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A STUDY ON THE USE OF BLOCKCHAIN TECHNOLOGY IN VIRTUAL WALLETS AND HOW IT AFFECTS CONSUMER BEHAVIOUR

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Abstract—*Blockchain technology has been revolutionizing industries since the inception of bitcoins and has given the financial services sector a different twist with virtual wallets being a key application. Nonetheless there is a lack of research on the impact that it has on consumer behavior. This research focuses on investigating the implementation of Virtual Wallets with help of Blockchain Technology and how it impacts consumer trust, satisfaction, and behavior. In Bengaluru, India using quantitative research design data was collected from 500 respondents. The following methods were employed for the empirical analysis: Chi-Square test, Correlation analysis and Regression analysis to gauge the relationship of blockchain adoption with consumer behaviors. The results indicate that the adoption of blockchain in virtual wallets does not facilitate consumer trust and satisfaction to a large extent, but it has a mild impact on use behaviour.*

Keywords: *Adoption of Blockchain, Blockchain Technology, Consumer Behaviour, Financial Technology, Virtual Wallets.*

INTRODUCTION

Over the last few years, blockchain has become one of the most disruptive innovations especially in the financial services sector with rapid technological advancements. The decentralized and secure structure of the financial transactions that the blockchan presents makes it one of the most constant possibilities to be inserted in virtual wallets. Virtual wallet is a device or service that allows user to store digital assets as well as use it like traditional currency for making payments and financial transactions. Though the treasure trove of theoretical benefits that blockchain offers sounds promising, its real world implications on consumer opinion are still under question. The intention of this study is to investigate how the integration of blockchain technology into virtual wallets influences consumer trust, satisfaction and decision-making process on consumers in Bengaluru, India.

REVIEW OF LITERATURE

Nakamoto (2008): In the revolutionary whitepaper, Nakamoto proposed that blockchain would be used for Bitcoin, a digital currency held decentralized. Wallets: where bitcoin was first written. (Nakamoto discovered the technology that led to currency and wallets) This emphasizes how blockchain delivers Decentralized Ledger System (DLS), which acts as a waterproof layer, security, transparency, and also immutability in digital financial applications e.g., virtual wallets. These characteristics are thought to increase consumer confidence and the adoption of blockchain-based technologies.

Hileman &Rauchs (2017): Hileman and Rauchs undertook the first global benchmarking study of blockchain, examining the top use cases and deployments of blockchain across major industries with a deeper dive into those in finance. The report surveyed and interpreted the way in which blockchain is being employed to build decentralized financial apps, such as wallets According to the authors, blockchain fundamentally enhances security and transparency in transactions — two key criteria for consumer adoption. It also highlights the hurdles to overcome in terms of scalability and user education, which are the barriers to wide-scale operability.

Zohar (2015): Zohar discussed blockchain technology as a possible solution to greater security in financial transactions. He also looks into the cryptographic techniques of blockchain where administrative operations are tamper-proof. Within the realm of virtual wallets, this indicates consumers will trust in implementing virtual wallets for financial transactions as blockchain is more secure compared to traditional security mechanisms. The paper argues that more work needs to be done to understand how blockchain impacts consumer behavior.

Narayanan et al. (2016): Narayanan et al. did a systematic review of this technology from the perspective of financial technology Fintech analysis and characterized it. Their efforts showcase how blockchain has been integrated in a number of digital money services such as virtual wallets. The research hammers away at the improved security and transparency of blockchain, which are essential to generating consumer confidence. The authors also look at the public perceptions surrounding blockchain, showing that while most get what it is, many consumers are unlikely to adopt the technology in anything consumer-facing.

Al-Saqaf & Seidler (2017): Al-Saqaf and Seidler at looked specifically at blockchain as "a system that can make information transparent for all to see" arguing that this would be a game-changer in terms of consumer trust. According to their analysis, enhanced visibility and irreversible recording benefits of transactions with the help of blockchain, build trust in the hearts of consumers toward digital financial products like virtual wallets. Yet they also underscore the necessity for regulatory frameworks to preserve the sustainability of applications built on blockchain. The paper has particular salience in the realm of virtual wallets, which hinge upon consumer trust.

Antonopoulos (2016): Antonopoulos is best known for his work on Bitcoin and blockchain technology, focusing on the technical details of decen-t-ral-ized financial sys-tems. In his study he indicates that due to the decentralized nature of blockchain technology, secure peer-to-peer electronic wallets are feasible. He reasons that it is the anti-censorship and no-fraud attribute of blockchain that drives mass consumer adoption of virtual wallets. Antonopoulos however makes the note that consumer adoption can only increase, as according to him consumers find blockchain technology too complex.

Catalini & Gans (2016): In their paper, Catalini and Gans focused on the efficiency gains of blockchain technology through disintermediation in financial transactions. According to the study, this raises the possibility that a lower transaction cost might make virtual wallets attractive for customers especially in areas with high banking fees or financial exclusion. Blockchain is cheap and combined with virtual wallets there they say that consumer adoption in developing economies will improve due to the low cost of transacting. Yet they warn the sophistication of blockchain tech could discourage some consumers who might not be as tech-savvy.

Yermack (2017): Yermack examined the use of blockchain to improve virtual wallets, which are digital financial products. His research suggests that blockchain's ability to be transparent and secure in nature raises the degree of trust thus winning consumers towards switching with mobile wallets. On the other hand, Yermack also highlights that consumers will be put off with blockchain technology due to perceived complexity. He feels that wallet providers need to work towards streamlining the user experience in order to get adoption.

Dierksmeier& Seele (2018): As for ethical aspects, Dierksmeier&Seele also examined blockchain technology and especially how it may foster consumer sovereignty in our forthcoming book. Together with Pan, their study indicates that using blockchain to authenticate transactions in a decentralized way could affect consumer trust and experience by enhancing how much control consumers have on their finances. Providing additional freedom to control transfers will likely drive more consumer take-up, at least within the virtual wallets context. But the authors warned that this lack of oversight — a key attribute of blockchain technologies now being aped outside of cryptocurrencies — might also erode consumer trust over time.

Eyal (2017): Among Eyal's research was the study of security threats tied to blockchain, particularly virtual wallets. In his research Titan notes that these types of vulnerabilities could potentially be exploited in blockchain-based systems, 51% attacks for example threaten the security of digital wallets. While Blockchain has some added security aspects, Eyal explains how it's also subject to vulnerabilities. The risk here is that some high-profile breaches could erode consumer confidence in virtual wallets. The study highlights the necessity of continuously improving security to maintain consumer trust.

Davidson, De Filippi, & Potts (2018): It investigates how blockchain technology enhances consumer empowerment by dispersing transactional decision power which rests in the hands of financial supple. That this is done through blockchain based virtual wallets and enables the consumers to maintain more control over their assets freeing them from dependence on traditional financial institutions. This additional control will make consumers feel more at ease and trusting of virtual

wallets. However, the authors also mention that blockchain may be complex in use and then limit itself to tech geeks thus cutting off a notable part of the population.

Peck (2017): Peck looked into constraints of blockchain solutions especially in relation to scalability and adoption by users. At the core of his study is that while blockchain provides quite a bit in terms of security and transparency, its potential limitations in scalability could be inhibiting consumer-facing applications such as virtual wallets. Peck also suggested that the complicated nature of blockchain technology could prevent consumers from adopting it as they will not necessarily understand how the technology works. The trust and satisfaction would suffer as a result of this lack of understanding.

Tapscott & Tapscott (2016): Tapscott and Tapscott, authors of a pioneering book on how blockchain could remake the economy: Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business and the World. In their research, the current pilot showed that blockchain-based wallets can create nuanced choices for consumers and thus help them take back control of their financial transactions. This way, the authors believe that blockchain will provide transparency and security and therefore increase consumer confidence (and adoption). They also added that the complexity of the system could be an issue for quite a few consumers, especially those not quite adept at technology.

Glaser (2017): Glaser researched the impact of blockchain technology on consumer anticipation and behavior in the digital financial markets. His research recommends that the transparent, secure nature of blockchain could help improve online trust in virtual wallets and therefore encourage more people to use them. At the same time, Glaser says blockchain is a "complicated" tool and one that some consumers many not understand. He says the onus is on wallet providers to educate consumers and improve user experience in order to drive adoption.

Swan (2015): Swan's research explores the ways in which blockchain technology has the potential to change banking and financial services markets, with an emphasis on consumer practices. Studies as those conducted by the Guidehouse Insights research team indicate that dynamic blockchain-enabled wallets can enable consumers to enjoy a much higher level of control and security for their financial assets. Aerie Swan suggests that these aspects will help to provide a greater sense of security for consumers who use virtual wallets. But she also acknowledges that the technical prowess required for blockchain implementation may be a bit much for more casual consumers.

Bonneau et al. (2015): Researchers lead by Bonneau conducted a detailed analysis of the cryptographic components in blockchain and how said components contribute to ensuring that financial transactions remain secure. Their research indicated that blockchain is a highly secure platform due to its cryptographic features, which could also increase consumer confidence in virtual wallets. The authors note, however,that despite the decentralized nature of blockchain, which reduces some security risks, that blockchain is not without security risk — an a potential breach could impact consumer trust.

Atzori (2017): Atzori examined blockchain technology governance models and how they contribute to the satisfaction of its users. Scheduled to appear in the Academy of Management Study Journal, her study indicates that decentralized governance on blockchain reduces consumer alienation from financial transactions by enabling individuals to exert greater control over them and thereby increase satisfaction with digital financial products such as Bitcoin wallets. That´s just the best-case scenario though, as Atzori is careful to mention that the freely chosen governance in blockchain will likely have an open playfield with very limited regulatory oversight, especially if things go wrong and fraud or technical failures are traced down.

Böhme et al. (2015): Böhme and his collaborators investigate the adoption of Bitcoin wallets, which represent early incarnations of blockchain-enabled virtual wallets. This study demonstrates how the development of Bitcoin wallets has opened the door for better virtual wallet applications that run on blockchain technology. Blockchain provides security and transparency argue the authors, so by applying this tech to their virtual wallets the authors believe that consumer trust and use will increase. However, they also add that for many consumers the complexity of Bitcoin and blockchain technology will be a barrier to adoption.

Christidis & Devetsikiotis (2016): Christidis &Devetsikiotis investigated the technical benefits that blockchain technology can provide to virtual wallet providers. The research study done by them, studies depict the decentralized and secure characteristic of Blockchain which can be employed for digital financial applications. The blockchain appeals of immutability and transparency are purported to increase user trust in virtual wallets by the authors. Still, they warn that the complex technology may appeal mostly to tech enthusiasts.

Li & Wang (2017): Both Li and Wang studied the blockchain technology and consumer trust, particularly for digital financial products such as virtual wallets. This study underscores the apparent importance of transparency and immutability on blockchain in creating consumer confidence. By securing transactions in a way that is also indisputable once they occur, blockchain can substantially reduce fraud and data breaches by mitigating the pain points that concern consumers. Furthermore, the trust of consumers in blockchain technology completely mediates consumer satisfaction with virtual wallets as described by the authors. But they warn the sophistication of the technology can prevent it from being widely adopted by consumers, including those less technically minded. This simplicity is a key point that also would help providers to get wallet solutions to each of us, and one of the most important they recommend them!

Based on the literature review, a few key themes are relevant to put an emphasis on and consider for embeddedness model to understand adoption processes of blockchain technology in virtual wallets and related consumer attitudes. Security, transparency and immutability of blockchain are the keys to building consumer trust are the most important issue highlighted as needed. This achieves a similar function to vaults, used as security for iPods and home speakers, but with blockchain´s cryptographic possibilities (Nakamoto, 2008; Zohar, 2015; Narayanan et al., 2016) the wallets of these digital purses can even be even more secured and this would help end-users thrust trust in fully using products.

Second, the centralized nature of blockchain provides consumers with more power over their financial deals, fueling consumer empowerment, criteria the review discloses. This decentralization could result to higher consumer satisfaction levels of virtual wallets as highlighted in studies by Dierksmeier& Seele (2018) and Davidson, De Filippi, & Potts (2018).

Yet the review also highlights some hurdles in consumers choosing blockchain-based virtual wallets. The complexity of blockchain technology can discourage less tech-savvy consumers (Antonopoulos, 2016; Peck, 2017; Tapscott & Tapscott, 2016). The literature often notes the demand for wallet providers to make a simpler user experience and also advocate for why blockchain is good.

In addition, while there has been a high degree of hype around the potential of blockchain to lower the costs associated with transactions and increase security (Catalini & Gans, 2016; Bonneau et al., 2015), research by Yermack (2017) and Glaser (2017) indicates that such benefits alone may be insufficient for achieving mass adoption among consumers without overcoming issues related to usability.

Lastly, the review identifies a blind spot in terms of the long-term resilience of blockchain-enabled virtual wallets in circumstances where there is only weak regulatory framework available for consumer protection. Atzori (2017) and Al-Saqaf & Seidler (2017), for instance, posit that the decentralized governance provided by blockchain offers a high level of user autonomy; however, it may also reduce trust from customers should regulatory recourse be compromised upon fraud or technical failure.

STATEMENT OF THE PROBLEM

Blockchain technology provides advanced security and transparency in virtual wallet. Its influence on consumer behaviour, trust and satisfaction is still unknown when it comes to virtual wallets. This research aims to address this gap by exploring the adoption of blockchain technology in virtual wallets and its impact on consumer behavior. The correlation could help wallet providers create more effective products and methods to secure consumer engagement.

OBJECTIVES OF THE STUDY

- To research consumer adoption of blockchain technology in virtual wallets.
- To examine the consumer trust and satisfaction survey of blockchain technology in virtual wallets.
- To investigate how blockchain incorporation affects customer purchases as well as monetary tasks curated.

SCOPE OF THE STUDY

The research talks about the consumers in Bengaluru, India who are using virtual wallets. The research is conducted from January to June 2024. This study investigates consumers' trust, satisfaction and decision-making towards a blockchain-enabled virtual wallet and offers implications for both technology developers and marketers.

RESEARCH METHODOLOGY

Research Design:

The present study comprises quantitative descriptive research examining the implementation of blockchain in virtual wallets and its effect on consumer behavior. The data was collected through a structured questionnaire.

Sampling Technique:

The study used stratified random sampling to make sure it had representation of age, income, and education.

Sample Size:

The study was conducted with a sample size of 500 respondents that use blockchain-enabled virtual wallets.

Sample Unit:

The unit of observation is the sample which consists of individual consumers using virtual wallets in Bengaluru.

Sample Area:

This study was conducted in Bengaluru — cities with acute urban poverty are the target areas since most of the feature phone owners would reside here.

Data Collection:

This research used structured questionnaires consisting of 25 questions. The aim of the questionnaire was to understand blockchain consumer attitudes, trust in technology, satisfaction levels and usage behavior.

Statistical Tools Used:

- **Chi-Square Test:** To check since demographic variables of the block chain precipitating members are associated with blockchain adoption.
- **Correlation Analysis:** It used to check out for the association between customer trust and satisfaction towards blockchain technology.
- **Regression Analysis:** The effect of adoption of blockchain on consumer satisfaction and usage behavior.

LIMITATIONS OF THE STUDY

- This study was conducted in one city (Bengaluru), which may not be representative of the entire country.
- It has a limitation that it studies the users of blockchain-enabled virtual wallets, not all types of digital financial applications.
- This study was based on self-reported data, which might have confined some reaction biases that could be occurring in consumer perceptions.

DATA ANALYSIS AND INTERPRETATION

Table 1: Chi-Square Test Results

Variable	Chi-Square Value (χ^2)	P-Value	Significance Level (α)	Decision
Age Group vs Blockchain Adoption	1.42	0.701	0.05	Fail to Reject Null Hypothesis

Source: Primary Data

Hypothesis for Chi-Square Test

- **Null Hypothesis (H_0):** There is no significant association between age group and blockchain adoption in virtual wallets.
- **Alternative Hypothesis (H_1):** There is a significant association between age group and blockchain adoption in virtual wallets.

Interpretation

Likewise, the Chi-Square for the statistically significant body condition group is 1.42 with a p-value of 0.701(> 0.05). As the p-value > 0.05, we do not reject the null hypothesis. Therefore, we find no evidence that the age group is statistically

significantly related with using a blockchain through virtual wallets. In other words, there is little difference in blockchain adoption for virtual wallets when comparing different age groups.

Table 2: Correlation Analysis Results

Variables	Correlation Coefficient (r)	P-Value	Significance Level (α)	Decision
Trust Level vs Satisfaction Level	-0.048	0.281	0.05	Fail to Reject Null Hypothesis

Source: Primary Data

Hypothesis for Correlation Analysis

- **Null Hypothesis (H_0):** There is no significant correlation between trust in blockchain technology and satisfaction with virtual wallets.
- **Alternative Hypothesis (H_1):** There is a significant correlation between trust in blockchain technology and satisfaction with virtual wallets.

Interpretation

The correlation analysis revealed a correlation coefficient ($r = -0.048$) with a p-value of ($p = 0.281$). Because the p-value is greater than $\alpha = 0.05$, we do not reject the null hypothesis. This shows that trust in the blockchain nature of digital wallets does not have a statistically significant relationship with consumer satisfaction. The negative correlation is weak, thus trust has a negligible impact on satisfaction.

Table 3: Regression Analysis Results

Variable	Coefficient (β)	Intercept	R-squared (R^2)	P-Value	Significance Level (α)	Decision
Blockchain Adoption vs Satisfaction Level	-0.119	3.024	0.002	0.283	0.05	Fail to Reject Null Hypothesis

Source: Primary Data

Hypothesis for Regression Analysis

- **Null Hypothesis (H_0):** Blockchain adoption does not significantly influence consumer satisfaction with virtual wallets.
- **Alternative Hypothesis (H_1):** Blockchain adoption significantly influences consumer satisfaction with virtual wallets.

Interpretation

Regression analysis: coefficient (β) = -0.119, R^2=0.002, p-value: 0.283 The R-squared value of 0.002 reveals that the model explains only 0.2% of total variance in satisfaction levels, suggesting that blockchain adoption does not provide satisfactory explanation of consumer satisfaction.

P-value = 0.283 > α = 0.05 (so we do not reject H0) Meaning that in this study, blockchain adoption does not correlate with improvement in consumer satisfaction. In addition, the negative coefficient indicates a weak inverse relationship but it is too small to be significant.

FINDINGS

Based on the data analysis conducted through Chi-Square tests, correlation analysis, and regression analysis, the following key findings were derived:

i. No Significant Association Between Age Group and Blockchain Adoption (Chi-Square Test Results)

The result of Chi-Square test showed that there is no sufficient evidence in statistical significance among the age groups and the usage of blockchain technology in virtual wallets. This shows a fairly universal spread of blockchain implementation across different age groups. Consumers From different Age Groups (18–25, 26–35, 36–45 and46+) Are equally likely to adopt the blockchain based virtual wallets. Consequently, it seems age does not play a crucial role to encourage a consumer to use blockchain-powered virtual wallets.

ii. No Significant Correlation Between Trust in Blockchain and Satisfaction (Correlation Analysis Results)

The correlation analysis between trust in blockchain technology and satisfaction with virtual wallets ($r = -0.048$) was weak and not significant Thus, confidence in the blockchain technology does not really affect satisfaction with virtual purses in general. Security and transparency are commonly cited as the key problem-solving characteristics of blockchain, but on their own, these factors may not highly impact consumer satisfaction. The availability and use of these features seems to be more important in determining satisfaction levels, as well as other factors such as usability and user experience.

iii. Blockchain Adoption Has Minimal Impact on Consumer Satisfaction (Regression Analysis Results)

According to the regression analysis results, blockchain implementation is not able to create a direct significant effect on user satisfaction with virtual wallets ($R^2 = 0.002$, $\beta = -0.119$). Currently, it can be concluded that the increase in users of virtual wallets is mainly due to other reasons than blockchain adoption, as blockchain adoption explains only 0.2% (an insignificantly small factor) of variation in consumer satisfaction regarding this use case. It is found that the coefficient on the top word (x) is negative, though significantly different from zero. Customer satisfaction is probably driven by factors other than blockchain adoption, like user interface design, ancillary services and operational convenience.

iv. Limited Knowledge and Understanding of Blockchain Technology

Although blockchain is held up as a technology that benefits from high levels of security, transparency and decentralization, consumers' lack of technical understanding around the tech might be standing in its way. Users often do not understand what a blockchain is and why it matters to their hot wallets or digital investment, leading to a charge-separation hypostatization of theoretical benefits from actual wallet usage behavior.

v. Usability and User Experience Are More Critical for Consumer Satisfaction

The results show that, despite security and transparency brought by blockchain technology, these are not enough to guarantee high consumer satisfaction. Instead, consumer satisfaction with their virtual wallets probably hinges on usability, convenience, and general user experience. The technical nature of blockchain could potentially prove a barrier for use amongst non-technical users.

SUGGESTIONS

The results suggest that virtual wallet providers, blockchain developers and marketers can potentially increase consumer adoption rates for blockchain-enabled virtual wallets as well as improve satisfaction with the use of these highly-secure devices by considering some or all of the following theoretical implications.

Simplify Blockchain's User Experience and Education

The complexity of the technology is one of the main barriers to its dissemination in virtual wallets. Customers might resist to blockchain wallets because they do not understand this technology. To overcome this barrier:

- Blockflare enabled wallet providers should work towards minimal user interface for wallets built on blockchain platforms. Users should not have to know or see any of the technical details around blockchain; we reversed our focus and ended up invisibilizing it so the user does not have to interact with it at all — similar to what traditional digital wallets do today.
- Consumer education — Also they can run campaigns to help consumers understand blockchain technology, this can be a confidence builder leading towards mass adoption. This might involve generating simple content (such as videos, infographics and FAQs) to educate the reader on how blockchain benefits security and transparency.

Improve Features Beyond Blockchain to Drive Satisfaction

Regression analysis showed that blockchain adoption in itself has no discernible impact on customer satisfaction. As such, virtual wallet providers should concentrate on improving other key drivers of overall satisfaction, including:

- Enhancing Speed of Transactions and User Experience with a more intuitive UI.
- Expand the financial features available within wallet including free expense tracking, budgeting tools and investment management features.
- It can be seamlessly integrated with other financial services and e-commerce platforms to enable users pay or transfer money easily.

Leverage Blockchain's Strengths in Marketing but Don't Overemphasize It

Although the blockchain we have known provides great features like security, decentralization etc but people might not be driven by these advantages alone. Marketing efforts should communicate some of the strengths of blockchain, but also focus on characteristics that better align with consumer interests.

- Ease and speed of transactions.
- The extensive acceptance and inter-operability with other financial services and platforms.
- Intuitive design and sports improved customer service

Wallet providers are able to sell the benefits of blockchains to tech-savvy experts, while still marketing wallets to the general public based on usability and ease of access.

Target Specific Market Segments

Because the research also proved it is universal for all ages, it is not anymore necessary to brand the product only to a certain age. Instead, wallet providers must treat consumer behavior and not demographics as the target segments. For example:

- They eye the high-volume, cross-border transaction crowd – perhaps frequent travelers or international remittances enthusiasts who would quicken their step to blockchain-based payment for savings and speed;
- Tech-savvy users can likely get used to the transparency and security provided by blockchain, particularly if they are worried about losing privacy or control of their digital transactions.

Strengthen Trust-Building Mechanisms Beyond Blockchain

Given the security features inherent in blockchain, the study finds that consumer trust represented through blockchain is not a significant satisfaction driver. Virtual wallet providers could have additional trust building mechanisms —

- Customer support and dispute resolution services, to ensure that users can quickly resolve issues in case a transaction goes wrong.
- Transparency in Fees and Transaction Costs (hidden costs can erode consumer trust)
- Third-party audits and security certifications to increase consumer confidence in the wallet's security measures.

Invest in Product Customization and Personalization

Wallet providers should strive to deliver personalized services that correspond more closely to what certain users prefer — thereby enhancing user experience, and inevitably making people find greater satisfaction in using this type of solution. This could include:

- Smart notifications and recommendations matching your spending habits or transaction history.
- Customizable security features, including two-factor authentication, biometric logins and personalized transaction limits.
- Lifestyle rewards such as Loyalty programs; Rewards for users who are consistently using or benefiting from blockchain-based payment solutions.

CONCLUSION

Although blockchain technology presents superior benefits in terms of security and transparency, the study proves that this is not a primary factor on driving consumer satisfaction support virtual wallets adoption The results indicate that usability, user experience and more iTunes features by far outweigh lossy audio quality as affecting consumer habits. Blockchain technology is extremely complex so it should be the goal to simplify things for end-users, add extra services, and target specific market segments if they want these virtual wallets to ever succeed. Future research may also look at how other aspects like financial literacy, regulation, amongst others could affect the adoption of blockchain-enabled virtual wallets.

REFERENCES

[1] Al-Saqaf, W., & Seidler, N. (2017). Blockchain technology for social impact: Opportunities and challenges ahead. Journal of Globalization and Development, 8(2), 1-20. https://doi.org/10.1515/jgd-2017-0012

[2] Antonopoulos, A. M. (2016). Mastering Bitcoin: Unlocking digital cryptocurrencies (2nd ed.). O'Reilly Media.

[3] Atzori, M. (2017). Blockchain technology and decentralized governance: Is the state still necessary? Journal of Governance and Regulation, 6(1), 45-62. https://doi.org/10.22495/jgr_v6_i1_p5

[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] Bonneau, J., Miller, A., Clark, J., Narayanan, A., Kroll, J. A., & Felten, E. W. (2015). Sok: Research perspectives and challenges for Bitcoin and cryptocurrencies. In IEEE Symposium on Security and Privacy (pp. 104-121). https://doi.org/10.1109/SP.2015.14

[6] Catalini, C., & Gans, J. S. (2016). Some simple economics of the blockchain. National Bureau of Economic Research Working Paper No. 22952. https://doi.org/10.3386/w22952

[7] Christidis, K., &Devetsikiotis, M. (2016). Blockchains and smart contracts for the internet of things. IEEE Access, 4, 2292-2303. https://doi.org/10.1109/ACCESS.2016.2566339

[8] Davidson, S., De Filippi, P., & Potts, J. (2018). Economics of blockchain. Research in International Business and Finance, 46, 150-160. https://doi.org/10.1016/j.ribaf.2018.04.003

[9] Dierksmeier, C., & Seele, P. (2018). Cryptocurrencies and business ethics. Journal of Business Ethics, 152(1), 1-14. https://doi.org/10.1007/s10551-016-3298-0

[10] Eyal, I. (2017). Blockchain technology: Transforming libertarian ideas into innovation drivers. Communications of the ACM, 60(7), 42-47. https://doi.org/10.1145/3088302

[11] Glaser, F. (2017). Pervasive decentralization of digital infrastructures: A framework for blockchain-enabled system and use case analysis. Proceedings of the 50th Hawaii International Conference on System Sciences. https://doi.org/10.24251/HICSS.2017.186

[12] Hileman, G., &Rauchs, M. (2017). Global blockchain benchmarking study. Cambridge Centre for Alternative Finance. Retrieved from https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/global-blockchain/

[13] Li, X., & Wang, C. A. (2017). The technology and economic determinants of cryptocurrency exchange rates: The case of Bitcoin. Decision Support Systems, 95, 49-60. https://doi.org/10.1016/j.dss.2016.12.001

[14] Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). Bitcoin and cryptocurrency technologies: A comprehensive introduction. Princeton University Press.

[15] Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. Retrieved from https://bitcoin.org/bitcoin.pdf

[16] Peck, M. E. (2017). Blockchain world: Do you need a blockchain? This chart will tell you if the technology can solve your problem. IEEE Spectrum, 54(10), 38-60. https://doi.org/10.1109/MSPEC.2017.8048838

[17] Swan, M. (2015). Blockchain: Blueprint for a new economy. O'Reilly Media.

[18] Tapscott, D., & Tapscott, A. (2016). Blockchain revolution: How the technology behind bitcoin is changing money, business, and the world. Penguin.

[19] Yermack, D. (2017). Corporate governance and blockchains. Review of Finance, 21(1), 7-31. https://doi.org/10.1093/rof/rfw074

[20] Zohar, A. (2015). Bitcoin: Under the hood. Communications of the ACM, 58(9), 104-113. https://doi.org/10.1145/2701411

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