

Research Article

Blockchain Adoption and the Changing Landscape of Financial Accounting: Implications for Accountability and Sustainable Business Practices

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Abstract: Purpose: Decentralized Finance is the nascent technology which is transforming the global financial landscape. The purpose of this study is to understand the impact of blockchain technology adoption in financial sector of India strengthening Business Transparency, CyberSecurity and ESG reporting. **Design/Methodology/Approach:** Exploratory-cum descriptive research approach is used to achieve the research objective. 381 accountants and information technology professionals of metropolitan cities of India are surveyed through questionnaire by applying Purposive and Snowball technique and the analysis was done using SPSS and AMOS-24. **Findings:** The results of the proposed study revealed that the antecedents of extended UTAUT model showed positive relation in predicting the Transparency, Security and ESG reporting while adopting blockchain technology in financial accounting with the mediating impact of initial trust and the moderating impact of interoperability was insignificant. **Practical Implications:** Economic development of a country is dependent on good governance, Adoption of Blockchain Technology is important for the economic development and good governance as it enhance transparency and reduce corruption in country. **Originality/Value:** This study explores the financial sector and shed light on adoption of blockchain which plays an important role in enhancing the business transparency, security and ESG reporting.

Keywords: Blockchain Technology, Transparency, UTAUT, Accounting, Interoperability.

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INTRODUCTION

Introduction of the nascent Blockchain Technology has made transformational change across various industries. (Rahman et al., 2025). The distributed ledger, decentralised ledger and cryptographic security features of Blockchain Technology are deriving attention in several sectors. (Bazel et al., 2025). Due to this adoption of Blockchain Technology in financial sector is increasing tremendously (Treleaven & Yang, 2017). As application of Blockchain Technology in financial sector allows users to have more control on financial assets, reduces fraud, faster cross border payments and also introduces Decentralised Finance (DeFi) applications (V. Malamas et al, 2020). Deloitte in 2024 predicted that by 2026, Financial transactions will become increasingly automated due to blockchain and other technologies enabling touchless operations. PwC in its report also highlighted blockchain's potential to transformed transaction handling in financial services leading to more effective methods of payment and derivatives settlement Blockchain technology is an innovation that will change the accounting and financial sector. Both accounting and financial sectors will change because of the introduction of Blockchain Technology (Bonsón & Bednárová, 2019). Companies have started making adjustments to add adheres to many changes (Alkafaji et al., 2023). Blockchain is considered as a technology that is primarily considered to change the accounting industry. (Dai & Vasarhelyi, 2017; Karajovic, Kim, & Laskowski, 2017). Accountant need to work hard to implement this into their daily functions and use (Al Shanti & Elessa, 2023). Blockchain Technology has made financial accounting more transparent, secure, permanent, and immutable. (Demirkan et al., 2020) Once a transaction is initiated, it is verified by network nodes through use of a consensus mechanism (proof of work or proof of stake) If valid, this transaction is packed with others into a block, which is then assigned a cryptographic hash linked to the previous block, forming a chain of blocks. (Rajasekaran et al., 2022) The data stored on blockchains are more secure and immutable as altering a single block in the chain would have a destructive effect on the entirety of the chain. (Lu et al., 2024). ICAI is

working in the directions to promote blockchain in finance by organising training programmes for Chartered Accountants of India with the aim to enhance accuracy, transparency and trust in financial reporting.(ICAI, 2021).

Societal development depends on how efficiently the new technologies are adopted in various sectors across society. (Taherdoost 2018). Technological advancements in different sectors plays an important role in achieving endeavours which is dependent on the successful adoption of any technology. (Liu & Ye, 2021). Therefore, a proper technology acceptance model is needed to find out if accounting professionals want to adopt blockchain systems in accounting transactions. In the past, various studies have utilized different technology acceptance models such as the Theory of Reasoned Action (TRA) (Fishbein and Ajzen 1972), the Technology Acceptance Model (TAM) (Davis 1987), the Theory of Planned Behaviour (TPB) (Ajzen 1985), and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2003), For the forecasting and acceptance of any nascent technology these are the different models playing the role of theoretical foundation. Unified Theory of Acceptance and Use of Technology (UTAUT) has proved to be the most effective technology adoption model among these models in predicting acceptance of any new technology in different domains (Jena, 2022a). The main aim of this study was to use UTAUT model to study the adoption of Blockchain Technology in financial domain of India and to predict its impact of Business Transparency, Security and ESG reporting of any organisation particularly in financial sector.

To achieve the research objective this study extends “The unified Theor of Acceptance and Use of Technology” by introducing new variables in the model. Accordingly, the main objective of this research is to develop an extended UTAUT model to predict adoption of blockchain in financial accounting. Secondly, to investigate the various antecedents which are important to study, (Performance Expectancy, Facilitating Condition, and Perceived Awareness) influence the adoption of blockchain technology in predicting Business Transparency, Security and ESG Reporting. Thirdly, how significantly initial trust mediates and interoperability moderates this established relationship of antecedents and outcomes of adoption.

Mixed method design is used to comprehensively examine and conceptualize the proposed framework. This will reduce corruption and increase transparency in business which are critical for the economic development of any nation. Findings of the study revealed that the antecedents of the study (Perceived Expectancy, Facilitating Condition and Perceived Awareness) have the significant positive relationship on Business Transparency, Security and ESG Reporting with the mediating impact of initial Trust. While Interoperability predicted an insignificant relation in the proposed framework.

The layout of the article is outlined as follows: ‘Section 2’ explores Theoretical background of the study related to factors influencing adoption of blockchain technology and the outcomes of the study. ‘Section 3’ outlines the hypotheses development process. ‘Section 4’ details the methodology for the quantitative study, including research design and methods. ‘Section 5’ outlines the data analysis and findings, ‘Section 6’ explores the results, contributions and suggestions for future research

THEORETICAL GROUND

Based on the objectives of the study, the theoretical basis of the research framework is used from the basic UTAUT model. There are four basic predictors of behavioural intention in the original UTAUT model, which are Effort Expectancy, Performance Expectancy, Social Influence, and Facilitating Condition (Im et al., 2011). As studied in the literature review, many researchers have extended the UTAUT model and formed new construct based on the different applications and validated the usage of appropriate construct in the different versions of UTAUT model(Han & Conti, 2020; Jena, 2022b). It is observed that facilitating condition and performance expectancy have a substantial direct impact on behavioural intention to use technology, and it is also noticed that most important UTAUT extensions are trust, personal innovativeness, perceived risk, attitude, and self-efficacy. While studying various experienced users of technology in various developed countries have discovered that some variables like Effort expectancy are prone to generating insignificant results (Venkatesh et al., 2016).and will have a negative impact on others and some predictors cannot co-exist in a research model like effort expectancy have shown to reduce the facilitating conditions predictive abilities. For this research paper, Performance Expectancy and Facilitating Condition are taken as antecedents to business transparency, security and ESG reporting in the model. Additionally, this study introduced a new antecedent, Awareness, to enhance the model, alongside exploring the mediating impact of initial trust within the process and the role of interoperability as a moderator in the model. The inclusion of the awareness variable is intended to capture the impact of knowledge and understanding on the adoption of blockchain technology. By integrating these three antecedents, the extended UTAUT model aims to provide a comprehensive framework for analysing the factors that influence the adoption of blockchain technology in the financial accounting transactions.

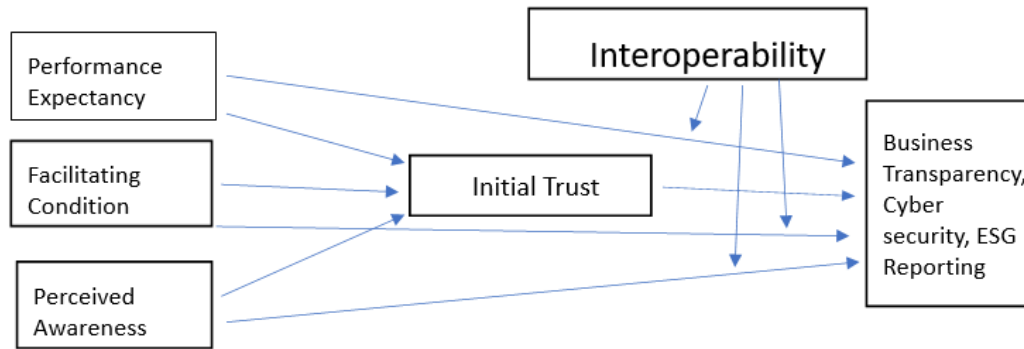


Figure 1. Conceptualized extended UTAUT model.

LITERATURE AND HYPOTHESIS DEVELOPMENT:

In the financial sector, such as interbank payment and global financial transactions, we use a closed distributed ledger. The closed type has a consensus mechanism that ensures the authenticity of the transaction, so that only a small number of specific groups can participate to offset the problems of openness. (S. Yoo, 2017). Acceptance is affected by various factors, such as the employees' thinking processes, trust, belief, attitudes, confidence level, and support system (Jevsikova et al., 2021). Banker's intention to adopt blockchain Technology for the transformation of banks is affected by nine factors (Renuka Sharma et al., 2023). Rabindra Kumar Jena, (2022) in his paper titled "Examining the Factors Affecting the Adoption of Blockchain Technology in the Banking Sector: An Extended UTAUT Model" developed and extended UTAUT model findings of the study revealed that how perceived expectancy and facilitating condition impact the banker's intention to use blockchain technology in banking sector with the mediating role of trust in the intention to adopt blockchain.

Business Transparency (BT), ESG Reporting (ER), Cyber Security (CS), and Adoption of Blockchain Technology

In the decision-making process, transparency which is related to the availability and quality of strategic information is viewed as a multidisciplinary and constantly evolving concept at different levels of organisation. (Shin, Kang, & Bae, 2020). Transactions recorded on blockchain can be viewed by anyone available on the chain network making it more transparent. This transparency helps to build trust among stakeholders and participants. (Hwang et al., 2017).

A Valette and R Olieslagers, (2023) defines Environmental, Social, and Governance (ESG) criteria have become critical benchmarks for assessing the sustainability and ethical impact of a company's operations. Environmental stewardship, social responsibility, and governance practices of any company can be evaluated by investors to trace the potential risk. ESG reporting relates to the disclosure of information about business operations in relation to environmental, social, and governance areas (Krantz & Jonker, 2024).

Cybersecurity refers to: "a measure for protecting computer systems, networks, and information from disruption or unauthorized access, use, disclosure, modification or destruction" (M P Gallahar et al., 2008) It is important to study what solutions can Blockchain Technology provide to deal with emerging cybersecurity threats and how deployment of blockchain will make internet infrastructure a secured one. (Demirkan et al., 2020).

Initial Trust as a Mediating Variable

Initial Trust (IT) is the confidence that users have in the reliability, security and performance of a technology instance prior to a direct interaction. (Gefen et al., 2003) describe the importance of confidence in the adoption of blockchain. Trust among users can be built by the decentralized and immutable nature of blockchain. For example, Kim and Peterson (2017) provide empirical evidence that IT mediates between user expectations and various adoption outcomes. Research findings indicate how trust mediates the relationship between users' perception and their actual engagement patterns and outcomes like transparency, cybersecurity, and ESG reporting (Frizzo-Barker et al., 2020).

Performance Expectancy and Blockchain Technology Adoption.

How an individual perceives the technology which will help them to gain maximum benefit from their work is referred to as Performance expectancy (PE). (Venkatesh et al. 2016). And behavioural intentions are proven to be affected by performance expectancy (Ayaz and Yanarta, 2020) (Nazim et al. 2021).

To study how performance expectancy will influence the business transparency, security and ESG reporting with the mediating role of initial trust, following hypothesis are formulated:

- **H1-** The relationship between Performance expectancy and Business Transparency is mediated by initial trust.

- **H2-** The relationship between Performance expectancy and Cyber Security is mediated by initial trust.
- **H3-** The relationship between Performance expectancy and ESG Reporting is mediated by initial trust.

Facilitating Condition and Blockchain Technology Adoption

The required infrastructure for the adopting of Blockchain Technology is embraced by the facilitating condition(FC). In the UTAUT model, facilitating condition is a direct predictor of user behaviour. (Venkatesh et al., 2003). Companies with better facilitating condition can make blockchain technology integration are supposed to be more effective leading to business transparency, cyber security and efficient ESG reporting(Taherdoost, 2022). Hence, the following hypothesis are proposed:

- H4- The relationship between Facilitating condition and Business Transparency is mediated by initial trust.
- H5- the relationship between Facilitating condition and Cyber Security is mediated by initial trust
- H6- Therelationship between Facilitating condition and ESG Reporting is mediated by initial trust.

Perceived Awareness and Blockchain Technology Adoption

Perceived Awareness (PA) refers to the level of the knowledge possessed by the individuals and organizations about the advantages and capabilities of any nascent technology. By being aware, we will know what is happening, what are its benefits and threats (Moosavi et al., 2021) and the adoption of blockchain for Transparency is propelled by awareness. The people who understand blockchain technology are more likely to trust it to curb fraud and maintain data integrity (Casino et al., 2019). its adoption for tracking and verifying sustainability initiatives (Treiblmaier, 2018). Related hypothesis are as follows:

- H7- The relationship between Perceived Awareness and Business Transparency is mediated by initial trust
- H8-The relationship between Perceived Awareness and Cyber Security is mediated by initial trust.
- H9- The relationship between Perceived Awareness and ESG Reporting is mediated by initial trust.

Interoperability as a Moderating Variable

Interoperability refers to the ability of two or more software components to cooperate irrespective of the differences in language, executing platform and interface (P. Wegner,1996) .Indeed, while risk mitigation and large-scale data analysis can be achieved by combining AI, blockchain, and cloud computing, adopting these technologies requires banks to overcome interoperability issues to ensure data integration across different systems (Addula et al., 2024). So, it's very important to study how it will moderate the relationship of antecedents of UTAUT model with Business transparency, cyber security and ESG reporting. Hence, related hypothesis are as follows:

- H10- Interoperability moderate the relationship between Performance expectancy and Business Transparency
- H11- Interoperability moderate the relationship between Performance expectancy and Cyber Security
- H12- Interoperability moderate the relationship between Performance expectancy and ESG Reporting.
- H13- Interoperability moderate the relationship between Facilitating condition and Business Transparency.
- H14- Interoperability moderate the relationship between Facilitating condition and Cyber Security.
- H15- Interoperability moderate the relationship between Facilitating condition and ESG Reporting.
- H16- Interoperability moderate the relationship between Perceived Awareness and Business Transparency.
- H17-Interoperability moderate the relationship between Perceived Awareness and Cyber Security.
- H18- Interoperability moderate the relationship between Perceived Awareness and ESG Reporting.

Conceptual model for the research based on the literature review has been framed in Figure 1.

From the literature review it is discovered that majority of the studies are focusing on developed and western countries, there is still a gap in prediction adoption of blockchain technology in perspective of Indian financial sector. Various antecedents are discovered while predicting the adoption of blockchain but still there exist a gap of introducing some new antecedents to the literature.For the integration of blockchain technology and designing effective regulatory framework the findings of the study offer valuable guidance to the policymakers of India.

RESEARCH METHODOLOGY RESEARCH DESIGN

This research explores the adoption of blockchain technology in financial sector so the accounting and IT professionals of metropolitan cities are surveyed through the questionnaire.Purposive and Snowball sampling methods are deployed to collect data from the respondentsand the data was collected over a period of four months from August to November 2025.Explicit consent was also obtained from the respondents prior to obtaining the information from them. Questionnaire is formulated using a five-point Likert scale with a total of 28 self-reported items for 8 different variables. Wolf et al., (2013) recommends that the minimum sample size be at least 10 times the number of free parameters in SEM. Considering the above recommendations, it was assumed that a minimum sample size of at least 200 would be sufficient to reduce bias in the study results. The calculated sample size was 381. Questionnaire was distributed through social media, and mail, resulting in a total of 419 responses received. Access to the complete questionnaire was granted only to those who

responded affirmatively. A total of 381 valid questionnaires were collected; this sample size was adequate for the purposes of data analysis and interpretation.

5. DATA ANALYSIS AND RESULTS

5.1 Measures

The scales for the research questionnaire are adapted from previous literature. Perceived awareness (Çoban et.al, 2024), ESG Reporting (Broniewicz et.al, 2024), Cyber security (Raed Falih et al., 2024), Perceived Expectancy (I Altawaiha et.al, 2024), Facilitating Condition (I Altawaiha et.al, 2024), Initial Trust (I Altawaiha et.al, 2024), Business Transparency (HH Teo et.al, 2003) Interoperability (K Sintok,2017 and N Van Thanh,2018). The specific measurement items for each construct are listed in Table. A 5 Point Likert scale is used for collecting participants' responses.

Table 1 reveals the assessment of measurement model to assess the values of factor loading, Composite reliability, Average Variance Extracted and Maximum Shared Variance. According to Hair et al. (2019), the recommended threshold limit for the values of reliability is 0.7 all the values on the table one representing the reliability are between 0.778 to 0.938 therefore, all the required values have the excellent values of reliability as required.

Table1: Convergent and discriminant validity table.

Construct	Items	Factor Loading	R	VE	SV
Performance Expectancy	Blockchain technology meets the performance standards required by financial accounting system.	.837	.894	.739	.182
	The efficiency of financial accounting system would significantly improve with blockchain adoption.	.901			
	Blockchain technology could handle financial accounting system more effectively than current systems.	.903			
Facilitating Condition	Adequate resources are available to support blockchain adoption in financial accounting.	.758	.862	.611	.281
	Technical Infrastructure in organizations support the adoption of blockchain.	.885			
	There is a significant support of IT staff for integrating blockchain in financial accounting.	.838			
	External support is available for adoption of blockchain technology in financial accounting.	.765			
Perceived Awareness	I am aware of the advantages of blockchain technology in financial accounting.	.842	823	608	164
	I believe that privacy of transactions is protected through blockchain technology.	.742			

	I know what blockchain technology is.	.752			
Initial Trust	Trust that blockchain technology will function reliably in financial accounting.	.797	938	791	125
	My trust in financial accounting is increasing because off blockchain's ability to record transactions transparently.	.892			
	The use of blockchain would make users more confident in the integrity of accounting system.	.928			
	For the successful adoption of blockchain trust in it is necessary.	.933			
Cyber Security	I believe that implementing blockchain technology enhances cybersecurity for our financial accounting system.	.728	881	652	051
	For the adoption of blockchain its potential to prevent data breaches is critical.	.886			
	To prevent unauthorised access in financial accounting blockchain is effective.	.917			
	Our response to cybersecurity threats in financial accounting would be improved due to adoption of blockchain.	.718			
Business Transparency	The data in the accounting system can be viewed transparently because of blockchain.	.780	778	539	182
	Intermediary is not involved while recording financial data on blockchain	.767			
	The entire data in financial accounting have a transparent flow because of blockchain.	.713			
ESG Reporting	Blockchain technology can enhance the assessment of materiality in ESG reporting by providing reliable data.	.618	913	785	032
	Blockchain will enable organizations to set and monitor KPIs and targets for more material ESG matters through transparent tracking.	.993			

	Blockchain will simplify and improve the process of collecting and verifying ESG data for accurate and comprehensive reporting.	.994			
y	Interoperability: Accountants find the system intuitive and easy to use without extensive training.	.766	911	720	281
	The blockchain platform supports common financial accounting data formats.	.871			
	The blockchain system is perceived as requiring minimal changes to existing accounting software.	.869			
	Blockchain-based solutions are perceived as reliable for long-term financial data storage and retrieval	.881			

Source: Author’s own work.

Factor loading measures the correlation between observed variables and their underlying latent constructs. The dataset shows a mean factor loading of 0.831, with values ranging from 0.618 to 0.994. This indicates that most items strongly correlate with their respective constructs, as values above 0.7 are generally considered acceptable.

5.2 Common Method Biasness

Before testing the measurement and structural models Common Method Variance (CMV) was conducted by applying Harman’s one-factor test (Podsakoff et al., 2003). Exploratory Factor Analysis (EFA) was also done to analyse the items in the test in which all items of measurement relating to the constructs were combined into a single factor without rotation. The threshold limit for EFA is 50% and the results indicated that the first component accounted for 32.93% which is very much less than the threshold limit (Podsakoff et al., 2003). Common method test was also assessed by Variance Inflation Factor (VIF) and the values for all constructs were found to be below threshold which is 3.3 (Kock, 2017; Podsakoff et al., 2003). As a result, it can be ascertained that this study was not significantly influenced by common method bias.

5.3 Validation of Structural Model

The model structure was analysed for its fitness by using the structural model test after confirming the fitness of the measurement model. Model fit was evaluated goodness of fit indices such as CMID/df, RMR, RMSEA, CFI, NFI, TLI, and GFI indices. The results of the test showed satisfactory validity and model accuracy as tabulated in the table below. All the values of the model fit are above the threshold value. (Hair et al, 2021)

Table2: Measurement model

	CMID/ df	R	RM	RMSE	CF	NF	TL	GF
Cut-off Value	<3	5	<0.	<0.8	>0.	>0.	>0.	>0.
Actual Value	1.787	9	.02	.045	.96	.93	.96	.90

Source: Results from SPSS 23 software

5.4 Model Assessment

In this section, we give a full and valid interpretation of the results from the PROCESS Macro. It examines a direct link and a mediation relationship between antecedents (Performance Expectancy (PE), Facilitating Condition (FC), and Perceived Awareness (PA)) and Outcomes (ESG Reporting (ER), Business Transparency (BT), and Cybersecurity (CS)) with Initial Trust (IT) as the mediator. It also explores the moderating role of Interoperability (INP). The direct relationship between the Outcomes BT, ER, CS and antecedents PE, FC, PA in the study predicted that perceived Awareness (PA) has a strong and statistically significant positive effect on ESG Reporting (ER) Coefficient: 0.96, SE: 0.24, t: 4.01, p: < 0.001 as higher awareness will lead to better ESG practices, whereas Performance Expectancy (PE) also significantly influences

Business Transparency (BT) Coefficient: 0.59, SE: 0.16, t: 3.61, p: < 0.001. Organizations with high expectations of blockchain's performance tend to improve transparency. Only these two variables supported the relationship. Rest, all other variable showed insignificant relationship.

5.5 Mediation effect

The bootstrapping method was used to assess the mediation effect in the theoretical model. The bootstrapping method is independent of any assumption about the sampling distribution. (Hair et al.,2017). Mediation results are presented in Table3. For the mediation effect of trust on the relationship between Perceived Awareness(PA) and Business Transparency (BT), Perceived Awareness (PA) and Cyber Security (CS), Performance Expectancy (PE) and Cyber Security (CS), Performance Expectancy (PE) and ESG Reporting (ER), Facilitating Condition (FC) and Business Transparency(BT), Facilitating Condition(FC) and (ER), Facilitating Condition(FC) and Cyber Security (CS) showing full mediation and between Performance Expectancy (PE) and Business Transparency (BT), Perceived Awareness (PA) and ESG Reporting(ER) there is partial mediation effect of initial trust. Thus, all the hypothesis formulated to establish the mediating relationship of initial trust i.e., H1, H2, H3, H4, H5, H6, H7, H8 and H9 are accepted.

Table3: Mediation Results

Path	Indirect Effect	Direct Effect	Mediation
PE → IT → BT	0.27	0.285*	Full
PE → IT → CS	0.36	0.12**	Partial
PE → IT → ER	0.21	-0.028**	Partial
FC → IT → BT	0.19	.011**	Partial
FC → IT → CS	0.25	-0.074**	Partial
FC → IT → ER	0.15	0.04**	Partial
PA → IT → BT	0.78	-0.156**	Partial
PA → IT → CS	0.105	0.309**	Partial
PA → IT → ER	0.061	0.353*	Full

(Significant- *, Insignificant- **)

Author's own work Source-Results from SPSS 23 software.

5.6 Moderation effect

Interoperability does not demonstrate a significant moderating effect in the relationships between Performance Expectancy, Facilitating Condition, or Perceived awareness with ESG Reporting, Business Transparency, and Cyber Security. There was no evidence for any interaction effect across all models (PE × INP: $\beta = -0.05$, $p = 0.32$; FC × INP: $\beta = 0.00$, $p = 0.94$; PA × INP: $\beta = 0.04$, $p = 0.69$). This indicates that Interoperability does not make an impact on the strength or direction of the relationships, meaning that although interoperability is important for blockchain integration, in this study interoperability does not alter the effect of key antecedents on the outcome variables of the model. It is clearly indicating there is no moderating impact of interoperability on any variable in this study. Hence, all the hypothesis for moderation impact of Interoperability is rejected.

DISCUSSION AND CONCLUSIONS

The main aim of this study is to extend the understanding of Blockchain Technology adoption in financial sector of India by extending UTAUT model with contextual variables. The theoretical foundation of the theories of UTAUT are enhanced by the proposed research model of this study and theory is also developed by the introduction of new variables to the model of UTAUT like Initial trust, interoperability, perceived awareness. These variables are playing critical role in predicting adoption of blockchain technology So, there impact is assessed on the outcomes which are business transparency, cyber security and ESG reporting in the financial sector.To evaluate the reality of blockchain technology adoption in India high level of trust by the accounting professionals is required. As it will make easier to validate the details of the blockchain services. The findings of the study indicated that initial trust have a significant impact on business transparency, cyber security and ESG reporting. The results of the study confirmed that for the successful adoption of blockchain technology initial trust by the accounting professionals is required. If the transactions are done on blockchain platform this will increase the authenticity and legitimacy which will automatically make the financial information users more comfortable toward adoption of blockchain.(Ullah et al., 2022).

The proposed model validates the relationship between performance expectancy, facilitating condition, and perceived awareness with initial trust. This finding is consistent with previous studies. The relationship between performance expectancy, facilitating condition and perceived awareness with initial trust is validated in the proposed model (Jena, 2022a, 2022b) in the context of IT-enabled financial services. As examined, initial trust is increased when the users discover that the nascent technology is facilitating efficiency in their performance. Therefore, when the financial risks are streamlined by blockchain technology, it will lead to strengthen trust of financial experts.

The moderating variable, interoperability fails to moderate the association of the formulated constructs in the model. All the nine Hypotheses related to the moderating impact of interoperability are statistically insignificant and hence rejected. This implies that interoperability being in the scope and context of this study, doesn't significantly influence the relationship between the antecedents and the outcomes in this study. The findings of the study revealed that although interoperability is an important aspect to be studied for the successful adoption of blockchain in any sector but it failed to establish relation of moderator between the antecedents and outcomes of the study consequently it failed in shaping the perception of trust and transparency in accounting. It might be possible that participants may lack understanding of blockchain's practical implications, or it may be that interoperability, as currently implemented, is not mature enough to exert a noticeable moderating influence.

6.1 Study Implications

This research makes theoretical advancement contribution to both research and practice. This model will provide a holistic approach to researchers to analyse the aspects and different factors responsible for successful adoption of blockchain technology in Indian accounting sector while extending the UTAUT model. It will facilitate policymakers and practitioners with useful insight with the role of advanced technology in financial services.

This study significantly contributes to the advancement in theory. Firstly, to the best of our understanding, this attempt to understand blockchain is way early in Indian financial sector. Although a small number of studies previously studied blockchain technology in financial accounting by UTAUT model but the resilience of this study is extended UTAUT model by adding contextual, behavioural, technological and environmental variables. It is important to point out that the constructs which are relevant for the adoption of blockchain technology are not just the facilitating conditions, but also the performance expectancy, initial trust, the moderating role of interoperability, and mediating role of initial trust, how they impact the business transparency, cybersecurity, and ESG reporting. Using empirical evidence to investigate the influence of adopting blockchain on three fundamental aspects of FA (i.e., business transparency, ESG reporting and cybersecurity), this study fills a significant gap in the literature.

6.2 Limitations and future research

The analysis of this study can provide valuable insights in the adoption of blockchain theory and its application in financial accounting but still there are various limitations which can be addressed in future researches. First, sustainability of a business is measured on three parameters of business transparency, cyber security and ESG reporting. Many other parameters can also be included in the above adoption model. Therefore, future studies can generalize are model by adding new constructs. Secondly, initial trust is analysed in our study there are some other types of trust which are also required to be explored in future research works. Thirdly, the interplay of interoperability as a moderator was not as significant as any other moderator can be. Government regulation is also an important factor which need to be studied for the successful adoption of nascent blockchain technology in Indian context as regulating blockchain technology is considered to be relevant for its successful adoption in Indian accounting sector.

CONCLUSIONS

The purpose of this study was to develop an extended UTAUT model and empirically validate it to show how significantly the antecedents of the model affect adoption intention of blockchain by accounting professionals. The results of the study depicted that here exist high explanatory power and the model is reliable across a range of scenarios. According to this study the strongest predictors for blockchain adoption in finance are Performance Expectancy (PE), Facilitating Condition (FC) and Perceived Awareness (PA). The moderating relation of interoperability which is insignificant also play an important role in this study. For future recommendations this study recommends researchers to integrate methods for studying the acceptance of nascent blockchain technology through shedding light on the importance of UTAUT model extension by integrating other new constructs. The role of Initial trust in mediating the relationship between the antecedents and outcomes of the study also play an important role in predicting the blockchain adoption intention by the practitioners. Therefore, the results highlighted trust-building among practitioners as an important element for implementation of blockchain and how its adoption will impact business transparency, ESG commitment and improved cybersecurity. Blockchain's inherent feature of immutability and transparency confirms the financial information is tamper proof and easily auditable which will help to curb corruption in India. For the effective implementation of blockchain in financial accounting the results of the study offer significant directions to the policymakers in designing effective regulatory

frameworks. In Indian accounting sector the results of this study demonstrate greater coherence in predicting implementation of blockchain in financial accounting.

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