Adoption of Cryptocurrency Online Trading Technology, *Jurnal Ekonomi*, 24(2), 272-287. <https://doi.org/10.24912/je.v24i2.591>.
- Al-Maatouk, Q., Othman, M. S., Aldraiweesh, A., Alturki, U., Al-Rahmi, W. M., Aljeraiwi, A. A. (2020), Task-technology fit and technology acceptance model application to structure and evaluate the adoption of social media in academia, *IEEE Access*, 8, 78427-78440. <https://doi.org/10.1109/ACCESS.2020.2990420>.
- Al-Rahmi, W. M., Yahaya, N., Aldraiweesh, A. A., Alamri, M. M., Aljarboa, N. A., Alturki, U., Aljeraiwi, A. A. (2019), Integrating Technology Acceptance Model with Innovation Diffusion Theory: An Empirical Investigation on Students' Intention to Use E-Learning Systems, *IEEE Access*, 7, 26797-26809. <https://doi.org/10.1109/ACCESS.2019.2899368>.
- Alaeddin, O., Altounjy, R. (2018), Trust, Technology Awareness and Satisfaction Effect into the Intention to Use Cryptocurrency among Generation Z in Malaysia, *International Journal of Engineering and Technology*, 7(4.29), 8-10. <https://doi.org/10.14419/ijet.v7i4.29.21588>.
- Alzahrani, S. (2019), Analysis of the Cryptocurrency Adoption Decision: Literature Review, in: 2019 Portland International Conference on Management of Engineering and Technology (PICMET) (pp. 1-11), 25-29 August 2019, Portland, Oregon, USA. DOI: 10.23919/PICMET.2019.8893819.
- Alwi, S., Salleh, M. N. M., Razak, S. A., Naim, N. (2019), Consumer Acceptance and Adoption towards Payment-Type Fintech Services from Malaysian Perspective, *International Journal of Advanced Science and Technology*, 28(15), 216-231.
- 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>.
- Banwari, V. (2017), Cryptocurrency scope in India, *International Journal of Management Sociology and Humanity*, 8(12), 82-92.
- Bashir, I., Madhavaiah, C. (2015), Consumer attitude and behavioural intention towards Internet banking adoption in India, *Journal of Indian Business Research*, 7(1), 67-102. <https://doi.org/10.1108/JIBR-02-2014-0013>.
- Baur, A. W., Bühler, J., Bick, M., Bonorden, C. S. (2015), Cryptocurrencies as a Disruption? Empirical Findings on User Adoption and Future Potential of Bitcoin and Co, in: Conference on E-Business, e-Services and e-Society (pp. 63-80), 13-15 October 2015, Delft, The Netherlands. https://doi.org/10.1007/978-3-319-25013-7_6
- Bentler, P.M., (1990), Comparative Fit Indexes in Structural Models, *Psychological Bulletin*, 107, 238-246. DOI: 10.1037/0033-2909.107.2.238.
- Bharadwaj, S., Bezborah, D. P. (2021), Decoding Consumer Psychology toward Dietary Supplements: A Mediation analysis between Freebies and Brand Loyalty, *Journal of Food Products Marketing*, 27(4), 173-187. <https://doi.org/10.1080/10454446.2021.1944418>.
- Cortina, J.M., (1993), What is coefficient alpha? An examination of theory and applications, *Journal of Applied Psychology* 78(1), 98-104. <https://psycnet.apa.org/doi/10.1037/0021-9010.78.1.98>.
- Chung, K. C. (2019), Mobile (shopping) commerce intention in central Asia: The impact of culture, innovation characteristics and concerns about order fulfilment, *Asia-Pacific Journal of Business Administration*, 11(3), 251-266.

- Daragmeh, A., Lentner, C., Sági, J. (2021), FinTech payments in the era of COVID-19: Factors influencing behavioural intentions of "Generation X" in Hungary to use mobile payment, *Journal of Behavioural and Experimental Finance*, 32, 100574. <https://doi.org/10.1016/j.jbef.2021.100574>.
- Davis, F. D. (1989), Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly*, 13(3), 319–340.
- Davis, F. D., Bagozzi, R. P., Warshaw, P. R. (1989), User Acceptance of Computer Technology: A Comparison of two Theoretical Models, *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>.
- Desjardins, J., (2018), Why Generation Z has a totally different approach to money, retrieved from: <https://www.weforum.org/agenda/2018/11/why-gen-z-is-approaching-money-differently-than-other-generations-95032cb6-6046-4269-a38a-0763bd7909ff/> (accessed 3 September 2021)
- Dospinescu, O., Dospinescu, N., Agheorghiesei, D. T. (2021), Fintech Services and Factors Determining the Expected Benefits of Users: Evidence in Romania for Millennials and Generation Z, *E a M: Economie a Management*, 24(2), 101–118. <https://doi.org/10.15240/tul/001/2021-2-007>.
- Folkinshteyn, D., Lennon, M. (2016), Braving Bitcoin: A technology acceptance model (TAM) analysis, *Journal of Information Technology Case and Application Research*, 18(4), 220–249. <http://dx.doi.org/10.1080/15228053.2016.1275242>.
- Gaidhani, S., Arora, L., Sharma, B. K. (2019), Understanding the attitude of generation Z towards workplace, *International Journal of Management, Technology and Engineering*, 9(1), 2804–2812.
- Gai, K., Qiu, M., Sun, X. (2018), A survey on FinTech, *Journal of Network and Computer Applications*, 103, 262–273. <https://doi.org/10.1016/j.jnca.2017.10.011>.
- Gazali, H.M (2019), Bitcoin Investment Behaviour: A Pilot Study, *International Journal on Perceptive and Cognitive Computing*, 5(2), 81–86. <https://doi.org/10.31436/ijpcc.v5i2.97>.
- Gil-Cordero, E., Cabrera-Sánchez, J. P., Arrás-Cortés, M. J. (2020), Cryptocurrencies as a financial tool: Acceptance factors, *Mathematics*, 8(11), 1–16. <https://doi.org/10.3390/math8111974>.
- Gomber, P., Kauffman, R. J., Parker, C., Weber, B. W. (2018), On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services, *Journal of Management Information Systems*, 35(1), 220–265. <https://doi.org/10.1080/07421222.2018.1440766>.
- Gupta, S., Gupta, S., Mathew, M., Sama, H.R., 2021, Prioritizing Intentions Behind Investment In Cryptocurrency: A Fuzzy Analytical Framework, *Journal of Economic Studies*, 48(8), 1442–1459. <https://doi.org/10.1108/JES-06-2020-0285>.
- Hansen, J. M., Saridakis, G., Benson, V. (2018), Risk, trust, and the interaction of perceived ease of use and behavioural control in predicting consumers' use of social media for transactions, *Computers in Human Behaviour*, 80, 197–206.
- Huang, F., Teo, T., Scherer, R. (2020), Investigating the antecedents of university students' perceived ease of using the Internet for learning, *Interactive Learning Environments*, ahead of print, 1–17. <https://doi.org/10.1080/10494820.2019.1710540>.
- Hofbauer, G., Sangl, A. (2019), Blockchain Technology and Application Possibilities in the Digital Transformation of Transaction Processes, *Forum Scientiae Oeconomia*, 7(4), 25–40. https://doi.org/10.23762/FSO_VOL7_NO4_2
- Horn, M., Oehler, A., Wendt, S. (2020), FinTech for Consumers and Retail Investors: Opportunities and Risks of Digital Payment and Investment Services, in: *Palgrave Studies in Sustainable Business in Association with Future Earth*, (pp. 309–327), Springer. https://doi.org/10.1007/978-3-030-38858-4_14.

- Hussein, L. A., Baharudin, A. S., Jayaraman, K., Kiumarsi, S. (2019), B2B E-Commerce Technology Factors with Mediating Effect Perceived Usefulness in Jordanian Manufacturing SMES, *Journal of Engineering Science and Technology*, 14(1), 411–429.
- Jagtiani, J., John, K. (2018), Fintech: The Impact on Consumers and Regulatory Responses, *Journal of Economics and Business*, 100, 1–6. <https://doi.org/10.1016/j.jeconbus.2018.11.002>.
- Jaideep, J. P., Yyoty, K. R. P. (2019), A Study on Cryptocurrency in India – Boon or Bane, *Journal of Emerging Technologies and Innovative Research*, 6(2), 412–417. <https://doi.org/10.9790/487X-2205062830>.
- James, B., Parashar, M. (2018), Cryptocurrency: An Overview on its Impact on Indian Economy, *International Journal of Creative Research Thoughts*, 6(2), 695–698.
- Jani, S. (2018), The Growth of Cryptocurrency in India: Its Challenges, Potential Impacts on Legislation, retrieved from: https://www.researchgate.net/publication/324770908_The_Growth_of_Cryptocurrency_in_India_Its_Challenges_Potential_Impacts_on_Legislation/citations (accessed 1 October 2021).
- Jin, C. C., Seong, L. C., Khin, A. A. (2020), Consumers' Behavioural Intention to Accept of the Mobile Wallet in Malaysia, *Journal of Southwest Jiaotong University*, 55(1), 1–13. <https://doi.org/10.35741/issn.0258-2724.55.1.3>.
- Johnson, E. M., Howard, C. (2019), A Library Mobile Device Deployment to Enhance the Medical Student Experience in A Rural Longitudinal Integrated Clerkship, *Journal of the Medical Library Association*, 107(1), 30–42. <https://doi.org/10.5195/jmla.2019.442>.
- Kaiser, H. F., Rice, J. (1974), Little jiffy, mark IV, *Educational and Psychological Measurement*, 34, 111–117. <https://doi.org/10.1177%2F001316447403400115>.
- Kamble, S., Gunasekaran, A., Arha, H. (2019), Understanding the blockchain technology adoption in supply chains-Indian context, *International Journal of Production Research*, 57(7), 2009–2033. <https://doi.org/10.1080/00207543.2018.1518610>
- Karahanna, E., Straub, D. W., Chervany, N. L. (1999), Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs, *MIS Quarterly: Management Information Systems*, 23(2), 183–213. <https://doi.org/10.2307/249751>.
- Kaur, S., Arora, S. (2020), Role of Perceived Risk in Online Banking and its Impact on Behavioural Intention: Trust as a Moderator, *Journal of Asia Business Studies*, 15(1), 1–30. <https://doi.org/10.1108/JABS-08-2019-0252>.
- Kern, A. G. (2018), Blockchain Technology: A Technology Acceptance Model (TAM) Analysis, retrieved from: <http://hdl.handle.net/10400.14/25478> (accessed 1 September 2021).
- LaMorte, W.W. (2019), Behavioral Change Models, Diffusion of Innovation Theory, retrieved from: <https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchange/theories/behavioralchange/theories4.html> (accessed 1 October 2021).
- Lee, G. J. (2015), *Business statistics made easy in SAS*, Silk Route Press: Randjesfontein, South Africa.
- Lee, H., Kim, J-H. (2019), The Effects of Technostress from using Blockchain on the Technology Acceptance Model (TAM), *Journal of Convergence for Information Technology*, 9(8), 27–34. <https://doi.org/10.22156/CS4SMB.2019.9.8.027>.
- Lee, I., Shin, Y.J. (2018), Fintech: Ecosystem, business models, investment decisions, and challenges, *Business Horizons*, 61, 35–46, <https://doi.org/10.1016/j.bushor.2017.09.003>.

- Lim, S. H., Kim, D. J., Hur, Y., Park, K. (2019), An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services, *International Journal of Human-Computer Interaction*, 35(10), 886–898. <https://doi.org/10.1080/10447318.2018.1507132>.
- Liu, W., Liang, X., Cui, G. (2020), Common risk factors in the returns on cryptocurrencies, *Economic Modelling*, 86, 299–305. <https://doi.org/10.1016/j.econmod.2019.09.035>.
- Lou, A. T. F., Li, E. Y. (2017), Integrating innovation diffusion theory and the technology acceptance model: The adoption of blockchain technology from business managers' perspective, in: *Proceedings of the 17th International Conference on Electronic Business ICEB* (pp. 293–296), 4–8 December 2017, Dubai, UAE.
- Lou, L., Tian, Z., Koh, J. (2017), Tourist satisfaction enhancement using mobile QR code payment: An empirical investigation, *Sustainability*, 9(7), 1186. <https://doi.org/10.3390/su9071186>.
- Małkowska, A., Urbaniec, M., Kosała, M. (2021), The impact of digital transformation on European countries: insights from a comparative analysis, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 16(2), 325–355. <https://doi.org/10.24136/eq.2021.012>
- Marak, Z. R., Tiwari, A., Tiwari, S. (2019), Adoption of 3D printing technology: an innovation diffusion theory perspective, *International Journal of Innovation*, 7(1), 87–103. <https://doi.org/10.5585/iji.v7i1.393>.
- Mazambani, L., Mutambara, E. (2019), Predicting FinTech innovation adoption in South Africa: the case of cryptocurrency, *African Journal of Economic and Management Studies*, 11(1), 30–50. <https://doi.org/10.1108/AJEMS-04-2019-0152>.
- Mention, A. L. (2019), The Future of Fintech, *Research Technology Management*, 62(4), 59–63. <https://doi.org/10.1080/08956308.2019.1613123>.
- Miller, K. W., Wilder, L. B., Stillman, F. A., Becker, D. M. (1997), The feasibility of a street-intercept survey method in an African-American community, *American Journal of Public Health*, 87(4), 655–658. <https://doi.org/10.2105/AJPH.87.4.655>.
- Min, H. (2019), Blockchain technology for enhancing supply chain resilience, *Business Horizons*, 62(1), 35–45. <https://doi.org/10.1016/j.bushor.2018.08.012>.
- Min, S., So, K. K. F., Jeong, M. (2019), Consumer adoption of the Uber mobile application: Insights from diffusion of innovation theory and technology acceptance model, *Journal of Travel & Tourism Marketing*, 36(7), 770–783. DOI: 10.1080/10548408.2018.1507866
- Moore, G. C., Benbasat, I. (1991), Development of an instrument to measure the perceptions of adopting an information technology innovation, *Information Systems Research*, 2(3), 192–222. <https://doi.org/10.1287/isre.2.3.192>.
- Nadeem, M. A., Liu, Z., Pitafi, A. H., Younis, A., Xu, Y. (2021), Investigating the Adoption Factors of Cryptocurrencies—A Case of Bitcoin: Empirical Evidence from China, *SAGE Open*, 11(1), 1–15. <https://doi.org/10.1177/2158244021998704>.
- Nangin, M. A., Barus, I. R. G., Wahyoedi, S. (2020), The Effects of Perceived Ease of Use, Security, and Promotion on Trust and Its Implications on Fintech Adoption, *Journal of Consumer Sciences*, 5(2), 124–138. <http://dx.doi.org/10.29244/jcs.5.2.124-138>.
- Norupp. (2016), Bitcoin and Diffusion of Innovation, retrieved from: <https://www.norupp.com/bitcoin-diffusion-of-innovation-2/> (accessed 1 October 2021).
- Philippon, T. (2016), The Fintech Opportunity, retrieved from: https://www.nber.org/system/files/working_papers/w22476/w22476.pdf (accessed 1 October 2021)
- Puneet, E., Deepika, E., Kaur, E. R. (2017), Cryptocurrency: Trends, Perspectives and Challenges, *International Journal of Trend in Research and Development*, 4(4), 4–6.

- Puschmann, T. (2017), *Fintech, Business & Information Systems Engineering*, 59(1), 69–76. <https://doi.org/10.1007/s12599-017-0464-6>.
- Rogers, E. M., Singhal, A., Quinlan, M. M. (2019), *Diffusion of Innovations*, in: *An Integrated Approach to Communication Theory and Research* (3rd edition) (pp.1-20), Routledge. <https://doi.org/10.4324/9780203710753-35>.
- Roussou, I., Stiakakis, E. (2016), *Adoption of Digital Currencies by Companies in the European Union: A Research Model combining DOI and TAM*, retrieved from: https://www.academia.edu/29464859/Adoption_of_Digital_Currencies_by_Companies_in_the_European_Union_A_Research_Model_combining_DOI_and_TAM (accessed 3 October 2021)
- Saberi, S., Kouhizadeh, M., Sarkis, J., Shen, L. (2019), *Blockchain technology and its relationships to sustainable supply chain management*, *International Journal of Production Research*, 57(7), 2117–2135. <https://doi.org/10.1080/00207543.2018.1533261>.
- Savira, A. P., Chotiyaputta, V. (2020), *Behavioural Intention Of E-Wallet Adoption in Jakarta, Indonesia*, *Apheit International Journal*, 9(2), 61–79.
- Singh, E. B. P., Faisal, A. M. (2019), *Cryptocurrency: An Analysis of Growth of Bitcoin and its Future*, *International Journal of Innovative Science and Research Technology*, 4(6), 221–224.
- Singh A. K., Singh, K. V. (2018), *Cryptocurrency in India - its Effect and Future on Economy with Special Reference to Bitcoin*, *Journal of Advance Management Research*, 6(2), 262–274.
- Sugandini, D., Purwoko, P., Pambudi, A., Resmi, S., Reniati, R., Muafi, M., Adhyka Kusumawati, R. (2018), *The Role of Uncertainty, Perceived Ease of Use, and Perceived Usefulness Towards the Technology Adoption*, *International Journal of Civil Engineering and Technology (IJCET)*, 9(4), 660–669.
- Tahar, A., Riyadh, H. A., Sofyani, H., Purnomo, W. E. (2020), *Perceived Ease of Use, Perceived Usefulness, Perceived Security and Intention to Use E-Filing: The role of technology readiness*, *Journal of Asian Finance, Economics and Business*, 7(9), 537–547. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.537>.
- Thangavel, P., Pathak, P., Chandra, B. (2021), *Millennials and Generation Z: A Generational Cohort Analysis of Indian Consumers, Benchmarking*, 28(7), 2157–2177. <https://doi.org/10.1108/BIJ-01-2020-0050>.
- Tiong, W. N. (2020), *Factors influencing behavioural intention towards adoption of digital banking services in Malaysia*, *International Journal of Asian Social Science*, 10(8), 450–457.
- Treiblmaier, H., Leung, D., Kwok, A. O. J., Tham, A. (2020), *Cryptocurrency Adoption in Travel and Tourism—An Exploratory Study of Asia Pacific Travellers*, *Current Issues in Tourism*, 1–17. <https://doi.org/10.1080/13683500.2020.1863928>.
- Ventre, I., Kolbe, D. (2020), *The Impact of Perceived Usefulness of Online Reviews, Trust and Perceived Risk on Online Purchase Intention in Emerging Markets: A Mexican Perspective*, *Journal of International Consumer Marketing*, 32(4), 287–299. <https://doi.org/10.1080/08961530.2020.1712293>
- Vitezić, V., Perić, M. (2021), *Artificial intelligence acceptance in services: connecting with Generation Z*, *Service Industries Journal*, 1–21. <https://doi.org/10.1080/02642069.2021.1974406>.
- Vogels, E. (2019), *Millennials Stand Out for Their Technology Use, But Older Generations Also Embrace Digital Life*, retrieved from: <https://www.pewresearch.org/fact-tank/2019/09/09/us-generations-technology-use/> (accessed 4 October 2021).
- Wang, Y., Ren, J., Lim, C., Lo, S.-W. (2019), *A Review of fast-growing Blockchain Hubs in Asia*, *The Journal of the British Blockchain Association*, 2(2), 1–16. [https://doi.org/10.31585/jbba-2-2-\(5\)2019](https://doi.org/10.31585/jbba-2-2-(5)2019).

- Wu, J. H., Wang, S. C. (2005), What drives mobile commerce? An empirical evaluation of the revised technology acceptance model, *Information and Management*, 42(5), 719–729. <https://doi.org/10.1016/j.im.2004.07.001>.
- Yuen, K. F., Cai, L., Qi, G., Wang, X. (2021), Factors influencing autonomous vehicle adoption: An application of the technology acceptance model and innovation diffusion theory, *Technology Analysis, Strategic Management*, 33(5), 505–519.
- Zolait, A. H. S., Sulaiman, A. (2008), Incorporating the Innovation Attributes Introduced by Rogers' Theory into Theory of Reasoned Action: An Examination of Internet Banking Adoption in Yemen, *Computer and Information Science*, 1(1), 36–51. <https://doi.org/10.5539/cis.v1n1p36>.

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