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CRYPTOCURRENCY AS A FINTECH INNOVATION IN INDIA- CONSUMER AWARENESS, PERCEPTION, AND ADOPTION INTENTION

Finance

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ABSTRACT

This paper presents an empirical study of cryptocurrency in India as a FinTech innovation, focusing on consumer awareness, perception, and intention to adopt. The study adopts a quantitative survey approach, using a questionnaire sent to 109 individuals from across India with diverse socio-economic backgrounds. Descriptive statistics, cross-tabulation, and chi-square tests ($p < 0.05$) were used for data analysis. Findings show 76.15% of respondents were aware of cryptocurrency, and 23.85% unaware. The most common application was investment, with payment being a distant second (54.13% vs. 15.60%). Cybersecurity risk, price variability, and low awareness decreased trust among 68.81% of respondents. Regulation played a pivotal role in boosting trust, with 74% agreeing it would do so. In a hypothetical situation, 55.96% of respondents would accept cryptocurrency payments. Chi-square tests showed a statistically significant relationship between acceptance and age ($\chi^2 = 22.18$, $p = 0.0046$) as well as education ($\chi^2 = 18.72$, $p = 0.0165$). The study finds that India has great untapped potential in terms of cryptocurrency adoption, provided there is greater clarity on the rules as well as financial awareness.

KEYWORDS

Fintech, Cryptocurrency, Consumer Awareness, Adoption Intentions, Regulatory Clarity, Security Risk, India.

INTRODUCTION:

FinTech has revolutionized financial services by making payments, credit, investment, and insurance accessible to everyone. Its most disruptive technology, cryptocurrency, is an e-commerce model that is cryptographically secured and has no central authority over banks. It is a product of Bitcoin's 2008 whitepaper that opened up trustless, blockchain-powered, peer-to-peer transactions.

The global FinTech industry is slated to hit the $700-billion milestone by 2030, and is being driven by UPI's success and the rise in the number of Jan Dhan accounts, which have crossed 500 million in India. However, the crypto situation in India is far from resolved — with the Supreme Court ruling against bitcoin in 2020 and the 30% crypto gains tax in 2022-there has been no clarity in this sector. Adoption motivators included performance expectancy, social influence, and regulatory stability, as suggested by the models established behavioral frameworks.

Behavioral frameworks such as TAM, UTAUT, and TPB have identified several factors, including performance expectancy, social influence, and regulatory stability, as adoption motivators. This study aims to study the perceptions of cryptocurrency among Indian consumers across various demographic segments, drawing upon these models.

RATIONALITY

This paper tries to cover some important issues in the cryptocurrency field, including a lack of knowledge about crypto in India, awareness among the Indian population about crypto, perception of crypto in general, and adoption of cryptocurrency in India.

LITERATURE REVIEW:

Our research into cryptocurrency adoption builds on extensive work on disruptive innovation, technology acceptance and adoption, and consumer behavior.

Cryptocurrency as Innovation:

Cryptocurrency is a Disruptive Innovation. A world founded at the launch of Bitcoin in 2008, cryptocurrency is based on blockchain technology, allowing secure, decentralized financial transactions without the need to rely on an intermediary.

Cryptocurrency and Financial Inclusion:

Cryptocurrency dispels the traditional hurdles of paperwork and transaction fees, making it a viable alternative for the 1.7 billion adults who are unbanked. This potential indeed is only achieved through digital literacy, proper infrastructure, and adjustment of regulations.

Technology Adoption Frameworks:

This study was based on the three existing models that have been proven to have the greatest influence on intentions to adopt, namely, the theory of technology acceptance (TAM), unoccupied technology acceptance (UTAUT), and reasoned action theory (TPB). Enhance consumer awareness and trust. Increase consumer awareness and trust. People are using cryptocurrencies primarily for speculation and investment, not as a medium of exchange. There remains a generational divide in awareness, with younger users more knowledgeable. Trust is complex, as exercising decentralization on blockchain lowers the set of risks caused by centralization, but governance issues open the door for users to be exposed to fraud and losses.

Regulatory Environment:

The global regulatory strategy is from legal tender adoption in El Salvador to a complete ban in China. India is in a limbo situation, cryptocurrency is taxable without having a thorough legal framework, leaving consumers with uncertainty regarding the law, which has a measurable impact on their trust and adoption. Before-and-after studies have all demonstrated the strong and continuing effect of clear and predictable policy on user engagement.

Cryptocurrency and MSMEs:

Blockchain-based solutions provide MSMEs a lucrative opportunity, with the benefits being transparency of the supply chain, decreased reliance on Intermediaries, and enhanced speed of settlement across borders. It also shows potential in increasing the credit availability to rural and underserved businesses, with its unregulated application posing a systemic risk to financial stability and governance.

RESEARCH GAP

Previous studies show that while most of the technical and macroeconomic issues of cryptocurrency have been widely examined, there has been a lack of research on consumer aspects such as knowledge, perception of cryptocurrency adoption, and its demographic predictors in India. The current research aims to contribute to this understanding by exploring the aspects of consumer behavior and attitudes towards cryptocurrency in India.

OBJECTIVES OF THE STUDY:

This study was undertaken with the following objectives:

1. To understand cryptocurrency as a FinTech innovation - definitions, characteristics, and evolution.
2. To understand awareness of cryptocurrency among different segments of India's population.
3. To explore beliefs about the advantages and risks of cryptocurrency.
4. To determine the factors influencing Indian consumers' cryptocurrency adoption intentions.
5. To assess the impact of regulatory uncertainty on trust and adoption.
6. To understand the role of cryptocurrency in promoting MSME and financial inclusion in India.
7. To inform policymakers on how to adopt cryptocurrency.

RESEARCH METHODOLOGY:

It is a quantitative and survey-based study. The study's methodology is discussed in this section:

Research Design: The current research adopts a quantitative and survey-based research design, consisting of a 12-item questionnaire in a structured format that was distributed to 109 participants with diverse demographic characteristics in India. The research employs a mixed descriptive and analytical design, examining relationships among key variables through the theoretical lenses of TPB and UTAUT frameworks.

Population and sample: The sample consisted of 109 respondents, 51.38% students, 18.35% self -employed, and 17.43% working professionals. The distributions of age were shifted to the younger age bracket (42.20% age 20-25; 24.77% age below 20) and undergraduate education (53.21%)

Statistical Methods: The data underwent descriptive statistics (frequency distributions, percentages) with cross-tabulations among the demographic variables and chi-square tests of independence (0.05) to see which connections among demographic variables and acceptance of cryptocurrencies were statistically significant. Chi-square was chosen due to its appropriateness with categorical data.

DATA ANALYSIS AND INTERPRETATION:

Cryptocurrency awareness and Conceptualization

AS shown in Table 1, 76.15% reported some familiarity with cryptocurrency, but the definition was quite varied, ranging from 'developing innovation' to 'investment asset', while 17.43 per cent did not appear to have a clear understanding of what is meant by 'cryptocurrency':

TABLE 1: FAMILIARITY LEVEL

Familiarity Level	Count	Percentage
Very Familiar	13	11.93%
Moderately Familiar	22	20.18%
Slightly Familiar	48	44.04%
Not Familiar at All	26	23.85%

Primary source

Usage Intent and Perception of Benefits and Risks:

As Table 2 shows, over half of respondents favored cryptocurrency for trading (54.13%), while only 15.60% considered payments. Despite 59.63% recognizing its banking advantages, 68.81% remained concerned about security, volatility, and awareness gaps.

TABLE 2 USAGE INTENT AND PERCEPTION

Survey Dimension	Agree / Strongly Agree	Neutral	Disagree / Strongly Disagree
Benefits over Traditional Banking	59.63%	28.44%	11.92%
Security Risks & Trust Concerns	68.81%	24.77%	6.42%
Digital Infrastructure Adequacy	64.22%	23.85%	11.93%
Regulatory Clarity Boosts Confidence	74.32%	21.10%	4.58%

Primary source

Future Adoption Intentions:

As shown in Table 3, however, under suitably regulated conditions, 55.96% would use it for payments while 29.36% would be willing, indicating strong 'latent demand' that could be realized with clear and well-designed regulation.

TABLE 3: FUTURE ADOPTION INTENTION

Future Acceptance	Count	Percentage
Yes — Would Accept	61	55.96%
Maybe — Conditional	32	29.36%
No — Would Not Accept	16	14.68%

Primary source

Chi-Square Test Results:

Chi-square tests of independence were applied to assess the statistical significance of associations between demographic variables and cryptocurrency acceptance at the $\alpha = 0.05$ level:

TABLE 4: CHI-SQUARE TEST RESULT

Variable Pair	χ^2	p-value	Result
Age Group vs. Acceptance	22.1786	0.0046	Significant
Education vs. Acceptance	18.7161	0.0165	Significant
Familiarity vs. Acceptance	6.3810	0.3819	Not Significant
Occupation vs. Acceptance	11.1982	0.1907	Not Significant
Infrastructure vs. Acceptance	12.6078	0.1261	Not Significant
Regulation Importance vs. Acceptance	4.5698	0.8024	Not Significant

Table 4 identifies age and education as significant predictors of cryptocurrency acceptance. Surprisingly, respondents over 45 showed the highest acceptance (~80%), challenging youth-driven adoption assumptions. Acceptance also rose with education level, from ~40% among high school students to ~63–64% among graduates. Security concerns remained universally high (~70%) across all demographics, confirming it as a consistent adoption barrier.

RESULTS AND DISCUSSION:

The awareness about cryptocurrencies in India is 77.8%, but there is a disparity in understanding with education levels. Around half stated they were willing to adopt, which is also indicative of high latent demand. Consistent to every generation and age, a clear understanding of the regulatory situation is identified as the main driver of trust. Digital infrastructure is considered to be sufficient, but cryptocurrency is perceived more as an investment product than as a means of business transactions.

Policy and Practice Implications:

1. Regulatory Framework Development: There must be an overall comprehensive regulatory system rather than an incomplete one, including areas on consumer protection, tax clarity, and anti-money laundering, etc. — more than 85% would do so under regulation.

2. Security and Consumer Protection: security measures, such as multi-factor authentication, cold storage, and risk disclosure, are crucial.

3. Monetary Literacy and Training: Financial literacy initiatives have to be targeted; academic, vocational, and rural communities must be reached.

4. MSME Support and Financial Inclusion: the enhancement of financial inclusion that can occur through cryptocurrency payment reduction in remittances, greater access to credit for micro, small, and medium enterprises, and micropayments in areas lacking credit access.

LIMITATION: There are a few limitations in the study. The sample is skewed toward younger, more educated, and urban participants, which means that it does not represent the rural and non-digitalized population. Limitations include that there is a lack of generalizability because of convenience sampling, which does not cover the different demographic groups in India. The cross-sectional design will only give an insightful snapshot; longitudinal research would provide more insight into attitudinal changes over time. Sometimes, people's own intentions for adoption do not correspond with their actual financial actions. Moreover, there was no attempt to measure governments' trust levels or pre-existing FinTech experiences within the questionnaire.

CONCLUSION:

76.15% users are aware of cryptocurrencies in India, with varying levels of awareness. Adoption is robustly policy sensitive: 55.96% said they would adopt if properly regulated, and 74% affirmed that 'good regulation in this area would enhance trust'. Age and education are major factors influencing acceptance, and security concerns are also significant factors. 64% think that the digital economy is good enough for them to use it as a payment, while cryptocurrency is mostly perceived not as a currency, but as an investment. The study concludes that the challenge for India is not about wanting to adopt, but that the ecosystem to enable a child to be placed in India is missing. Three key elements in making cryptocurrency mainstream adoption a reality are regulatory uncertainty, security concerns, and financial illiteracy.

REFERENCES

1. Abramova, S., & Böhme, R. (2016). Perceived benefit and risk as multidimensional constructs in Bitcoin trading. *ACM SIGCAS Computers and Society, 45*(3), 308–320.
2. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T
3. Amsyar, M., Othman, M. N., & Azmi, N. (2020). The impact of blockchain on financial services: A systematic literature review. *Journal of Asian Finance, Economics and Business, 7*(10), 235–245mailto:mailtohttps://doi.org/10.13106/jafeb.2020.

4. Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). Bitcoin: Economics, technology, and governance. *Journal of Economic Perspectives, 29*(2), 213–238. https://doi.org/10.1257/jep.29.2.213
5. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008
6. DeVries, P. D. (2016). An analysis of cryptocurrency, Bitcoin, and the future. *International Journal of Business Management and Commerce, 1*(2), 1–9.
7. Glaser, F., Zimmermann, K., Haferkorn, M., Weber, M., & Siering, M. (2014). Bitcoin—Asset or currency? Revealing users' hidden intentions. In *Proceedings of the 22nd European Conference on Information Systems (ECIS)*.
8. Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system. https://bitcoin.org/bitcoin.pdf*
9. Ozili, P. K. (2023). Financial inclusion and cryptocurrency adoption: Evidence and policy implications. *Journal of Risk and Financial Management, 16*(2), 1–15. https://doi.org/10.3390/jrfm16020074
10. Panigrahi, S. (2023). Blockchain adoption and financial stability concerns in developing economies. *Journal of Economic Policy Review*.
11. Raj, A., & Kishore, R. (2024). Cryptocurrency regulation in India: Challenges and opportunities. *Journal of Financial Regulation and Compliance*. Advance online publication.
12. Rekha, R. (2025). Regulatory frameworks for cryptocurrency adoption in emerging economies. *International Journal of Finance and Economics*. Advance online publication.
13. Shahzad, S. J. H., Bouri, E., Roubaud, D., & Kristoufek, L. (2020). Safe haven, hedge, and diversification for G7 stock markets: Gold versus Bitcoin. *Economic Modelling, 87*, 212–224. https://doi.org/10.1016/j.econmod.2019.07.023
14. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157–178.
15. Xiong, W., & Luo, Y. (2024). Global cryptocurrency regulation and its economic implications. *Finance Research Letters*. Advance online publication.