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Socioeconomic and Technological Variables Affecting Cryptocurrency and its Future- A Review

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Abstract

The first commercial cryptocurrency transaction in 2010 started a transaction revolution. Blockchain and cryptocurrency will change transactions like the Internet. Many more cryptocurrencies are being launched as trade methods or rights to assets or obligations. Cryptocurrencies offer many benefits, but also difficulties and constraints. This research examines cryptocurrency customer behaviour. Using a technical acceptance framework, a model that explains 85% of cryptocurrency usage intentions was evaluated. Risk wasn't a factor. This could be because most respondents deemed using cryptocurrency hazardous; the absence of variation in their risk perception responses could explain this. Adoption may require willingness to manage bitcoin risk. A cryptocurrency's success hinged on its performance expectations. In Spain, college-educated persons with Internet basics participated in the study.

Keywords: Blockchain; Cryptocurrencies; Initial Coin Offering; Bitcoin

Introduction

Blockchain is "a digital, distributed transaction record held on multiple computer systems by different businesses" (Zheng et al. 2018). Cryptocurrencies use blockchain, but it has other uses. Blockchain and cryptocurrencies are dangerous, yet blockchain has many applications beyond cryptocurrencies (Monrat, Schelén & Andersson, 2019). By 2027, 10% of GDP will be on blockchain, with a 62.1% annual growth rate through 2025, predicts the World Economic Forum (2015) BusinessWire (2017).

Although various economic sectors and activities are expected to adopt and benefit from blockchain, cryptocurrencies still hold a bigger current significance. A non-fiat digital currency is one that lacks an inherent value, is not backed by any underlying assets, and is not a liability for any organisations, according to the World Bank (Li & Kassem, 2021). Cryptocurrencies are digital money systems based on cryptography techniques and blockchain technology. The current payment system is sluggish, risky, ineffective, inequitable, competitive, and national rather than international, according to the U.S. Federal Reserve (Federal Reserve System, 2017). All of these problems are thought to be solvable with cryptocurrencies (Phillip, Chan & Peiris, 2018).

Since the first cryptocurrency, bitcoin, was introduced, the commercial and economic realms have been seeking to adjust to and incorporate the recent monetary technology into their operations. In 2010, the first Bitcoin retail transaction occurred. For two pizzas,

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Laszlo Hanyecz gave 10,000 bitcoins (Bort, 2014). Nowadays, there are 5,040 companies worldwide where you may use bitcoin to pay for services including lawyer services, automobile purchases, and healthcare appointments (Coinmap, 2018; Usebitcoins, 2018). According to Sharma, Arora & Mehta (2022), the volatility of cryptocurrencies creates large psychological price thresholds. Additionally, only the cryptocurrencies listed on the market for buying and selling are included in that figure. Today, any company may utilize blockchain technology to establish its own cryptocurrency and decide how to use it through an ICO. The latest cryptocurrency can be utilized to pay for products and services provided within a company's walls, as a right to an asset or responsibility, or as a hypothetical currency whose price is on the basis of market outlooks. The spectrum is extremely broad and will continue to expand in the coming years.

All of this begs the issue of what are the crucial aspects that lead to a cryptocurrency being embraced by users and/or investors. As mentioned, there are various opportunities presented by this "cryptocurrency pandemonium," as well as many issues. Illegal cryptocurrency activity is a reality, especially with bitcoin, the first and most popular cryptocurrency (Conti, Gangwal & Ruj, 2018). For instance, extortion, money laundering, drug transactions, tax evasion, and even the theft of bitcoins itself have all been done via cryptocurrencies (Dai et al. 2019). Another disadvantage is that using cryptocurrencies is not an intuitive technology; for many consumers, using bitcoins is a significant obstacle (Reyad, 2018). One qualitative study discovered an obstacle to the extensive usage of cryptocurrencies, with non-users of bitcoin feeling unable to utilize it Gurgun et al. (2022). In addition to a shortage of technology proficiency, economic literacy may impede the advancement of cryptocurrencies. In a 2015 US study on economic competence, 37% of participants were able to accurately respond to at least 4 out of 5 questions about financial literacy (fundamental arithmetic and inquiries about interest rates, price increases, bond rates, loans, and threat). Given the population's poor level of financial literacy, it can be challenging to communicate financial concepts connected to cryptocurrencies. The growth of cryptocurrencies will be significantly influenced by how people perceive them. According to an ING survey on attitudes toward bitcoin, 29% of Europeans stated they would never finance in cryptocurrencies because they believed equities to be a less hazardous alternative (Barnes, 2018).

Cryptocurrencies offer several benefits, such as quick, economical, distinguishable, and reliable trades, but they also have shortcomings, like intrinsic risk, technical and economical obstacles connected with using them, and the foggy social view associated with having them. Due to the intricacy and implications of these developments, it is crucial to explore the consequences and challenges of the blockchain and cryptocurrency revolution from an interdisciplinary perspective. The most well-known and prominent cryptocurrency in use today, bitcoin, has been the focus of some research (Aysan, Demirtaş & Saraç, 2021), but due to cryptocurrencies' relatively young, there is limited knowledge about them. For a cryptocurrency to prosper in the unstable and expanding cryptocurrency market, this essay concentrates on the essential factors that it must consider. It examines the influences of perceived risk, execution expectation, enabling variables, effort expectancy, societal impact, and economic knowledge on the intent to use bitcoins using technological acceptance models.

The primary determinants of consumer acceptance of cryptocurrencies could be identifiedallowing present and potential market participants to focus on the most crucial characteristics a coin should possess. The study was carried out in Spain using a sample of university-educated individuals who were familiar with the basics of the internet.

Literature Review

Models that explain how people and organisations adopt contemporary technologies include the Unified Theory of Acceptance and Use of Technology (UTAUT) and its expansion, UTAUT2 (Tamilmani, Rana & Dwivedi, 2021). Both are on the basis of Technology Acceptance Models (TAMs), also known as the Theory of Planned Behavior (TPB) and the Theory of Reasoned Action (TRA) (TAM and TAM2). The objective to utilize a technology is described by UTAUT models as being directly and favorably influenced by performance expectations, societal norms, and enabling circumstances (Bosnjak, Ajzen & Schmidt, 2020).

Performance expectancy is the extent to which a person thinks that employing a particular technology would enhance his or her performance. The term "effort expectation" refers to the complexity of a certain technology's use. Social influence belongs to a person's perception of how much other people think they should use a certain technology. The phrase "facilitating conditions" refers to one's perception of their organisational and technical readiness to use a particular technology (Tamilmani, Rana & Dwivedi, 2021).

Numerous research has examined how these factors affect the acceptability of fintech or financial technologies, but there hasn't been any agreement on how they affect users' intentions to utilize them. On the other hand, dependent on the technology and target market, important variances have been found. For example, Cumming, Leboeuf, & Schwienbacher (2020) found no substantiate that performance expectations and aiding conditions have the same impact as social influence and effort expectations, they did show that these factors have a positive effect on the intent to apply crowdfunding. However, Shang & Dabija (2021) discovered that performance expectations, social influence and effort expectations all have a beneficial influence on the outcome to use a biometric payment authentication system. According to Devkota (2021), social influence and conducive conditions have a minimal impact on behavioural intentions to accept plastic money, whereas performance expectations and effort expectations have a good influence. Performance and effort expectancy have a favourable effect on the usage of monetary internet site in Colombia, according to Sanchez-Torres et al. (2018). Although performance expectancy and accelerated conditions are key antecedents of this goal, Singh and Srivastava (2020) found little proof that effort expectancy and social impact had any substantial impact on behaviour.

Numerous studies have been done on mobile banking (m-banking). In Pakistan, the intent to utilise m-banking services is determined by performance expectations, effort expectations, and social influence. For specific consumer demographics, performance and effort expectations can affect the desire to utilize mobile microfinance services (based on gender, age, and religion).

Numerous studies have been done on mobile banking (m-banking). In Pakistan, the intent to utilise m-banking services is determined by performance expectations, effort expectations, and social influence. For specific consumer demographics, performance and effort expectations can affect the desire to utilize mobile microfinance services (based on gender, age, and religion). The authors claim that social influence affects how likely it is for each industry to employ mobile microfinance services. Performance expectations, effort expectations, enabling variables, and social impact all affect behavioural intention in their analysis of mobile payment uptake by the base-of-the-pyramid (BoP) group (Malaquias & Hwang, 2019; Mora & Prior, 2018).

The main driver of wanting to adopt cryptocurrency for electronic payments is perceived utility. They discover no proof that social influence directly affects intention. Another TPB study found that subjective norms (social influence) and perceived behavioural control (the ease of using cryptocurrency) are crucial. People are more likely to utilize cryptocurrencies if they believe they are simple to use and have positive societal effects. As well, Bitcoin was examined. The perceived usefulness and ease of usage have an impact on people' inclinations to use bitcoin (Shahzad et al. 2018; Goundar et al. 2021).

The following hypotheses are put out in light of these data regarding the acceptance of financial technologies:
H1. Performance expectations for cryptocurrency use have a beneficial impact on users' intentions to utilize them.
H2: Expecting effort to use cryptocurrency has a good impression on one's intention to do so.
H3: The desire to use cryptocurrencies is positively influenced by social pressure to do so.
H4. Creating favourable conditions for cryptocurrency use has a beneficial impression on users' plans to utilize them.

Perceived risk, in the words of Faqih (2016), refers to how consumers assess the level of uncertainty and possible adverse impacts associated with using or purchasing a product. From the perspective of behavioural research, this concept was developed. Apparent risk has been identified as a customer behaviour predictor in the framework of purchase intention as well as a predictor of technology uptake (Ketabi, Ranjbarian & Ansari, 2014).

In light of the research, particularly that on cryptocurrencies, apparent risk performs a negligible position in predicting the intention to adopt cryptocurrencies for digital expenses (Mendoza-Tello et al. 2018).

The following theory is put forth considering the idea of cryptocurrency as a new fintech with possible risk:

H5: The perceived danger associated with adopting cryptocurrency has a detrimental impact on users' intentions.

Financial knowledge, according to Garg & Singh (2018), is the level of understanding one has of important financial concepts and the ability to use that understanding in making financial decisions.

Financial knowledge predicts financial behaviour, according to numerous studies. Low financial literacy reduces equity investment. Allgood & Walstad (2016) found that a person's financial education makes them more likely to invest in the stock market and buy equities.

Research cites U.S. and foreign papers. According to Garg & Singh, a lack of financial literacy is associated with unwise financial outcomes, high-priced loans, expensive credit card use, and unnecessary debt (2018). More saving behaviour, saving planning, stock market participation, and financial product options are all correlated with higher financial literacy.

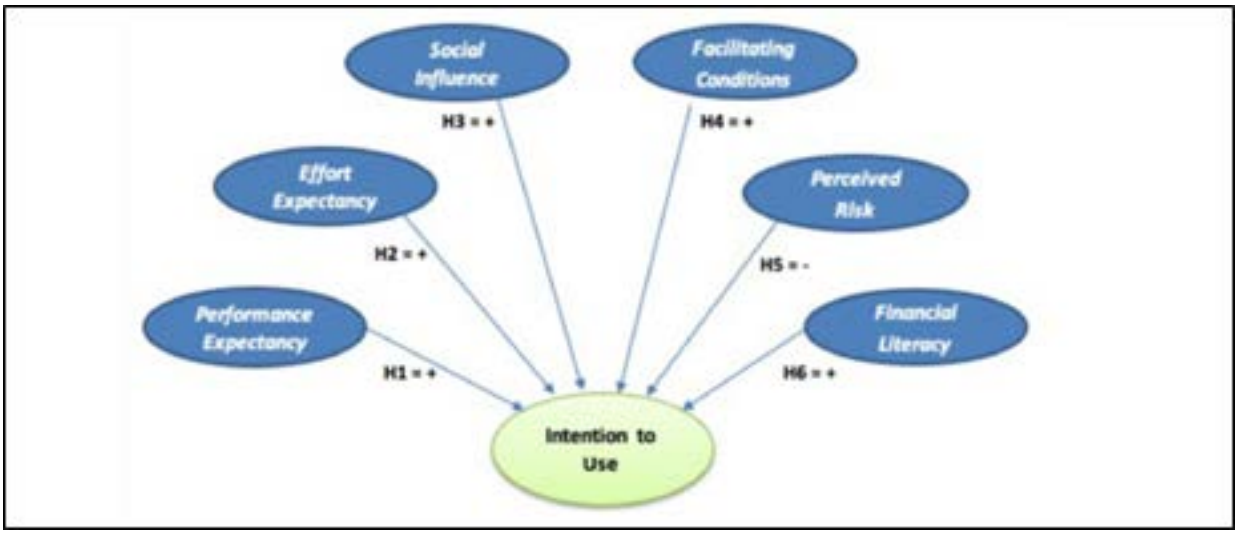
Similar findings are reported by Garg & Singh (2018), who indicate that numerous studies reveal that those with more financial literacy exercise greater caution when making decisions related to their money.

The following hypothesis is put out because cryptocurrencies are a type of technology financial product and in light of the data discussed above concerning the impact of commercial literacy on the utilization of economic findings:

H6. The desire to use cryptocurrencies is positively influenced by financial literacy.

The suggested methodology for examining the intention to use cryptocurrency is exemplified in Figure 1.

Figure 1: Model for using cryptocurrencies



Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Research Methodology

Information Gathering

The information from university-educated Spaniards over the age of 20 using a structured, self-administered internet survey was gathered. Invitations to persons who fit this description without considering their gender, age, or household pay till the required sample size and make-up were sent. Because the survey is online, only people with basic Internet knowledge are included. Because cryptocurrencies are built on blockchain technology, using them demands a technical and financial expertise. College-educated folks likely to understand these technologies were polled.

This ensured that respondents have the required knowledge. To ensure that respondents have a high-ranking degree of financial literacy and that the data collected is acceptable for the study's goal, prior research supports the selection of a highly educated sample (Garg & Singh, 2018).

The sample consisted of 402 Spanish residents with a college degree and a fundamental understanding of the Internet who were over 20 years old. Data collection took place between August 1 and September 10, 2018.

An introduction text on cryptocurrency and blockchain was included at the start of the survey: "New financial technologies have immense promise, but they can be utilized for good or harm, just like blades or fire. The cutting-edge financial and insurance services built on blockchain that are now being developed lower transaction costs and intermediary costs, but if utilized improperly they could also be unsafe and insecure. With their unchangeable, anonymous, and traceable transactions, cryptocurrencies (like bitcoin) are the ideal illustration of blockchain-based financial innovation. The technology is now plagued by large legal loopholes that allow it to be utilized for shady and criminal activities including tax fraud, money laundering, the purchase of illegal goods like narcotics or weapons, corruption, etc. Other dangers include the fact that forgetting your password means losing your money and the fact that heirs without the key won't be able to access their inheritance, among others."

Regarding ethics approval, it should be noted that:

(1) The study and protocol were fully explained in writing to every participant.
(2) Neither direct nor indirect health information was collected from subjects.
(3) Data anonymity was always maintained.
(4) No ethics review board or committee approval was sought or received.
(5) Participants' informed consent was assumed through survey completion. Their voluntary response to the questionnaire was regarded as their consent for the study's use of the data.

Weighing Scales

The measurement scales were based on those that are frequently employed in the writing on technological acceptability.

Table 1 lists the structures, objects, and theoretical organizations of each.

There are two fundamental means to evaluate financial literacy, according to Garg & Singh (2018): I through a test that measures financial literacy; and (ii) through financial literacy self-assessments. It was decided to employ a self-assessment technique. From the perspective of consumer behavior, this implies that individuals would act in accordance with their beliefs of their financial understanding rather than their real financial knowledge. Therefore, the determining element in relation to the intention to utilize cryptocurrencies would be one's perception of one's own level of financial knowledge.

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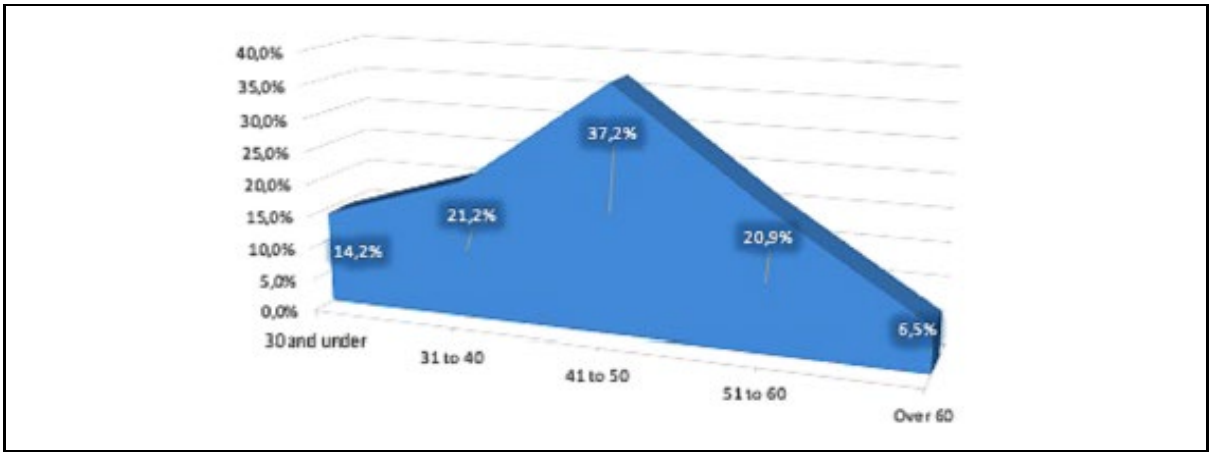
Model Profile

As was already said, the sample was made up of adults over 20 with college degrees and a decent understanding of the Internet.

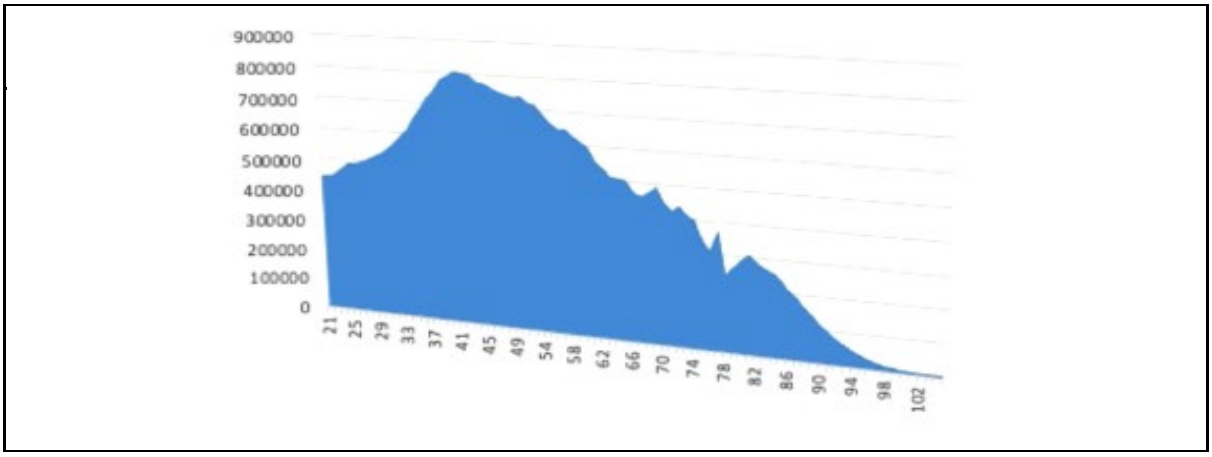
The age distribution of the sample is proportional to that of the Spanish populace. The age distribution of the sample and the age pyramid of the Spanish populace are shown in Figures 2, 3, respectively. Due to the extremely low possibility that someone under the age of 21 would already hold a university degree, they were not included in the study. People between the ages of 41 and 50 made up the largest group of responders. This reflects how the Spanish people are distributed generally.

Figure 2: Sample Distribution by Age



Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Figure 3: Spanish population's age distribution, shown as a pyramid



Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

As a result, the sample is sufficient and accurate for the populace.

The sample's total monthly domestic income was distributed as follows: 6.2% of respondents gave a price under €1,000, 13.2% between €1,000 and €1,748, 13.9% between €1,750 and €2,499, 16.4% between €2,500 and €2,999, 38.3% above €3,000, and 11.9% did not respond. As can be seen, the sample comprised of people with college degrees, who are more expected to earn greater wages. As a result, the sample's income levels were extremely high. This distribution resembles that of the entire Spanish population. 49.3% of those with a university degree gain earnings that are classified in the greatest level, as per the Spanish National Institute of Statistics (INE, 2017).

Statistical Techniques

The research employed the subsequent statistical methodology:

Stage 1: Analysis of the measurement pattern

Major element exploratory factor evaluation with Varimax rotation was employed to see if the scales might have measurements. The measurements were subsequently the focus of investigations on reliability, convergent validity, and discriminant validity. Based on these results, it was decided to eliminate scale items at this moment.

What is the purpose of using cryptocurrency in stage two? (Evaluation of the structural model). The R2, Q2, path factors, and expected levels of significance were calculated for the suggested explanatory model for the intent to adopt cryptocurrencies. Consistent partial least squares structural equation modelling was employed in the inquiry (PLSc-SEM). PLSc-SEM has been shown to be less susceptible to Type I along with Type II mistakes than PLS-SEM by Dijkstra & Henseler (2017). When there is uncertainty or when the data are not distributed properly, this approach is also advised.

PLS-MES is disregarded because it tends to overestimate regression coefficients and understate factor loadings (Shaheen et al. 2017). PLSc-SEM can be applied to models, such as the one at hand, in which all structures are contemplative.

Table 1: Structures/Items, Theoretical Underpinnings, and Loading (t-value)

Items /Structures	Theoretical Underpinnings	Loading (*t*-value)
Intention to use		
I intend to use cryptocurrencies	TAM2 scale (Venkatesh and Davis, 2000)	0.90 (52.16)
I predict that I will use cryptocurrencies		0.91 (48.22)
Performance expectancy		
Using cryptocurrencies will increase opportunities to achieve important goals for me	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)	0.97 (69.60)
Using cryptocurrencies will help me achieve my goals more quickly		0.93 (69.35)
Using cryptocurrencies will increase my standard of living		0.92 (55.40)
Effort expectancy		
It will be easy for me to learn how to use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)	0.89 (38.66)
Using cryptocurrencies will be clear and understandable for me		0.95 (58.16)
It will be easy for me to use cryptocurrencies		0.94 (62.97)
It will be easy for me to become an expert in the use of cryptocurrencies		0.94 (49.45)
Social influence		
The people who are important to me will think that I should use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)	0.91 (43.21)
The people who influence me will think that I should use cryptocurrencies		0.93 (48.28)
People whose opinions I value would like me to use cryptocurrencies		0.99 (70.56)
Facilitating conditions		
I have the necessary resources to use cryptocurrencies	Adapted from the UTAUT2 scale (Venkatesh et al., 2012)	0.79 (23.27)
I have the necessary knowledge to use cryptocurrencies		0.88 (32.08)
Cryptocurrencies are compatible with other technologies that I use		0.78 (21.61)
I can get help if I have difficulty using cryptocurrencies		0.77 (20.66)
Perceived risk		
Using cryptocurrencies is risky	Faqih (2016) based on Shim and Lee (2011)	0.90 (6.30)
There is too much uncertainty associated with the use of cryptocurrencies		0.65 (5.98)
Compared with other currencies/investments, cryptocurrencies are riskier		0.87 (6.65)
Financial literacy		
I have a good level of financial knowledge	Based on Hastings et al. (2013)	1.00 (62.58)
I have a high capacity to deal with financial matters		0.92 (33.56)

Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Results

There was little desire to use cryptocurrency. On a scale of 1 to 10, the mathematical mean of the intention to utilize them was a 3, and the average score increased to 4, extremely close to the threshold where respondents would either use or not utilize cryptocurrencies, when questioned about their intention to do so soon 5. The coefficient of variance was 1.08 for the intended use and 0.83 for the projected usage. Standard deviations were substantial. It was strongly advised to create an explanatory model to comprehend cryptocurrency adoption behaviors given the variation in cryptocurrency use intentions. To achieve this, the model was put forth, which is based on elements that the academic and scientific community has recognized as having a high capacity for explaining variation in intentions to utilize new products and technology.

The Measurement Model is Analyzed

The number of factors in each scale was calculated using exploratory factor analysis. It was discovered that there is only one dimension to each scale. The Kaiser-Meyer-Olkin (KMO) statistic, which measures sample adequacy, was more than or equal to 0.5 (for two items, the KMO was always = 0.5), indicating that the statistical procedures were adequately carried out. Bartlett's test of sphericity coefficient had a significance level less than 0.00 for all scales, and the factors accounted for more than 70% of the variance. While examining the metrics, it became clear that they did not capture multidimensional thought processes.

A reliable reliability indicator that faithfully represents measurement models requires that the variable's identical loadings be greater than 0.7 and large (value t > 1.96), as stated by Sarstedt, Ringle, and Hair (2021) (see table 1 below).

One of the noted variables had a consistent loading that was just under 0.7 but had t-values higher than 1.96.

The usual loading criterion of 0.7 is flexible in this situation, according to the authors, especially when the indications boost the factor content's validity.

The composite reliability for each construct was greater than 0.7 and Cronbach's alpha, indicating that the reliability was sufficient (please see table 2 below).

Table 2: Combined reliability & Cronbach's alpha measure convergent validity (AVE)

Construct	Composite reliability	Cronbach's alpha	AVE
Intention to use (IU)	0.898	0.897	0.814
Performance expectancy (PE)	0.960	0.960	0.889
Effort expectancy (EE)	0.962	0.962	0.864
Social influence (SI)	0.959	0.959	0.887
Facilitating conditions (FCs)	0.878	0.878	0.645
Perceived risk (PR)	0.850	0.851	0.658
Financial literacy (FL)	0.956	0.955	0.916

Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Because the scales' AVE values were more than 0.5, the convergent validity requirements were satisfied. The HTMT values were accurate (0.9), and the square root of the AVE was greater than the construct correlations, indicating discriminant validity (Hislop, 2016) (refer to table 3).

Table 3: Variable Validity

Construct	IU	PE	EE	SI	FC	PR	FL
Intention to use (IU)	**0.902**	0.896	0.640	0.680	0.674	0.120	0.282
Performance expectancy (PE)	0.896	**0.943**	0.557	0.739	0.565	0.137	0.237
Effort expectancy (EE)	0.640	0.557	**0.930**	0.493	0.767	0.088	0.450
Social influence (SI)	0.680	0.739	0.494	**0.942**	0.566	0.089	0.239
Facilitating conditions (FCs)	0.673	0.565	0.767	0.563	**0.803**	0.094	0.489
Perceived risk (PR)	−0.123	−0.137	−0.090	−0.084	0.047	**0.817**	0.284
Financial literacy (FL)	0.282	0.237	0.450	0.239	0.493	0.286	**0.957**

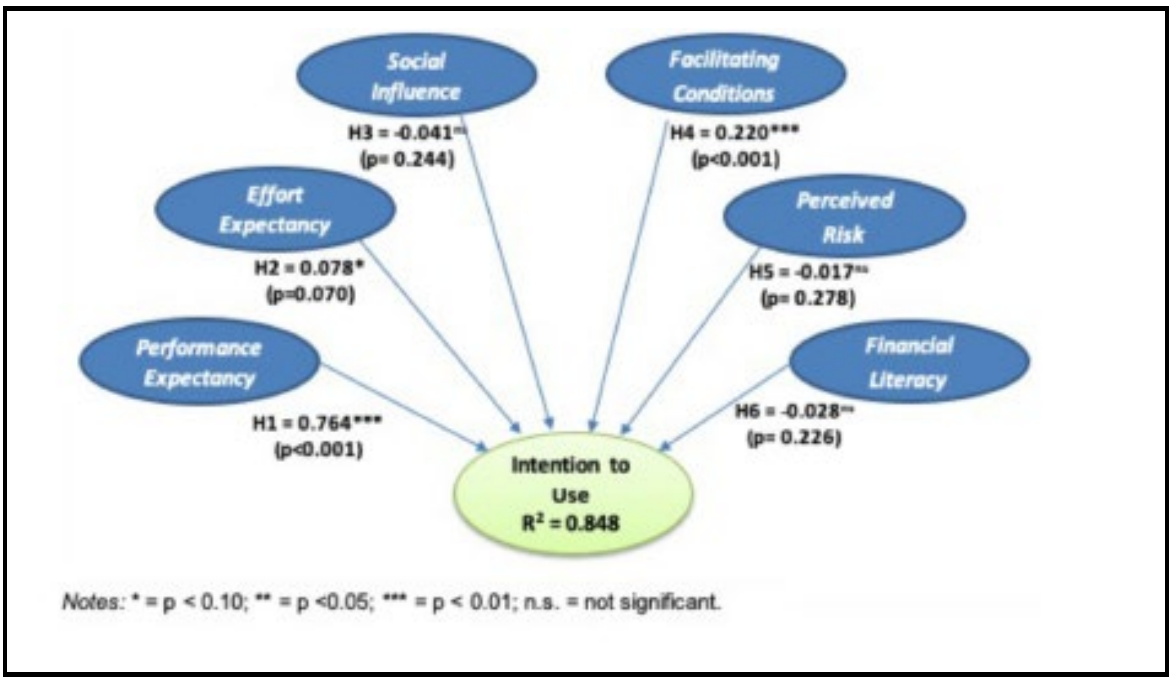
Bold data on the diagonal are the square root of the AVE. Data located below the diagonal are the correlations between the constructs. Data above the diagonal are the HTMT values.

Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Explanatory Framework of the Objective to Use Cryptocurrencies

To assess the applicability of the route coefficients, 5000 resamples were performed in a consistent PLS bootstrapping procedure. The model's overall results are shown in figure 4, along with the R2 of the dependent variable and the path coefficients of the explanatory variables.

Figure 4: Graphical representation of the relationship between R2 and the path coefficients, which are explanatory factors, and the intention to use cryptocurrency



Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Table 4 demonstrates the extraordinarily high integrity of fit of the framework. The framework's strong explanatory power is demonstrated by the R2 value of 0.848, which accounts for 84.8% of the variation in respondents' intentions to use cryptocurrencies. The Q2 produced by PLS predict was used to evaluate the model's propensity for prediction (Shmueli et al. 2016). PLS predict produced a Q2 that was higher than zero,

and Q2 values over zero suggest the importance of extraneous factors in prediction. As a result, it is established that the model adequately explains why people want to use bitcoins. Table 4 displays the average variance of the intention to use explained by each antecedent variable. This result was sometimes negative, as can be observed, "owing to the original relationship between the two variables being so close to zero that the difference in the signs essentially reflects random variation around zero" (Hair et al. 2021).

Table 4: Direct effects, p-value, dependent variable correlation, model fit, and explanatory factor variance

	R^2	Q^2	Direct effect	*p*-value	Correlation	Variance explained
Intention to use (IU)	0.848	0.654				
Performance expectancy (PE)			0.764	0.000	0.896	68.45%
Effort expectancy (EE)			0.078	0.070	0.640	4.99%
Social influence (SI)			−0.041	0.244	0.680	−2.79%
Facilitating conditions (FCs)			0.220	0.000	0.673	14.81%
Perceived risk (PR)			−0.017	0.278	−0.123	0.21%
Financial literacy (FL)			−0.028	0.226	0.282	−0.79%

Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

According to the findings, performance expectations and enabling circumstances have a big impact on people's intentions to utilize cryptocurrencies. As a result, hypotheses H1 and H4 received support. However, it was at a much lower level (sig = 0.07), and effort expectancy (EE) also had a substantial impact. Although support for H2 was also identified, it was less distinct. For the other theories, there was no evidence to support them (H3, H5, and H6).

The PLS predict to get reliable predictions of behavioural intention to use cryptocurrency was employed (Shmueli et al. 2016). When the outcomes of PLS (partial least squares) with LM, PLS foresee generally delivers projections that are extremely similar to those obtained by utilising LM were compare (linear model) (refer to table 5).

Table 5: Analyses Using Partial Least Squares

	PLS			LM			PLS-LM		
	RMSE	MAE	Q^2	RMSE	MAE	Q^2	RMSE	MAE	Q^2
IU_1	1.91	1.37	0.66	1.92	1.41	0.65	−0.02	−0.04	0.01
IU_2	1.94	1.42	0.66	1.99	1.44	0.65	−0.05	−0.02	0.02

IU, behavioral intention; RMSE, root mean squared error; MAE, mean absolute error; PLSs, partial least squares; LM, linear model.

Source: Arias-Oliva1, Pelegrín-Borondo & Matías-Clavero, 2019

Discussion

Blockchain-based cryptocurrencies were put to the test in this study as an explanatory model of adoption intentions. The characteristics from UTAUT technology acceptance models served as the foundation for the proposed model. Additionally included as variables explicitly employed in the investigation of fintech acceptability were perceived risk and financial knowledge. A whopping 84.8% of the variant in usage intention is described by the proposed framework.

The findings illustrated that performance expectancy (14.81%) and favourable terms (14.81%), which together accounted for 68.45% of the variance in intention to apply, are the best predictors of a specific investor's intention to take advantage of cryptocurrencies. Although the

impact of effort expectation was less significant (4.99%), the explanatory power was as strong. Only three other factors—risk perception, social influence, and financial literacy —had a negligible impact on the outcomes (p-value > 0.1).

The acceptance of financial innovations based on cryptocurrencies is first explained by performance expectancy. This conclusion is in line with prior studies that discovered this variable to be important in determining whether or not to use a particular financial technology, such as biometric payment systems, plastic money, internet banking, or mobile banking. Studies on cryptocurrencies, and bitcoin, have discovered that performance expectations affect usage intention, especially for electronic payments and bitcoin acceptability in China. Perceived utility most influences bitcoin usage (Shang & Dabija (2021; Singh & Srivastava 2020; Walton & Johnston, 2018; Devkota, 2021; Sánchez-Torres et al. 2018; Singh & Srivastava, 2020).

Facilitating conditions had the second-highest level of explanatory power. There is no consensus among experts as to how conducive conditions affect the adoption of financial innovations. While some studies have discovered evidence of its impact, others have found no such evidence (Devkota, 2021; Singh & Srivastava, 2020; Sánchez-Torres et al. 2018).

The majority of the literature suggests that acceptance of financial technology is influenced by effort expectations. Some research show that effort expectations don't affect fintech adoption or the intention to use it in all areas. Effort expectation has a positive effect on cryptocurrency adoption and bitcoin acceptance in China. The data confirm that effort expectancy affects fintech adoption. Compared to performance expectations and favorable conditions, it's not the most crucial component in cryptocurrency acceptance. South Africa's bitcoin study had similar results (Shang & Dabija (2021; Singh & Srivastava 2020; Walton & Johnston, 2018).

Many factors must be addressed while analyzing non-significant variables. Given the early stages of bitcoin's development and technological base, it may seem unusual that perceived danger wasn't linked to their popularity (blockchain). Due to their secrecy and lack of trustworthy middlemen, cryptocurrencies can be utilized for unlawful activities including money laundering, ransomware, and illicit marketplaces (Vassallo, Vella, & Ellul, 2021). The wide range of cryptocurrency usage intents cannot be explained by the perceived risk's low variability. It still has a substantial effect on the acceptability of cryptocurrencies.

This idea is endorsed by other industries. Customers often expect that a high-end hotel will be tidy, therefore the degree of cleanliness of one, for example, has no predictive value when it comes to hotel choosing. Choosing a hotel does not depend much on cleanliness as a result of the extremely low variation in the variable. In high-end hotel opportunities and selection, cleanliness may therefore play a key but not determining role (although its absence would significantly detract from the evaluation of the service) (Kaur & Kochar, 2018).

Applying the same reasoning, cryptocurrency acceptance. The intention to use cryptocurrencies is not sufficiently explained by the variability of the perceived risk (coefficient of variation: 0.36), which is high according to the three noticeable variables measuring apparent risk (1.08 and 0.83 for the three observable variables measuring the scale's perceived risk, respectively). Despite the fact that most people believe using cryptocurrencies to be risky, they nevertheless intend to do so. According to Shaikh et al. (2018), although preadoption is crucial, intent to take advantage of mobile banking is unaltered by perceived risk. Both Moon & Hwang (2018) and

Farah et al. (2018) concur that the outcome to employ a new financial technology is not driven by perceived risk. They demonstrate in their study on cryptocurrencies that adopting cryptocurrencies for electronic payments is not influenced by perceived risk (Zadorozhnyi, Muravskyi & Shevchuk, 2018). (2018) research by Walton and Johnston demonstrates that attitudes toward bitcoin or plans to embrace it are unaffected by perceived security risk.

Finally, it was discovered that financial literacy is ineffective as a predictor of bitcoin acceptance. According to other financial literacy studies, those who are more financially literate are less prone to make irrational investing decisions (Garg & Singh, 2018). Most studies show a favorable link between measures of financial literacy and responsible financial conduct across a range of domains. According to the findings, it cannot be proven that having more financial understanding affects a person's decision to utilize cryptocurrency. This is so that people can make wiser financial decisions thanks to financial literacy. The optimal course of action might be to invest in some situations while avoiding investing in others.

The level of financial competency of a customer does not influence their capacity to evaluate an investment (in this case, cryptocurrency) in an appropriate manner (for example, whether to finance in bitcoin or ethereum dependent on the state of the economic market at any particular time). Although the study's focus was on technology, financial literacy may have little to no influence on judgments regarding investments. A cryptocurrency may be adopted for financial reasons rather than because it is a desirable piece of technology.

Conclusion

Based on the research, a number of recommendations were made for how to operate in the bitcoin and blockchain-associated services market more successfully. The danger associated with conducting business in these markets is addressed in the first piece of advice. Customers and investor’s see financing in or using these new technical resources as being exceedingly perilous given the status of the requisite technological progress. Cryptocurrency transactions are therefore perceived to carry a very high level of risk. As a result, future cryptocurrencies should make it a requirement for pre-adoption that they attempt to address that issue. The first cryptocurrencies that are perceived as "risk-free" could have a significant competitive edge over what is currently available.

The most crucial adoption aspect in the design of a modern cryptocurrency's merchandise and provision should be performance, which should be highlighted (or the innovation initiatives for existing ones).

Significant marketing efforts must be done to ensure that potential customers believe bitcoin offers a high value proposition to the client. A cryptocurrency will be utilized more frequently the more value it provides. To successfully navigate the bitcoin market, it is essential to focus on utility.

Conflict of Interests

The author declares that he has no conflict of interests.

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