



Extension of the UTAUT Model: Assessing the Impact of Consumers' Financial Literacy on Intention to Adopt Cryptocurrency Platforms in India

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ABSTRACT

In this research paper, we investigate the variables that impact the behavioural intention of cryptocurrency investors in India. The analysis of the data was done using smart partial least square-structural equation modelling. The study was carried out in India using purposive sampling and included investors who had a fundamental understanding of cryptocurrency. It has been established that factors such as financial literacy, facilitating conditions, social influence, effort expectancy and performance expectancy have a significant influence on the investment behaviour of these individuals. The study looks at how the Unified Theory of Acceptance and Use of Technology model with financial literacy affects the behaviour of cryptocurrency investment.

Keywords: Cryptocurrency, India, Investment, Partial Least Squares-Structural Equation Modeling

JEL Classifications: D14, D81, G41

1. INTRODUCTION

Cryptocurrencies, also called digital or virtual currencies, are created, mined, and publicly exchanged for trade by people or companies. They are independent of any centralized power, including a government or bank, and their transactions are verified independently. Regulators across many nations do not accept cryptocurrencies. Despite the outright restriction on the use of cryptocurrencies in many nations, they have become more popular in recent years as more nations have begun to accept and regulate them (Global-Legal Research Centre, 2018). Moreover, interest in cryptocurrencies is rising due to the numerous blockchain start-up businesses employing the blockchain revolution in emerging economies to improve the effectiveness of the present financial structure.

It is assessed that in India, a country of more than one billion people, twenty-seven million public which is 2.0% of the entire population, are Bitcoin owners at the moment. India's crypto adoption rate has continued to increase quickly, despite the misperception and regulatory uncertainty about the rules that govern cryptocurrencies. In February 2022, the Finance minister of India Ms Sitharaman said that in addition to a 30% tax, the government intends to levy an additional 1, per cent more tax on overall cryptocurrency transactions on any profits derived from trading cryptocurrencies. Cryptocurrency is neither lawful nor illegal as a result of the Supreme Court's decision to invalidate RBI's 2018 attempts to outlaw it.

The world economy is emerging with digitalization, which has brought about a sea change in economic activities. As per Patel

and Shrimali (2021), some fundamental challenges, such as visibility, responsiveness, reliability, safety and immutability have emerged in monetary loss due to the involvement of middlemen. Modernizing the payment process with virtual currency can have an impact on the direction of global currencies.

In Jan. 2009, the first cryptocurrency, Bitcoin was launched. Since then, the overall number of cryptocurrencies available in the market is 20,179 and the total number of exchanges is 501. The market capital of all the cryptos is dollar 916,662,571,591,356 i.e. \$916 billion and 24-h volume was \$ 49 billion of which Bitcoin contributes 42.90% of total capacity, and Ethereum 15.30% of total capacity (as of July 11, 2022) (CoinMarketCap).

Cryptocurrencies are quasi-digital cash that is not backed by money, have no integral worth, and can't be used as a resource of payment by financial intermediaries (Natarajan et al., 2017). Cryptocurrency is a prominent and unique type of currency because of its distinctive characteristics, this is in distinction to other types of digital currency issued by administrations that are centralized, controlled by native governments or communities, or backed by paper currency (Chuen et al., 2017). Two highly disruptive cryptos, Bitcoin and Ethereum, intend to use blockchain technologies to spur invention in the variability of Indian industries (Singh and Singh, 2018).

Bitcoin transformed the field of digital or virtual currencies and influenced many areas. Blockchain created the transactions and made them verifiable and secured, thus evoking double-spend risk. Bitcoin's security expectations were heavily dependent on the fast circulation of transactions and blocks (Tschorsch and Scheuermann 2016). The financial industry is where blockchains are most extensively used, and they are now also being used for payment, remittance, commodities, and smart contracts. Consumers' demands and technological advancements are also evolving. Due to security measures and the risk of violating people's personal information, a blockchain is becoming more necessary (Soonduck, 2017). Bitcoin is the first cryptocurrency. Some factors affect stakeholders to capitalize on Bitcoin. The reliability test results show that the objects are valid and reliable to signify the intention to invest in Bitcoin. There are a few considerations while investing in Bitcoin general attitude, financial risk-tolerance, and perceived benefits (Gazali et al., 2019). Since effort expectations are only a minor deciding factor for investors, social influence (SI) is a vital driver of bitcoin investing (Gupta et al., 2020). According to the structural model, investor decisions about the Bitcoin cryptocurrency may be greatly influenced by awareness, compatibility, and facilitating factors. Regarding attention, perceived ease of use (PEOU) and perceived usefulness (PU), Bitcoin has attracted a lot of attention to PEOU. It is productive and advantageous to have an objective and use it to manage the connection b/w PEOU and the goal of the coin. The authors also show how transaction processing is important for influencing PU (Nadeem et al., 2021)

In summary, cryptocurrencies provide several benefits such as fast, authentic, transparent and secure transactions. However, there are also certain restrictions including inherent risk, technical

difficulties, financial obstacles and the uncertain public perception surrounding their usage. It is important to study the effects and problems of the blockchain and cryptocurrency transformation from an interdisciplinary viewpoint, as the complexities and consequences of these advancements are significant.

2. THEORETICAL REVIEW

2.1. The Behavioural Intention of Investors or Customers to Use Cryptocurrency

The cryptocurrency investment method is influenced by numerous variables and investors have definite intentions earlier investing. As per past studies, trust and performance expectations significantly affect the intent to use cryptos (Gil-Cordero et al., 2020). Factors like PU, gratification, authorization and ongoing intent to use a service have a significant interdependence (Wang et al., 2019). The growth of economic markets is dependent on the incorporation of innovative financial technology and a crucial element affecting the utilization of cryptocurrencies is consumer attitude (Mazambani and Mutambara, 2019; Adewumi, 2024). A study by (Mendoza-Tello et al., 2018) found that PU is one of the crucial factors in determining the intent to use cryptos, with no evidence to support the direct impact of SI. Another research based on the theory of planned behaviour (TPB) found that idiosyncratic norms (social effect) and perceived behavioural control (ease of use of cryptos) play an important role in bitcoin acceptance (Schaupp and Festa, 2018). The adoption of cryptocurrencies is more if they are perceived as easy to use and if there is positive social pressure to practice. A study in China on Bitcoin acceptance (Shahzad et al., 2018) revealed that PEOU and PU have a substantial impact on users' intention to accept Bitcoin. The integration of technology into daily life is a future topic of theoretical explanation, with models focusing on how users perceive technology features. The literature provides various theories that offer insights into how customers intend to use technology.

2.2. Unified Theory of Acceptance and Use of Technology (UTAUT) Model

The UTAUT is an established model in the field of technology adoption research. It aims to comprehend and forecast the acceptance and usage of different technologies by individuals. The theory posits four key constructs that are intention to use and behaviour: Effort expectancy (EE), Performance Expectancy (PE), Facilitating Conditions (FC) and SI.

The UTAUT framework, originally introduced by Venkatesh et al. in 2003, combines elements from eight distinct models and theories to create a cohesive framework. The goal of this study is to provide a thorough understanding of technology adoption behaviour. The UTAUT model integrates constructs from the Technology Acceptance Model (TAM), the TPB, the theory of Reasoned Action (TRA), the Motivational Model, a hybrid model merging the Technology Acceptance Theory (TAM) and the TPB, the Social Cognitive Theory, the Model of PC Utilisation and the Innovation Diffusion Theory. UTAUT aims to remove duplication and capture the fundamental factors that affect the adoption of technology by drawing on a range of theoretical views.

In addition, UTAUT takes into account moderating elements such as age, gender, voluntariness of use and experience. These factors can impact the relationship between the basic constructs and the intent to use technology or the actual use of technology (Venkatesh et al., 2003; Venkatesh et al., 2012). UTAUT has been extensively utilised and confirmed in several technological fields, like e-commerce, mobile technology, social media, and healthcare information systems.

3. METHODOLOGY

This study is based on the UTAUT model and focuses on the adoption of cryptocurrencies in India. UTAUT theory, provides a unified viewpoint by simplifying and incorporating various fundamental concepts from eight distinct theories and models: The TAM, the TPB, the TRA, the Motivational Model, a hybrid model merging the Technology Acceptance Theory (TAM) and the TPB, the Social Cognitive Theory, the Model of PC Utilisation and the Innovation Diffusion Theory (Venkatesh et al., 2003). Therefore, this study employs the constructs of the UTAUT model to establish the theoretical foundation for comprehending the acceptance of cryptocurrencies in India.

3.1. Variables

3.1.1. FCs

The extent to which people believe they possess the practical and managerial properties to apply a particular technology is referred to as "FCs" (Venkatesh et al., 2003). A study found that SI has a significant effect on the intent to use crowd-sourced funding, but there was no provision for the claims of performance expectations and FCs (Moon and Hwang, 2018). Another research performed in Bangladesh showed that customers' intent to "use mobile banking services" is extremely inclined by effort expectations, performance expectations and facilitating factors (Nisha, 2016). A different study conducted in Karnataka (state), India, (Kishore and Sequeira 2016) also highlights the strong explanatory power of PE, EE and social impact in the acceptance of mobile banking. Other research discovered that behavioural intention is strongly influenced by performance expectations, FCs, effort expectations, and SI (Hussain et al., 2019). This research will examine the following hypotheses:

H1: FCs have a positive effect on intent to use cryptocurrency.

3.1.2. EE

EE is the measure of how easy users believe using new technology or information will be. PE is positively influenced by EE, as UTAUT shows. Users will therefore have high expectations for the performance they will receive if they feel that using Bitcoins is simple and needs little effort; otherwise, they will have low expectations (Zhou et al., 2010; Martins et al., 2014). In this research, EE is defined as the degree to which investors expect to be able to use crowdfunding to purchase appropriate technologies (Kim and Jeon, 2017). Such usability has been shown to have a beneficial effect on backers' intentions to participate in earlier studies (Li et al., 2018). This research will examine the following hypotheses:

H2: EE has a positive effect on intent to use cryptocurrency.

3.1.3. PE

One key concept in the original UTAUT theory is "PE" (Venkatesh et al., 2003), which is well-defined as the extent to which a technology's use helps users accomplish specific tasks (Venkatesh et al., 2012, p 159). Much prior research has shown that PE positively impacts consumers' behavioural intention to utilise a service (Venkatesh et al., 2003). It is reasonable to believe that PE may have a comparable effect on consumer acceptance of Bitcoin in relation of its usage (Luo et al., 2010). Furthermore, a technology's usefulness can, to some extent, reflect an organisation's capabilities, which frequently helps people develop trust in the organisation (Oliveira et al., 2014). As a result, this study predicts that if users believe Bitcoin to be valuable, they will be more likely to trust it, raising their expectations and intent to use it going forward (Zhang et al., 2018). This research will examine the following hypotheses:

H3: PE has a positive effect on intent to use cryptocurrency.

3.1.4. SI

According to Kelman's theory (1958) individuals' attitudes, opinions, and behaviours can be influenced by the thoughts and actions of other people. His theory states the extent to which people believe they should practice a specific technology. The adoption of a payment authentication system created on biometrics is certainly impacted by factors which include: (i)- PE, (ii)- EE and (iii)- SI (Kim et al., 2018). Research has revealed that the intent to use crowdfunding is strongly impacted by SI and effort expectations, but not by performance expectations or FCs (Moon and Hwang 2018). Another study conducted by Hussain (Hussain et al., 2019) found the above variables (i, ii, and iii) are the same as mentioned in Kim et al., (2018) only they also add one factor namely "FCs" which expressively impact behavioural intent. A study in Karnataka (state), India demonstrated the importance of SI, performance expectations and effort expectations in determining the acceptance of mobile banking (Kishore and Sequeira 2016). With regards to cryptocurrencies and bitcoin, an individual is more expected to use cryptocurrencies if have faith that they are easy to use and if they are receiving favourable and positive social pressure (Schaupp and Festa, 2018). This research will examine the following hypotheses:

H4: SI has a positive effect on intent to use cryptocurrency.

3.1.5. Financial literacy

Financial literacy is defined as a person's consideration of key financial ideas that permit them to make informed financial decisions. It is shown through multiple studies that individuals with an advanced level of financial literacy are expected to contribute more to financial markets, make stock investments and makes informed decisions on credit cards, reserves, loans, and retirement investment plans.

Financial literacy encompasses a range of concepts such as knowledge of financial products, mathematical skills, and the ability to develop financial plans. Previous researchers have indicated that financial literacy has a substantial effect on various aspects of financial behaviour, including saving habits, financial product selection and debt management.

In light of the fact financial literacy has a significant impact on financial decision-creation and crypto-currency is a technical financial tool, the following hypotheses have been proposed:

H5: Financial literacy has a positive effect on intent to use cryptocurrency.

3.2. Data Collection

This quantitative study examined how Indian investors felt about investing in cryptocurrencies. Respondents with a history of investment in cryptocurrencies were considered while using purposive sampling techniques. A filter question, "Are you aware of cryptocurrency?" was inserted at the beginning of the questionnaire to determine who would participate in my study.

A systematic survey consisting of closed-ended questions was developed by the researchers. It was categorised into two segments with the first section being the demographic concepts that were analysed age, gender, education level, monthly income, employment and asset experience while the second section was on investors' perception of different parameters. The following variables have been considered: financial literacy, perceived risk, FCs and SI. A 5-point Likert scale with the following response options was used to analyse each item in the questionnaire's second section: (1) Strongly agree, (2) Agree, (3) Neither agree or disagree, (4) Disagree, and (5) Strongly disagree.

A systematic, self-administered online survey was utilised to collect information from adults in India over the age of 18 years

Table 1: Response rate of the questionnaires

Response	Frequency/rate
No. of questionnaires	411
Questionnaires filled completely	354
Incomplete Questionnaires	57
Response rate	86.13%

Table 2: Items/contracts and their sources

Item/Contract	Variable	Questions	Source
Performance Expectancy	PE1	Using cryptocurrencies will increase opportunities to achieve important goals for me	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)
	PE2	Using cryptocurrencies will help me achieve my goals more quickly	
	PE3	Using cryptocurrencies will increase my standard of living	
Effort Expectancy	EE1	It will be easy for me to learn how to use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)
	EE2	Using cryptocurrencies will be clear and understandable for me	
	EE3	It will be easy for me to use cryptocurrencies	
	EE4	It will be easy for me to become an expert in the use of cryptocurrencies	
Social influence	SI1	The people who are important to me will think that I should use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)
	SI2	The people who influence me will think that I should use cryptocurrencies	
	SI3	People whose opinions I value would like me to use cryptocurrencies	
Facilitating conditions	FC1	I have the necessary resources to use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)
	FC2	I have the necessary knowledge to use cryptocurrencies	
	FC3	Cryptocurrencies are compatible with other technologies that I use	
	FC4	I can get help if I have difficulty using cryptocurrencies	
Financial literacy	FL1	Level of understanding about cryptocurrency.	Based on Hastings et al. (2013)
	FL2	Investing in cryptocurrency would be difficult for me due to lack of understanding of concept.	
	FL3	Have you ever helped someone to invest in cryptocurrency by making them aware about the basics of cryptocurrency?	
	FL4	Understanding of blockchain technology is helpful in investing in cryptocurrency	
Investment Behaviour	I1	I intend to use cryptocurrencies	TAM2 scale (Venkatesh and Davis, 2000)
	I2	I predict that I will use cryptocurrencies	

who were familiar with cryptocurrencies. Data were collected for 3 months, from January 2024 to March 2024. Data was gathered through using an online poll using Google Forms. The invitations to those individuals were also sent who fit the respondent's profile without creating any dissimilarities based on age, gender or income till we have the sample scope and arrangement vital for a reliable study. The data is limited to people who are familiar with the basics of the internet. 411 questionnaires were received in total after the survey. Table 1 displays the data after the filtering process, which revealed that only 354 complete responses were acknowledged.

3.3. Measurement of Variables

A quantitative technique has been undertaken for the study. The dependent variable (DV) is "Investment behaviour" and the independent variables (IV) are "financial literacy," "FCs," "SI" "PE" and "EE (Table 2)."

4. DATA ANALYSIS AND INTERPRETATIONS

This segment presents the data analysis and interpretation of the gathered data. Table 3 displays findings of the frequency analysis, carried out on the respondents' demographic information.

The demographic characteristics of 354 respondents' responses were examined. The majority of the respondents, 252 respondents (71.19%) were male while 102 respondents (28.81%), were female. As per age of respondents, 240 respondents, or 67.80% of the total, were between the ages of 25–34, these are common. Respondents between the ages of 18–24, including 24 respondents (6.78%), 66 respondents (18.84%), and respondents 45 years of age and older. Only 24 respondents (6.78%) are in the 45–54 age group and no respondents are from the 55+ age group.

The majority of the survey participants, 180 respondents (50.85%), held a master's degree in terms of their education level. Next, there were 72 (20.34%) respondents with a doctoral degree. 54 (15.25%) participants held a bachelor's degree, while 24 (6.78%) held a professional degree. Only 18 (5.09%) participants had completed high school and 6 (1.69%) had a diploma.

In terms of income, the largest group of respondents, 96 (27.12%), earned between Rs.20,000 and Rs. 40,000, 72 (20.34%) reported earning <Rs. 20,000, while 78 (22.03%) earned above Rs. 80,000, 42 (11.86%) respondents earned between Rs. 60,000 and Rs. 80,000 and, 78 (22.03%) were in the highest income bracket, above Rs. 80,000. Most of the respondents, 150 (42.37%), worked in the private sector, while 90 (25.32%) were self-employed. 84 (23.73%) were students, 30 (8.48%) were government employees, and none were retired. In regards to investment experience, 156 (44.07%) had <1 year of experience, 120 (33.90%) had over 3 years, and 78 (22.03%) had 1–3 years.

4.1. Measurement Model Results

Ringle et al., 2015 suggested that partial least squares (PLS)- structural equation modeling (SEM) is software which

Table 3: Investors' demographic profile

Characteristics	Respondent's Profile (Retail Investors)	Total No. of Respondents: 354	
		Total No. Frequency	Percentage (%)
Gender	Male	252	71.19
	Female	102	28.81
Age	18-24	24	6.78
	25-34	240	67.80
	35-44	66	18.64
	45-54	24	6.78
	55+	0	0.00
Education level	High School	18	5.09
	Diploma	6	1.69
	Bachelor's degree	54	15.25
	Master's degree	180	50.85
	Doctoral Degree	72	20.34
	Professional Degree	24	6.78
Monthly Income	0-20,000	72	20.34
	20,000-40,000	96	27.12
	40,000-60,000	66	18.65
	60,000-80,000	42	11.86
	Above 80,000	78	22.03
	Employment	Student	84
	Private Sector	150	42.37
	Self Employed	90	25.42
	Govt. Servant	30	8.48
	Retired	0	0.00
Investment Experience	Less than 1 year	156	44.07
	1-3 years	78	22.03
	More than 3 year	120	33.90

is used to analyse the measurement model and for this paper, the smart PLS 3.0 version is used for the assessment. The measurement model was assessed and examined through the values of composite reliability (CR), factor loading (FL), discriminant validity (DV) and average variance extracted (AVE). The outcomes of this assessment are shown in Figure 1 and Table 4. The overall investment behaviour in cryptocurrency was also evaluated, where perceived risk, financial literacy, social factors and FCs were found to be the key determinants of overall investment behaviour. Figure 1 displays the FL for all the constructs, with all of them having a FL of more than 0.50, which is considered an acceptable limit for establishing convergent validity (CV) (Hair, 2010). For internal consistency, CR and Cronbach's alpha should be more than 0.95 and 0.70 respectively (Hair Jr et al., 2017). All of the variables in this study displayed strong internal consistency reliability, as demonstrated by their CR and Cronbach's alpha values being greater than the minimum value of 0.70. Table 4 contains the findings regarding internal consistency reliability.

The measurement of CV was demonstrated through the use of FLs, Cronbach's Alpha, AVE and CR (Hair et al., 2014). CV measures the similarity of ideas conveyed by items from one variable to another (Fornell et al., 1996). It is considered acceptable when the AVE value is 0.5 or higher (Hair et al., 2011, 2013; Chin, 1998b). Table 4 shows that all the CR values exceeded the recommended 0.7 (Hair et al., 2006). Additionally, the CR and AVE should be at least 0.7 and 0.5 respectively (Hair and Lukas, 2014; Fornell

Figure 1: Measurement model

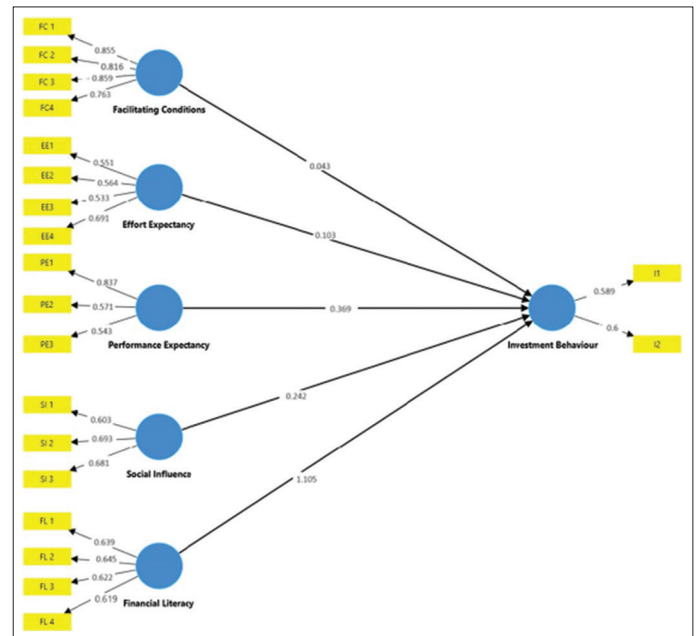


Table 4: Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Facilitating Condition	0.926	0.913	0.918	0.676
Performance Expectancy	0.918	0.928	0.926	0.745
Effort Expectancy	0.975	0.948	0.946	0.565
Social Influence	0.91	0.911	0.901	0.675
Financial Literacy	0.932	0.923	0.915	0.743

and Larcker, 1981), and in this study, both meet these standards.

DV was established by the use of Fornell and Locker criteria, cross-loading, and HTMT (Heterotrait-monotrait ratio), as presented in Tables 5-7. The Fornell and Locker criteria state that DV is established when the construct Y_i is more closely related to its indicators than to other constructs. The cross-loading criteria suggest that an indicator's loading with its constructs should be higher than its correlations with any other constructs. Heterotrait-monotrait ratio (HTMT) measures the correlation between two constructs. If the HTMT value is higher than 0.9, the constructs are not distinct. In this study, the structural model fulfilled all of the criteria for DV as established by the three indicators.

4.2. Structural Model Assessment

Table 5: Discriminant Validity (Fornell-Larcker Criterion)

	Facilitating Condition	Investment Behaviour	Performance Expectancy	Effort Expectancy	Social Influence	Financial Literacy
Facilitating Condition	0.819					
Investment Behaviour	0.763	0.862				
Performance Expectancy	0.741	0.868	0.741			
Effort Expectancy	0.762	0.854	0.862	0.809		
Social Influence	0.733	0.873	0.911	0.831	0.861	
Financial Literacy	0.811	0.881	0.909	0.877	0.921	0.857

Smart PLS 3.0 was employed to evaluate the structural model, and a robust bootstrapping approach with 5000 resamples was utilized to ascertain the significance of path coefficients. The assessment of the structural model included examining the path coefficients, the coefficient of determination (R^2) and the effect size (f^2) (Shmueli et al., 2016). Bootstrapping was used to evaluate the statistical implication of the subconstruct weights and the path coefficients (Chin et al., 2008). Refer to Figure 2 for the model outcome, which displays the value of R^2 for the dependent and explanatory variables and the path coefficients.

The effectiveness of the model can be determined through the R^2 value, also referred to as the coefficient of determination. This metric quantifies the proportion of alteration in the DV that can be explained by the IVs included in the structural model.

Table 6: Cross loadings

	Facilitating Condition	Investment Behaviour	Performance Expectancy	Effort Expectancy	Social Influence	Financial Literacy
FC1	0.855	0.672	0.657	0.663	0.611	0.665
FC2	0.816	0.627	0.591	0.621	0.574	0.662
FC3	0.859	0.631	0.64	0.695	0.663	0.712
FC4	0.763	0.603	0.542	0.554	0.563	0.601
PE1	0.837	0.62	0.623	0.631	0.632	0.702
PE2	0.571	0.664	0.782	0.691	0.673	0.721
PE3	0.543	0.651	0.743	0.642	0.655	0.677
EE1	0.551	0.631	0.733	0.641	0.671	0.689
EE2	0.564	0.616	0.696	0.584	0.642	0.661
EE3	0.533	0.623	0.722	0.635	0.689	0.681
EE4	0.691	0.885	0.746	0.747	0.799	0.752
SI1	0.603	0.852	0.762	0.735	0.752	0.754
SI2	0.693	0.888	0.761	0.776	0.763	0.785
SI3	0.681	0.862	0.74	0.712	0.764	0.783
FL1	0.639	0.849	0.736	0.745	0.733	0.765
FL2	0.645	0.704	0.785	0.66	0.699	0.786
FL3	0.622	0.64	0.773	0.702	0.689	0.703
FL4	0.619	0.668	0.756	0.645	0.682	0.725
I1	0.589	0.642	0.75	0.661	0.744	0.713
I2	0.6	0.675	0.748	0.623	0.714	0.73

Table 7: Heterotrait-Monotrait Ratio (HTMT)

	Facilitating Condition	Investment Behaviour	Performance Expectancy	Effort Expectancy	Social Influence	Financial Literacy
Facilitating Condition						
Investment Behaviour	0.763					
Performance Expectancy	0.737	0.867				
Effort Expectancy	0.761	0.851	0.869			
Social Influence	0.734	0.871	0.81	0.823		
Financial Literacy	0.801	0.88	0.81	0.863	0.821	

It is widely regarded as a dependable measure of the model's predictive accuracy.

Table 8 provides the modified R2 values along with the predictor's explanatory power for each construct. According to researchers (Hair, 2010; Henseler et al., 2009), an R2 value of around 0.75 is considered substantial, around 0.50 is deemed moderate, and around 0.26 is regarded as weak.

The f-square can be calculated by removing exogenous variables from the path model, which changes the R-square level and shows whether removing exogenous variables has a significant impact on the criterion variable (Chin, 1998b). The f-square effect size is divided into three categories: Weak ≥ 0.2 , moderate ≥ 0.13 and strong ≥ 0.35 (Cohen, 2013).

Figure 2: Structural model

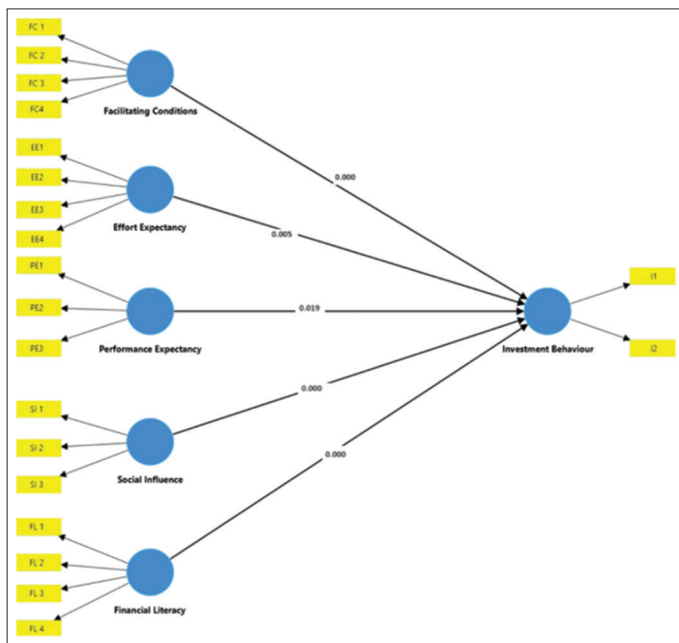


Table 8: R-Square

	R-square	R-square adjusted
Investment Behaviour	0.061	0.04

Table 9: f-Square

	Investment Behaviour	Effect Size
Facilitating Condition	0.043	Moderate
Performance Expectancy	0.103	Moderate
Effort Expectancy	0.369	Strong
Social Influence	0.242	Strong
Financial Literacy	1.105	Strong

Table 10: Structural Model (Mean, STDEV, T-value, P Value)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Facilitating Condition -> Investment Behaviour	0.668	0.669	0.049	13.608	0.000
Effort Expectancy -> Investment Behaviour	0.408	0.401	0.146	2.801	0.005
Performance Expectancy -> Investment Behaviour	0.292	0.300	0.124	2.355	0.019
Social Influence -> Investment Behaviour	0.766	0.767	0.044	17.430	0.000
Financial Literacy -> Investment Behaviour	0.512	0.524	0.144	3.567	0.000

Table 9 shows the effect sizes for FCs, PE, EE, SI and financial literacy on investment behaviour are 0.043 (moderate), 0.103 (moderate), 0.369 (strong), 0.242 (strong) and 1.105 (strong) respectively, based on the guidelines by Cohen et al., (2013). According to (Chin et al., 2003), even a weak f^2 should be taken into consideration because it has a noticeable effect on the DV.

The primary objective of the research was to investigate the effects. The hypotheses were formulated based on an assessment of the path coefficient and corresponding "t" value. The study consisted of seven direct hypotheses (H1 to H5).

- H1: FCs have a positive effect on intent to use cryptocurrency.
- H2: EE has a positive effect on intent to use cryptocurrency.
- H3: PE has a positive effect on intent to use cryptocurrency.
- H4: SI has a positive effect on intent to use cryptocurrency.
- H5: Financial literacy has a positive effect on intent to use cryptocurrency.

From the total five hypotheses, all five H1, H2, H3, H4 and H5 were accepted as the t-value was >1.96 as seen in Table 10. The effect was assessed using PLS-SEM bootstrapping, a suitable method for analysing a small sample as stated by (Hair et al., 2014), the methodology outlined by Preacher and Hayes (2008; 2004) was employed to evaluate the effect. The effect was analyzed using Smart PLS 3.0 (Ringle et al., 2015) and 5000 resamples were used to compute the t-value.

5. IMPLICATIONS AND CONCLUSION

5.1. Theoretical and Practical Implications

In several studies conducted on cryptocurrency, various aspects have been explored such as perceptions and challenges (Bonneau et al., 2015), the possibilities for investment in cryptocurrencies (Chuen et al., 2017), the impact of individual aspects on user behaviour (Hamakhan, 2020), innovative applications of blockchain technology (Kim and Deka, 2019), and factors influencing investment behaviour in cryptocurrency (Jariyapan et al., 2018). Despite the extensive research, there is still a gap in the literature about the determinants of investor adoption of certain behaviours for Indian investors. To fill this gap, this research study was conducted using the Smart PLS-SEM model to examine the behavioural intent to invest in cryptocurrency.

This research aims to determine the key issues impacting how investors, handlers, or customers accept cryptocurrencies. Past researchers (Głab et al., 2021) support risk and the role of financial knowledge is important in the cryptocurrency market while investing. Another study seeks to comprehend, how investors

Table 11: Hypotheses relation and results

Hypothesis	Path Relations	T statistics (O/STDEV)	P values	Results
H1	Facilitating Condition -> Investment Behaviour	13.608	0.000	Accepted
H2	Effort Expectancy -> Investment Behaviour	2.801	0.005	Accepted
H3	Performance Expectancy -> Investment Behaviour	2.355	0.019	Accepted
H4	Social Influence -> Investment Behaviour	17.430	0.000	Accepted
H5	Financial Literacy -> Investment Behaviour	3.567	0.000	Accepted

evaluate risk by using financial knowledge (Park and Irwin 2020). Here, the existing study shows that investment behaviour is influenced by the UTAUT model variable and financial literacy (Table 11). The previous researchers also examine the factors and suggest that no direct impact of SI regarding their investment behaviour of cryptocurrency (Caporale et al., 2020; Liu et al., 2019). FCs do not affect directly on investment behaviour of cryptocurrency (Barber et al., 2019; Chang and Wu 2019; Aste et al., 2017).

In addition, our investigation aimed to determine the extent to which investment behaviour is impacted by FCs, EE, PE, SI and financial literacy. Much research has found evidence and insights into the relationship between FCs and investment behaviour (Djalilov et al., 2021; Bouri et al., 2019; Yao et al., 2021). Our analysis also supported the study of Djalilov et al., Bouri et al. and Yao et al. and revealed that the UTAUT model variable has a relationship with investment behaviour (Table 11: H8). Moreover, in addition to the UTAUT model financial literacy has a positive and significant impact on the investment behaviour of cryptocurrency.

5.2. Limitations and Recommendations

This study was limited in scope as it only included a sample size of 354 participants and was focused on a narrow population of retail investors from India. To enhance the findings of this research, future studies should exceed the sample by including institutional investors and data collected from multiple countries. Additionally, this study only explored a general concept of investor behaviour by seeing a limited number of issues. Further research could incorporate additional factors to consider investor behaviour better.

5.3. Conclusion

The study significantly advances our understanding of consumer behaviour research by analysing the factors that affect cryptocurrency investors' behaviour. The study used the partial least squares (PLS) model to examine the impact of factors such as financial literacy, FCs, SI, and perceived risk on the investment behaviour of retail investors in India. The results indicated that these factors have a substantial impact on the intention of Indian investors to invest in cryptocurrency. Moreover, financial literacy and UTAUT variables significantly and positively influence investment behaviour.

The research results suggest that the combination of financial literacy, FCs, SI, EE and PE serves as a useful framework for understanding cryptocurrency adoption.

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