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THE IMPACT OF TOURISTS' AWARENESS OF CRYPTOCURRENCIES ON THEIR TRUST OF USAGE: THE MEDIATING ROLE OF ATTITUDES - EVIDENCE FROM EGYPT

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Abstract : As the global tourism industry increasingly adopts digital innovations, cryptocurrencies have emerged as a promising alternative for seamless and borderless financial transactions. While their use offers efficiency and convenience, tourists' willingness to adopt such technologies depends heavily on psychological factors such as awareness and trust. Understanding these factors is crucial for both industry stakeholders and policymakers seeking to foster adoption. This study aims to examine the relationship between tourists' awareness of cryptocurrencies and their trust in using them for tourism-related transactions. A particular focus is placed on the mediating role of tourists' attitudes in this relationship. By clarifying these mechanisms, the study contributes to both theory and practical strategies for digital payment adoption in tourism. A quantitative methodology was employed, using a structured questionnaire distributed to a convenience sample of 387 tourists from diverse nationalities. The study measured three key constructs—awareness, attitude, and trust—using validated scales. Structural Equation Modeling (SEM) was conducted using Warp PLS version 8 to examine the relationships among the study variables. The results indicate that tourists' awareness of cryptocurrencies clearly contributes to forming positive attitudes toward their use. These attitudes, in turn, play a crucial role in enhancing tourists' trust in using cryptocurrencies for tourism-related transactions, acting as a psychological bridge that transforms knowledge into confidence. Although awareness has a direct effect on trust, this influence is limited, suggesting that trust is better established when positive attitudes are present. These findings highlight the central role of both awareness and attitudes in building trust, emphasizing that education and information alone may not be sufficient to ensure cryptocurrency adoption without fostering favorable perceptions among users.

Keywords: cryptocurrency, trust, awareness, attitude, tourist behavior, tourism, Egypt

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INTRODUCTION

Over the past decade, technological innovation has significantly reshaped global business practices, particularly in the realm of financial transactions. The emergence of Internet technologies, mobile applications, social media platforms, electronic payment systems, blockchain, and digital currencies has created both opportunities and challenges for organizations across industries (DiPietro & Wang 2010). Among these, cryptocurrencies decentralized digital currencies secured by cryptographic techniques—have rapidly gained attention as an alternative form of money that operates independently of central banking systems (Gilbert & Loi, 2018). As globalization and the digital transformation of travel continue to expand, the need for secure, affordable, and user-friendly international payment solutions is steadily rising (Andruline et al., 2023). While traditional and mobile payment methods continue to lead, the adoption of cryptocurrencies like Bitcoin, Ethereum, Solana, and Binance Coin (BNB) is steadily growing within the tourism sector. With the support of blockchain technology, cryptocurrencies enable transparent and efficient peer-to-peer transactions, which can enhance service quality and foster greater consumer trust in international tourism environments (Treiblmaier et al., 2021; Roussou & Stiakakis, 2016). In this context, cryptocurrencies provide not only data integrity but also security, anonymity, transparency, trust, and privacy (Kupi et al., 2025). Despite those benefits, the use of cryptocurrencies among tourists remains relatively low. This is largely due to limited awareness, a lack of trust, and insufficient understanding of how the technology works. Many travelers view cryptocurrencies as complicated, unstable, or unsafe, which influences their reluctance to incorporate them into their travel plans. In this scenario, tourists' perceptions and attitudes toward cryptocurrencies are crucial in determining their level of trust and likelihood of adoption (Andruline et al., 2023).

This study aims to investigate the impact of tourists' awareness of cryptocurrencies on their trust in using them for tourism-related purposes, while also examining the mediating role of tourists' attitudes. By addressing this gap, the study

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contributes to a more nuanced understanding of the behavioral dynamics influencing cryptocurrency adoption in the tourism sector and offers insights for tourism service providers, policymakers, and digital payment innovators.

LITERATURE REVIEW

Cryptocurrency in tourism: the theoretical background

Cryptocurrencies are digital currencies stored and transmitted electronically. They operate as decentralized mediums of exchange, relying on advanced cryptographic techniques to secure transactions and regulate the creation of new units (Roussou & Stiakakis, 2016). The adoption of cryptocurrencies in the tourism industry offers notable advantages, including faster transaction speeds, reduced fees, and enhanced financial privacy (Gursoy et al., 2022).

One major benefit lies in its efficiency for international transactions, providing quicker processing times, lower costs, and greater system reliability. Additionally, transactions can be conducted around the clock, free from storage or transfer fees, and independent of centralized oversight. These features make cryptocurrency an appealing option for both travelers and service providers alike. Despite these benefits, concerns over market volatility, limited consumer understanding, and the technical challenges of usage may outweigh positive perceptions for some (Ahmed et al., 2024).

Tourists often exhibit excitement about exploring innovative financial technologies and the autonomy they bring to spending. On the other hand, fears surrounding cybersecurity risks, potential financial losses, and regulatory uncertainties may lead to apprehension or distrust (Nadeem et al., 2021). Awareness of Cryptocurrencies Dinev & Hu (2007) emphasized the importance of awareness as a preliminary step in the process of technology acceptance and behavioral intention. Awareness shapes how people receive, process, and eventually adopt technological innovations.

In a more specific definition, Taherdoost & Masrom (2009) described awareness as "the degree to which an individual is aware about the technology," highlighting its role in bridging the gap between the introduction of a technological concept and its actual implementation or usage. According to Shahzad et al. (2018), awareness is essential for users to comprehend the multifaceted nature and potential benefits of such innovations. Trust in Cryptocurrencies Trust plays a critical role in influencing user behavior toward emerging financial technologies, particularly cryptocurrencies (Shahzad et al., 2024). According to Rousseau et al. (1998), trust is defined as a "psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another under conditions of risk and interdependence." According to Quan et al. (2023) trust in innovative technologies like cryptocurrencies involves consumers' belief that the system is reliable, secure, and functions as intended. As emphasized by Akther & Nur (2022), trust is a critical determinant in the adoption of cryptocurrencies, especially given the anonymity, volatility, and perceived complexity associated with them.

Tourists' attitudes toward the usage of cryptocurrency

Attitudes represent tourists' evaluative predispositions—whether favorable or unfavorable—toward using cryptocurrency in tourism-related payments, encompassing three dimensions: cognitive, affective, and behavioral (Eagly & Chaiken, 1998; Ajzen, 1991). The cognitive dimension reflects perceptions of the functional value of cryptocurrencies, such as convenience and autonomy, while considering concerns over market volatility, limited knowledge, and technical complexity (Ahmed et al., 2024). The affective dimension covers emotional responses, ranging from excitement when engaging with innovative financial technologies to apprehension or distrust due to cybersecurity risks or regulatory uncertainty (Nadeem et al., 2021). The behavioral dimension includes actual or intended use of cryptocurrencies for travel services, such as booking accommodations, purchasing attraction tickets, or making local purchases, influenced by tourists' trust and familiarity with the technology. Studies show that younger, tech-savvy travelers are more likely to adopt cryptocurrencies in their travel experiences (Treiblmaier et al., 2021; Kim et al., 2022).

Formulation of Research Hypotheses

Understanding the behavioral mechanisms underlying tourists' acceptance of cryptocurrency requires a multidimensional analysis of psychological constructs such as awareness, trust, and attitude.

The Impact of Awareness on Trust

The adoption of cryptocurrencies is significantly influenced by an individual's level of technological awareness and familiarity (Rashideh, 2020; Nam et al., 2019). Awareness is a fundamental determinant in the diffusion of innovations, serving as the initial stage in the decision-making process regarding technology adoption (Lu et al., 2022). Similarly, Flavián et al. (2020) emphasize that higher awareness enables users to better comprehend technological attributes and anticipate potential consequences. Trust in cryptocurrencies is also a multidimensional construct, often described in terms of competence (the system's technical ability), benevolence (the perception that the system or developers act in the user's interest), and integrity (adherence to ethical standards and transparency). These dimensions collectively influence how users perceive the risks and benefits of adopting cryptocurrencies and whether they are willing to engage in transactions within such ecosystems (Chen & Dhillon, 2003). Hence, it is proposed to test the following hypothesis:

H1: Tourists' awareness of cryptocurrencies positively affects their trust in using them

The Effect of Awareness on Attitude

Attitude is defined as an individual's evaluative disposition—either favourable or unfavorable—toward a specific behavior, object, or technology (Andruline, 2023). Multiple studies have substantiated the positive relationship between technology awareness and consumer attitudes toward emerging digital solutions. For instance, Dinev & Hu (2007) argue that awareness provides users with the cognitive foundation necessary for attitude formation. Similarly, Aladdin & Altounjy

(2018), Vetrichelvi & Priya (2022), Potas et al. (2022), and Andruline et al. (2023) affirm that increased technological awareness leads to more favorable attitudes toward digital innovations, including blockchain-based applications. As a result, the second hypothesis is defined as follows:

H2: Tourists' awareness of cryptocurrencies positively influences their attitudes toward using these currencies

The Influence of Attitude on Trust

In digital contexts, trust is essential for technology adoption, as it reduces perceived risk and increases the likelihood of acceptance (Gefen et al., 2003). In the case of cryptocurrencies, trust serves as a psychological assurance of transactional reliability and credibility (Liébana-Cabanillas et al., 2018). Valachis et al. (2009) conceptualize trust in virtual transactions as the willingness to become vulnerable to the actions of another party in the absence of face-to-face interactions. Nureyyev et al. (2020) found that when individuals possess a favorable attitude toward a technology, they are more likely to trust and eventually adopt it. Hence, it is proposed to test the following hypothesis:

H3: Tourists' attitudes toward cryptocurrencies positively influence their trust in using them

The Mediating Role of Attitude between Awareness and Trust

The literature suggests that attitude may serve as a mediating mechanism between awareness and trust. As awareness contributes to a more informed evaluation of cryptocurrencies, it first influences the formation of positive attitudes, which in turn enhances trust (Rahardja et al., 2023). Thus, the mediating effect of attitude is critical to understanding how tourists' knowledge translates into trust in real-world applications.

H4: Tourists' attitudes mediate the relationship between their awareness of cryptocurrencies and their trust in using them

Conceptual Framework of the Study

To better illustrate the hypothesized relationships among the key variables in this study, a conceptual framework has been developed. This framework visually demonstrates how tourists' awareness of cryptocurrencies is expected to influence both their attitudes toward using these digital currencies and the level of trust they place in them. Furthermore, the framework posits that tourists' attitudes may play a mediating role in the relationship between awareness and trust. The following figure outlines the study's four main hypotheses and the proposed interactions among the constructs.

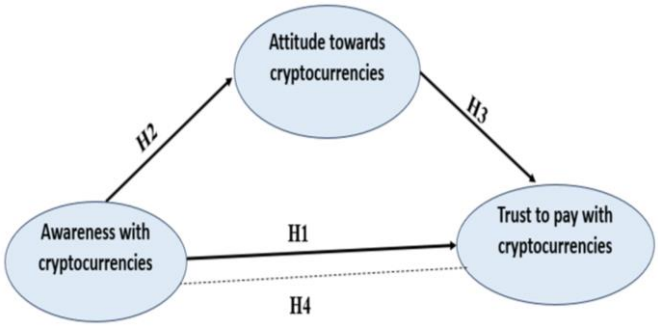

Figure 1. Conceptual Framework of the Study

MATERIALS AND METHODS

The study is grounded in behavioral theory and seeks to understand how cognitive and emotional constructs influence tourists' willingness to adopt cryptocurrencies in travel-related transactions. To achieve these objectives, a structured questionnaire was developed to collect data from a diverse group of tourists. A convenience sampling technique was used to recruit participants for this study. Convenience sampling is a non-probability method in which respondents are selected based on their availability and willingness to participate, and it was considered appropriate given the exploratory nature of the research and the need to reach individuals with varying levels of exposure to digital financial technologies. Data were collected through a structured questionnaire administered to tourists at various tourism-related locations in Egypt, including hotels, tourist attractions, and transportation hubs, in both printed and electronic formats. A total of 387 valid responses were collected from tourists of different nationalities, with a majority from Egypt, alongside participants from Sudan, Libya, Saudi Arabia, China, Japan, Jordan, Italy, and Korea.

The research instrument consisted of four main sections. The first section captured demographic data, including age, gender, nationality, and educational background. The second section measured tourists' awareness and knowledge of cryptocurrencies using nine items adapted from (Nureyyev et al., 2020; Andruline, 2023; Prakosa, 2022). The third section assessed tourists' attitudes toward the use of cryptocurrencies through eight items that reflect the cognitive, affective, and behavioral dimensions of attitude formation, adapted from(Andruline et al., 2023; Prakosa& Sumantika, 2022). The fourth section measured trust using eight items that explored perceptions of security, privacy, reliability, and overall confidence in using cryptocurrencies in the tourism context, adapted from (Nuryyev et al., 2020; Prakosa & Sumantika, 2022).

For data analysis, the study employed Warp PLS version 8, a powerful tool for Partial Least Squares Structural Equation Modeling (PLS-SEM). Warp PLS was selected due to its ability to model both linear and non-linear relationships, assess mediation effects, and manage small to moderate sample sizes with minimal assumptions about data distribution. Descriptive statistics were first calculated to summarize the sample characteristics and provide a general overview of

respondents' levels of awareness, attitudes, and trust. The measurement model was then assessed for reliability and validity. Cronbach's Alpha and Composite Reliability values confirmed internal consistency for all constructs. Convergent validity was evaluated through Average Variance Extracted (AVE), with all values exceeding the acceptable threshold of 0.50. Discriminant validity was established using both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio, confirming that the constructs were statistically distinct from one another.

RESULTS AND DISCUSSION

Participants' Profile

According to Table 1, the demographic data of the sample reveals a balanced representation with a slight predominance of male participants (56.3%). The majority of respondents fall within the age group of 25 to under 35 years (64.3%), indicating that most participants are young adults, which may reflect the characteristics of the respondents in this study. Educationally, the sample is highly educated, with 88.9% holding a university degree, and an additional 9.8% holding postgraduate degrees (Master's and Doctorate). This suggests that the sample possesses a strong academic background, which may enhance their ability to understand and engage with complex topics such as blockchain and cryptocurrency

In terms of nationality, the majority of respondents are Egyptians (79.1%), followed by participants from Sudan (6.5%), Libya (4.9%), and a few other countries. This distribution reflects a primarily local sample with limited international diversity, which is important to consider when generalizing the results across broader tourist populations.

Table 1. Participants' profile
Note: Total refers to the total number of participants across all characteristics (Gender, Age, Education, and Nationality)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	218	56.3%
	Female	169	43.7%
Age	Under 25 years	123	31.8%
	25 to under 35 years	249	64.3%
	35 to under 45 years	7	1.8%
	45 years and above	8	2.1%
Education	Less than secondary	3	0.8%
	Secondary	2	0.5%
	University degree (Bachelor's)	344	88.9%
	Master's degree (Master's)	16	4.1%
	Doctorate (PhD)	22	5.7%
Nationality	Egypt	306	79.1%
	Saudi Arabia	12	3.1%
	China	11	2.8%
	Italy	4	1.0%
	Sudan	25	6.5%
	Jordan	4	1.0%
	Libya	19	4.9%
	Japan	3	0.8%
	Korea	3	0.8%
Total		**387**	**100%**

Descriptive Statistics for the study variables

Tourists' Awareness and Interest in Cryptocurrencies

The analysis of tourists' awareness and interest in cryptocurrencies as Table 2 reveals a moderate overall level (mean = 3.19, SD = 0.271). The highest-ranked item was the statement "I constantly seek information about the advantages and disadvantages of cryptocurrencies" (mean = 3.97), indicating a proactive interest among tourists in understanding the evolving nature of digital currencies.

Table 2. Tourists' Awareness and Interest in Cryptocurrencies
* Mean score; low: "1.00 to 2.33, average (moderate): 2.34 to 3.66, high: 3.67 to 5.00"
Note: All items were measured on a 5-point Likert scale (1= strongly disagree, 5= strongly agree)

	Statement	Mean	Standard Deviation	Rank
1	I consider cryptocurrencies as a complementary digital financial tool to the basket of traditional currencies.	3.96	0.303	2
2	I believe cryptocurrencies are limited to Bitcoin.	3.94	0.440	4
3	I believe they are an illegal electronic payment method used for buying and selling within a limited scope.	2.26	0.693	6
4	I consider them a type of virtual currency that comes in multiple forms.	3.95	0.371	3
5	I know the difference between cryptocurrencies and traditional currencies.	2.22	0.693	8
6	I constantly seek information about the advantages and disadvantages of cryptocurrencies.	3.97	0.332	1
7	I am aware of blockchain technology used in cryptocurrencies.	2.24	0.693	7
8	I search for solutions or problems related to the use of cryptocurrencies.	3.93	0.438	5
9	I am aware of how to protect cryptocurrency assets from hacking and fraud.	2.24	0.693	7
	Overall Awareness and Interest in Cryptocurrencies	3.19	0.271	

The second-highest response was "I consider cryptocurrencies a complementary digital financial tool to the traditional currency basket" (mean = 3.96), followed by the belief that "Cryptocurrencies are a type of virtual currency with multiple forms" (mean = 3.95). These results suggest that a considerable portion of tourists recognize the broader conceptual framework and diversity of cryptocurrencies.

Tourists' Attitudes toward Cryptocurrencies

The results in Table 3 show that tourists generally have positive attitudes toward the use of cryptocurrencies in the tourism sector, with an overall mean score of 4.22, indicating agreement with most of the statements. The highest-ranked attitude, with a mean of 4.91, reflects strong agreement that using cryptocurrencies would be a suitable payment option in Egypt's tourism sector. Infrastructure readiness was also seen as important, with a mean of 4.04, suggesting that tourists view technological and logistical preparedness as essential for successful adoption. Similarly, social media was acknowledged as a key influence on tourists' acceptance of cryptocurrencies (mean = 4.03), highlighting the role of digital communication in shaping consumer behavior. In contrast, the lowest-ranked statement was the belief in the need for more awareness and education about cryptocurrencies (mean = 3.92).

Table 3. Tourists' Attitudes Toward Cryptocurrencies
* Mean score; low: "1.00 to 2.33, average (moderate): 2.34 to 3.66, high: 3.67 to 5.00"
Note: All items were measured on a 5-point Likert scale (1= strongly disagree, 5= strongly agree)

	Statement	Mean	Standard Deviation	Rank
1	I believe that using cryptocurrencies will be a suitable payment option in the tourism sector in Egypt.	4.91	0.463	1
2	I think that the use of cryptocurrencies in tourism enhances the customer experience.	3.94	0.460	7
3	In my opinion, there is a need for more awareness and education about cryptocurrencies in Egypt before they can be widely adopted in tourism.	3.92	0.474	8
4	I expect that cryptocurrencies will become an essential part of Egypt's tourism economy.	4.01	0.243	5
5	I believe that the application of cryptocurrencies in Egypt's tourism sector will contribute to boosting the national economy.	4.90	0.353	2
6	I believe that having adequate infrastructure is crucial for accepting cryptocurrency payments in tourist areas.	4.04	0.259	3
7	I think it is very easy to use cryptocurrencies for completing tourism-related transactions.	3.96	0.311	6
8	Social media plays a significant role in shaping my purchasing attitudes and encouraging me to accept the use of cryptocurrencies.	4.03	0.173	4
	Overall Tourists' Attitudes Toward Cryptocurrencies	4. 22	0.172	

This suggests that while attitudes are generally favorable, a knowledge gap still exists that may hinder wider adoption. Moreover, perceptions of ease of use and enhancement of customer experience received moderate scores (means between 3.94 and 3.96), indicating room for improvement in user-friendliness and trust.

Trust in Cryptocurrencies

The results in Table 4 indicate that overall trust in cryptocurrencies among participants is relatively low, with an overall mean of 2.02, suggesting a general skepticism or lack of confidence in their use, especially in the context of tourism in Egypt. The statement that received the highest mean score (3.07) was: "I believe that using cryptocurrencies in Egypt could be less exposed to economic fluctuations compared to traditional currencies."

Table 4. Trust in Cryptocurrencies
* Mean score; low: "1.00 to 2.33, average (moderate): 2.34 to 3.66, high: 3.67 to 5.00"
Note: All items were measured on a 5-point Likert scale (1= strongly disagree, 5= strongly agree)

	Statement	Mean	Standard Deviation	Rank
1	I feel confident when using cryptocurrencies in financial transactions.	3.04	0.450	2
2	I believe that using cryptocurrencies in Egypt could be less exposed to economic fluctuations compared to traditional currencies.	3.07	0.487	1
3	I believe that using cryptocurrencies in tourism increases trust in Egypt's digital financial system.	1.36	1.02	8
4	I believe cryptocurrencies offer a high level of security in financial transactions, making them a reliable option for tourists in Egypt.	1.37	1.02	7
5	I believe relying on cryptocurrencies reduces third-party risks such as those from financial institutions.	1.41	1.08	5
6	I feel reassured because cryptocurrency transactions are transparently recorded on the blockchain.	2.25	0.689	3
7	I expect that cryptocurrencies will become a trusted payment method in tourism in the near future.	1.39	1.05	6
8	I trust that privacy is protected when using cryptocurrencies in tourism-related transactions in Egypt.	2.24	0.693	4
	Overall Tourists' Trust Toward Cryptocurrencies	2.02	0.726	

The second highest mean (3.04) was for the feeling of confidence when using cryptocurrencies in financial transactions. This shows that some respondents are personally open to the idea of cryptocurrencies, although this sentiment is not dominant. The statement regarding reassurance due to blockchain transparency also had a moderately positive response

(mean = 2.25), indicating that technical features like blockchain might help enhance trust to a limited extent. However, the remaining items scored quite low, particularly the belief that cryptocurrency use in tourism enhances trust in the digital financial system in Egypt (mean = 1.36), and perceptions regarding security and reliability for tourists (means ranging between 1.37 and 1.41). This implies that while theoretical knowledge or expectations about cryptocurrencies exist, practical trust in using them in tourism-related transactions is still lacking.

Model Fit

The results indicate that the measurement model used in the study is statistically valid and reliable. The APC, ARS, and AARS values are all significant at $p < 0.001$, confirming strong relationships between variables and good explanatory power. The AVIF and AFVIF values fall within acceptable limits, indicating no multicollinearity issues. The GoF value of 1.000 shows an excellent model fit. Additionally, both SPR and NLBCDR scored the ideal value of 1.000, suggesting strong predictive validity and the absence of statistical anomalies. Overall, the model is well-suited for analysis

Table 5. Measurement Model Fit for the Study

Measure	Value	Criterion
APC (Average Path Coefficient)	0.594	Acceptable if P < 0.001
ARS (Average R-Squared)	0.362	Acceptable if P < 0.001
AARS (Average Adjusted R-Squared)	0.361	Acceptable if P < 0.001
AVIF (Average Variance Inflation Factor)	3.736	Acceptable if ≤ 5, ideally ≤ 3.3
GoF (Goodness of Fit)	0.450	Acceptable if ≤ 5, ideally ≤ 3.3
SPR (Simpson's Paradox Ratio)	1.000	Small ≥ 0.1, Medium ≥ 0.25, Large ≥ 0.36
SPR (Simpson's Paradox Ratio)	1.000	Acceptable if ≥ 0.7, ideally = 1
NLBCDR (Nonlinear Bivariate Causality Direction Ratio)	1.000	Acceptable if ≥ 0.9, ideally = 1

Validity and Reliability

The measurement model results in Table 6 indicate that all constructs—awareness, attitudes, and trust—achieved acceptable reliability and validity. Cronbach's Alpha and composite reliability values for each construct were above the recommended thresholds, confirming internal consistency. All factor loadings exceeded 0.70 in most cases, and AVE values were above 0.50, ensuring convergent validity. Additionally, VIF values were low, indicating no multicollinearity issues. These findings confirm that the measurement model is robust and suitable for further structural analysis.

Table 6. Validity and Reliability

Construct	Item	Loading	Cronbach's Alpha	Composite Reliability	VIF	AVE
Awareness and Interest in Cryptocurrencies	Awareness 1	0.868	0.809	0.859	1.430	0.578
	Awareness 2	0.732				
	Awareness 3	0.827				
	Awareness 4	0.733				
	Awareness 5	0.740				
	Awareness 6	0.738				
	Awareness 7	0.741				
	Awareness 8	0.756				
	Awareness 9	0.732				
Attitudes Toward Cryptocurrencies	Attitude 1	0.835	0.947	0.958	1.146	0.540
	Attitude 2	0.756				
	Attitude 3	0.956				
	Attitude 4	0.900				
	Attitude 5	0.925				
	Attitude 6	0.954				
	Attitude 7	0.825				
	Attitude 8	0.772				
Trust in Cryptocurrencies	Trust 1	0.820	0.944	0.957	1.359	0.745
	Trust 2	0.739				
	Trust 3	0.810				
	Trust 4	0.903				
	Trust 5	0.751				
	Trust 6	0.842				
	Trust 7	0.896				
	Trust 8	0.761				

To assess discriminant validity among the constructs in the study — namely, awareness and interest in cryptocurrencies, tourists' attitudes toward cryptocurrencies, and trust in their use — two standard methods were used: the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio (HTMT). According to the Fornell-Larcker criterion, the square root of the Average Variance Extracted (AVE) for each construct should be higher than its correlations with other constructs (Hair et al., 2019). As shown in Table 7, the square root of AVE for awareness and interest (0.735), attitudes (0.891), and trust (0.863) all exceed their respective inter-construct correlations. This indicates adequate discriminant validity.

Table 7. Fornell-Larcker Matrix for Evaluating Discriminant Validity

Variable	Awareness and Interest	Attitudes	Trust
Awareness and Interest	0.735		
Attitudes	0.659	0.891	
Trust in	0.593	0.376	0.863

Further validation using the HTMT ratio also confirmed the discriminant validity. All HTMT values were below the recommended threshold of 0.90 (see Table 8). Specifically, the HTMT value between awareness and trust was 0.891, between awareness and attitudes was 0.777, and between attitudes and trust was 0.741. These values support the conclusion that the constructs are empirically distinct from one another.

In summary, the discriminant validity assessment confirms that the study constructs — awareness, attitudes, and trust — measure conceptually and statistically separate phenomena, supporting the robustness of the research model.

Table 8. Discriminant Validity of Latent Variables Using the HTMT Criterion

Variable	Awareness and Interest	Attitudes	Trust
Awareness and Interest			
Attitudes	0.777		
Trust in	0.891	0.741	

Analysis of the Structural Model and Hypotheses Testing

The results of the hypothesis testing in Figure 1 and Table 9 illustrates the interrelationships between three main constructs: Tourist Awareness of Cryptocurrencies, Attitude Towards Cryptocurrencies, and Trust to Pay with Cryptocurrencies. The model was evaluated through path coefficients (β), significance levels (p-values), and the coefficient of determination (R^2), providing a comprehensive understanding of how these variables interact in shaping tourists' behavioral intentions toward cryptocurrency use. The results of the structural model reveal several important relationships among the study variables. First, the direct relationship between Tourist Awareness and Trust to Pay with Cryptocurrencies is statistically significant ($\beta = 0.258$, $p < 0.01$); however, the effect size is weak, indicating that awareness alone has a limited direct influence on trust. Therefore, this hypothesis cannot be strongly supported and should be interpreted cautiously.

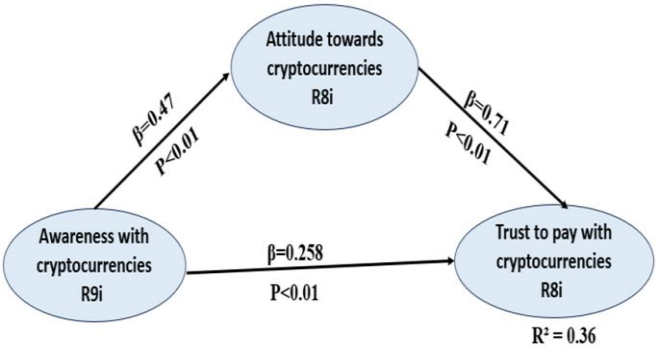

Figure 2. Results of the Structural Equation Model and Hypothesis Testing for the Study Model

Second, the relationship between Tourist Awareness and Attitude towards Cryptocurrencies is positive and statistically significant ($\beta = 0.47$, $p < 0.01$), indicating that higher levels of awareness are associated with more favorable attitudes toward the use of cryptocurrencies in tourism-related transactions. The magnitude of this relationship is moderate, suggesting that awareness plays an important, but not exclusive, role in shaping tourists' attitudes.

Table 9. Results of Hypothesis Testing

Hypothesis	Path Coefficient	B	t-values	P-values	Decision
H1	Tourist Awareness of Cryptocurrencies → Trust	0.258	23.465	0.000	Weakly Supported
H2	Tourist Awareness of Cryptocurrencies → Attitudes	0.474	1.837	0.000	Supported
H3	Tourist Attitudes → Trust	0.708	11.957	0.000	supported
H4	Mediation: Tourist Awareness → Attitudes → Trust	0.336	1.490	0.000	Weakly supported

Third, the results show a strong and significant relationship between Attitude towards Cryptocurrencies and Trust to Pay with Cryptocurrencies ($\beta = 0.71$, $p < 0.01$). This indicates that tourists who hold positive attitudes toward cryptocurrencies are more likely to trust their use as a payment method in the tourism context. This finding highlights the critical role of attitude in enhancing trust and supporting the adoption of cryptocurrencies.

Furthermore, the results indicate a mediating effect of Attitude towards Cryptocurrencies in the relationship between Awareness and Trust. The indirect effect is statistically significant ($\beta = 0.336$, $p < 0.01$), suggesting that awareness contributes to trust primarily through shaping tourists' attitudes. However, given the weak effect size and the t-value slightly below the conventional threshold ($t = 1.490$), this mediation cannot be strongly supported and should be interpreted

cautiously. This finding highlights the psychological mechanism through which awareness may influence trust, but its practical impact is limited. Finally, the coefficient of determination (R^2) for Trust to Pay with Cryptocurrencies is 0.36, indicating that the model explains 36% of the variance in trust. This represents a moderate level of explanatory power, suggesting that while the proposed model captures key determinants of trust, additional factors may also influence tourists' trust in cryptocurrencies and should be explored in future research.

DISCUSSION

The findings of this study provide valuable insights into the psychological and perceptual drivers that influence tourists' trust in using cryptocurrencies for travel-related transactions. Grounded in the theoretical foundations of innovation diffusion (Rogers, 1995) and behavioral intention models (Ajzen, 1991; Eagly & Chaiken, 1998), the results empirically validate the critical role of awareness and attitudes in fostering trust toward the adoption of new digital financial technologies. The first hypothesis (H1), examined the direct relationship between tourists' awareness and their trust in using cryptocurrencies. Although the results indicate statistical significance, the effect size is weak, suggesting that awareness alone has a limited direct influence on trust. Therefore, this hypothesis cannot be strongly supported and should be interpreted with caution. This finding implies that while awareness is necessary, it is insufficient on its own to generate trust, particularly in contexts characterized by concerns related to security, regulation, and privacy.

The second hypothesis (H2) which suggested a positive relationship between awareness and attitude, was also supported by the data. These finding echoes previous research by Dinev & Hu (2007) and Bharadwaj & Deka (2021), who found that awareness serves as a precursor to favorable technology attitudes. Likewise, Alaeddin & Altounjy (2018), Potas et al. (2022), and Andruline et al. (2023) confirmed that increased exposure to technological information helps users develop more accepting and open attitudes toward adoption. This confirms that individuals who are well-informed are more likely to develop positive attitudes, since knowledge influences how perceptions are formed (Khalifa et al., 2026). The high awareness scores in this study were significantly associated with positive evaluations of cryptocurrency usage in tourism, including perceptions of improved transaction efficiency and economic potential.

The third hypothesis (H3 tested the effect of attitude on trust and was strongly supported. Tourists with favorable attitudes toward cryptocurrencies expressed higher levels of trust, which is consistent with the findings of Chandra et al. (2010) and Goles et al. (2009), who established that attitude plays a critical role in shaping trust in digital environments.

Theoretical models such as those proposed by Reichheld & Schefter (2000) and Gefen et al. (2003) support the notion that trust is built upon perceived competence, integrity, and benevolence—qualities that are influenced by users' underlying attitudes. These results also support Quan et al. (2023), who argue that users with positive perceptions are more confident in the reliability of cryptocurrency systems. Finally, the mediation hypothesis (H4) was validated, indicating that tourists' attitudes mediate the relationship between awareness and trust. This finding suggests that awareness alone is not sufficient to directly establish trust unless it translates into a favorable evaluative stance. This is supported by the work of Rahardja et al. (2023), who introduced the concept of technology mindfulness to describe how deeper awareness impacts both trust and risk perception through attitudinal shifts. The mediating role of attitude in this study reveals the psychological pathway through which knowledge becomes confidence, emphasizing the importance of not only informing tourists but also shaping how they feel about cryptocurrency. The low mean scores related to trust in the descriptive analysis highlight that despite basic awareness and positive attitudes, significant skepticism remains regarding the security, regulation, and privacy of cryptocurrencies. This gap mirrors the concerns highlighted by Bonneau et al. (2015) and Sagheer et al. (2022) about the technical complexity and regulatory ambiguity of cryptocurrencies, which continue to hinder their widespread adoption.

Therefore, while awareness and attitude are necessary conditions for trust, they may not be sufficient without complementary efforts in policy, consumer education, and system design to address trust-related barriers

CONCLUSION

Through quantitative analysis of responses from 387 tourists, the study confirmed that awareness is the first gateway to change. The more tourists know about cryptocurrencies, the more positively they tend to feel about them. And when those attitudes are shaped by accurate understanding, trust can begin to form. Yet, the road from awareness to trust is not direct—it winds through emotional responses, personal values, and perceived risks.

This study found that attitude plays a crucial mediating role, acting as the bridge between knowing about a technology and actually trusting it enough to use it. Still, the findings also revealed a sobering truth: many tourists remain hesitant, if not skeptical, about using cryptocurrencies in real travel scenarios.

Implications and Recommendations

This study provides important practical insights for tourism stakeholders, technology providers, and policymakers. For tourism operators and hospitality brands, simply offering cryptocurrency payment options is not enough—educating customers is crucial. This can include creating informative content, integrating blockchain demonstrations into travel apps, and collaborating with influencers to make the technology more understandable. Governments and tourism authorities play a key role in building trust through clear regulations, consumer protection measures, and legal frameworks, ensuring tourists feel their digital assets are secure and their privacy respected. Technology developers should focus on designing user-friendly interfaces, simplifying crypto-wallets, improving multilingual support, and embedding visible security and transparency features. Future research should examine additional psychological and contextual factors affecting tourists' decisions, such as perceived usefulness, previous experience with digital payments, or cultural attitudes toward financial

risk. Overall, this study highlights the essential roles of awareness, attitudes, and trust in fostering cryptocurrency adoption in tourism, providing guidance for practical strategies to enhance the travel experience.

Limitations and Future Research Directions

Like all research, this study comes with its own set of limitations—acknowledging them is not a weakness, but rather a step toward growth and academic transparency. One key limitation lies in the use of a convenience sampling technique, which, while practical and efficient, may not fully capture the diversity of the global tourist population. Most participants were young, educated, and familiar with digital environments—characteristics that may not reflect the broader attitudes of older or less technologically engaged tourists. Future studies may benefit from employing probability-based or stratified sampling techniques to enhance the generalizability of findings across different demographic segments and cultural contexts. Another limitation relates to the cross-sectional nature of the research. The data provide a valuable snapshot of tourists' awareness, attitudes, and trust at a single point in time—but they do not capture how these perceptions may evolve over time or with increased exposure to cryptocurrency usage. A longitudinal approach in future research could offer deeper insights into how tourists' trust builds—or declines—as their experience with cryptocurrency grows

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