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# Determinants of Cloud-Based Accounting Adoption in Nigerian Deposit Money Banks

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## **Abstract**

This study examines the factors that determine the adoption of cloud-based accounting in Nigerian deposit money banks. A cross-sectional survey research design was employed in the study. The population of study was 391 deposit money bank branches operating in northwestern Nigeria as of December 31, 2021, as obtained from the Central Bank of Nigeria Database. A sample of 177 deposit money bank branches in northwestern Nigeria was used. The cluster sampling technique was employed in selecting the respondents. The study retrieved 364 questionnaires that represent a response rate of 68.5%. The collected data were analyzed using descriptive and inferential statistics. PLS-SEM was employed for hypothesis testing, and the study found that human factors and perceived trust have a significant and positive relationship with cloud-based accounting adoption, as predicted, whereas technological and organizational factors revealed an insignificant relationship. On the other hand, environmental factors showed a significant but negative association with cloud-based accounting adoption. Therefore, this study recommends that banks and other vendors of cloud-accounting technology should build clients' trust in cloud-based applications by ensuring that sensitive personal information is reliably encrypted and by providing evidence that the system allows users to maintain control over the data they share. In addition, banks should carry out strong public awareness programs that can help enlighten the general public about the security and other benefits of cloud accounting adoptions.

**Keywords:** Cloud based Accounting, Perceived Trust, Technological, Organizational, Environmental

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## **1. Introduction**

The inefficiencies of old accounting methods led to the adoption of cloud-based accounting, and in order to meet the needs of the twenty-first century, managers of businesses must update their outdated accounting information systems with the most recent models (Egiyi & Udeh, 2020). Notwithstanding, there exist numerous impediments to the adoption of cloud accounting within the Nigerian milieu. These comprise inadequate infrastructure, apprehensions about the confidentiality and integrity of data, and governmental regulations that impede the advancement of cloud accounting in Nigeria (Egiyi & Udeh, 2020). On the other hand, organizational elements refer to characteristics of an organization that could significantly influence its decision to use cloud computing

(Alkather et al., 2017) It is crucial to take into account environmental factors, particularly as they pertain to the adoption of new technology (Lawan et al., 2021). Likewise, Baharuddin et al. (2018) described environmental factors as the sector in which the company works and its relationships with suppliers, competitors, and the authorities.

The human factor in technology adoption, according to Permadi et al. (2018), is how individuals view and assess the system's use in connection to training, experience, knowledge, hope, acceptance, and rejection of the technology. When people adopt technology, they assess the information system based on how well users are satisfied and how well they use it (Alfina & Irfan, 2020).

However, numerous studies on the adoption of cloud-based accounting were carried out in Asia or other developed nations worldwide (Chong et al., 2021; Modisane & Jokonya, 2021; Lynn et al., 2020). These studies were conducted in Pakistan (Sastararujji et al., 2021), Saudi Arabia (Albar & Hoque, 2019), and Afghanistan (Alshahrani, 2021). However, studies on the factors influencing the adoption of cloud accounting technology were clearly scarce in Nigeria, as the researcher was able to find very few (e.g., Okafor et al., 2021). This is despite the evidence of a gradually diminishing resistance to adopt cloud-based accounting in developing countries like Nigeria (Egiyi & Udeh, 2020). Furthermore, to the best of the researcher's knowledge, no study has looked at the factors that influence the adoption of cloud-based accounting in Nigerian businesses, especially the banking industry, which is one of the nation's most competitive, technologically advanced sectors. Furthermore, to the best of the researcher's knowledge, the majority of the scant studies that looked at the variables influencing cloud-based accounting internationally were carried out in Asian nations (Premarathne et al., 2021; Eldalabeeh et al., 2021; Walakumbura, 2021). Furthermore, a few of them (Moradi & Nia, 2020; Banybakr & Eleima, 2021; Oaadi & Elhaddad, 2021) made use of the Technology, Organization, and Environment (TOE) framework. The majority of them (e.g., Algushami et al., 2018; Sanarathna et al., 2018; Sithole & Ruhode, 2020; Modisane & Jokonya, 2021) do not add any variables to the model.

In addition, although in Nigeria there were several headlines regarding the computerized accounting data breach of the clients' financial data, it is clear that the Nigerian banking industry welcomed cloud-based accounting. It was alleged that Unity Bank plc exposed client financial and non-financial information to unapproved parties (Ifeoma, 2020). According to Idris (2020), cybercrime hackers who share the content on social media are the ones who carried out the infiltration. He went on to say that if such an incident happened, clients may lose their accounting data to unauthorized individuals who could change or erase the data. Similar circumstances led to a second computerized accounting data breach at Access Bank in August 2020. According to Irene (2020), the hacker claimed he wanted the banks to understand the weaknesses in their data protection system in order to obtain access to the clients' computerized accounting data. But in spite of these accusations against the purported hackers, the banks publicly refute any breach on their databases, which is to be expected from the perspective of secret persons (Irene, 2020). Few Nigerian enterprises, according to the unnamed source, who works as an executive at one of the country's top fintech companies, would openly disclose a breach to the public in order to protect their reputation.

A recent research on Access Bank and Unity Bank indicates that, despite their public denials of the breach, they may have received negative press that damaged their reputations (Irene, 2020). Furthermore, according to a poll, Irene (2020) revealed that there will be a fifty percent increase in data privacy issues and cyber security concerns. This is a result of the hackers' constant monitoring and testing of various firms' security systems in Nigeria and throughout the globe. Furthermore, according to a research conducted by the

Association for Information and Image Management, the lack of structure in data management is the primary cause of more than 60% of the information theft that occurs within institutions (Idris, 2020).

As a result, it is evident that the aforementioned situations lacked a risk assessment prior to adoption. Thus, According to Sivathanu (2019), trust is defined as the users' desire toward a technology-enabled expected outcome and their confidence that the service provider will carry out their obligation. Research has shown that the degree of perceived trust that people have in new technology plays a crucial role in influencing the technology's intended behavior (Sabli et al., 2021). It is therefore stated that, in comparison to businesses with lower levels of trust, those with higher levels of trust would be more willing to embrace and employ cloud-based accounting. According to De Visser et al. (2016), trust is a recent and important aspect in technology-related research. People assess whether they can trust a new system before deciding to use it, therefore their inclination to trust is a significant factor in determining how they utilize it (Furner et al., 2021). According to Talwar et al. (2020), the use of wireless internet for financial transactions is positively impacted by perceived trust. Numerous studies on the adoption of technology have emphasized the role that trust plays in bolstering the system's perceived security and legitimacy (Liébana-Cabanillas et al., 2018).

It is therefore suggested that perceived trust be incorporated into the framework. As a result, it is critical to take perceived trust into consideration when determining what factors influence the adoption of cloud accounting technology, which has reduced perceived risk. Furthermore, to close this gap in the literature, Osama et al. (2022) advise in their study that future researchers should take trust into account as the primary factor, moderator, and/or mediator. Thus, this study's primary goal is to examine the variables that influence cloud-based accounting adoption in Nigerian deposit money institutions. Thus, this study deemed perceived trust to be a determining element in the adoption of cloud-based accounting, and this is seen as one of the study's contributions.

## **2. Literature Review**

### **2.1 Conceptual Review**

#### **2.1.1 Cloud-Based Accounting Adoption**

Cloud-based accounting refers to an online accounting process that accomplishes the same duties as the conventional accounting by employing this technique of accounting (Okafor et al., 2021). Similarly, cloud-based accounting may be characterized as making use of accounting systems over the internet rather than accounting systems hosted locally on a specific computer system (Sobhan, 2019). It is an internet based accounting and can be accessible on the internet via any computer with internet connectivity while the conventional accounting system is confined to a specific computer (Sobhan, 2019). Moreover, cloud computing refers to the supply of accounting or computing services over the internet that includes storage, data analysis or accounting (Alhujran et al., 2018). According to Egiyi and Udeh (2020), cloud accounting is a circumstance where all data and details of financial transactions may be kept and accessible from anywhere.

#### **2.1.2 Technological Factor**

Technological variables in the context of cloud accounting pertain to the characteristics that might be beneficial or detrimental to its implementation in any capacity. These aspects encompass the comparative advantage of the technology, which may influence its acceptance (Lawan et al., 2021). They believe that the relative advantage refers to the anticipated benefits of adopting technology, and corporations get additional advantages mostly through taking technical risks. Atiti (2021) also discussed the technological aspects

that influence the adoption of technology, such as cost flexibility, increased productivity, and scalability. In addition, Baharuddin et al. (2018) defined technical elements as the characteristics of both internal and external technology that are relevant to the organization and used by the firm. Technological element refers to the attributes of both internal and external technologies that are relevant to a business (Alhujran et al., 2018).

### **2.1.3 Organizational Factor**

Organizational element under the TOE framework says that for technology to be fully employed, it should fit into an organizational structure (Atiti, 2021). In the view of Baharuddin et al. (2018), organizational factor refers to descriptive features of the organization, including company size and scope, complexity of firm managerial structure, and quality and degree of its human resources. Similarly, organizational considerations relate to the features of a company that could greatly affect its cloud adoption decision (Alkather et al., 2017). The organizational component relates to the features of organizations in terms of size, the scope of business, centralization, formalization, and managerial structure, amount of resources, and connectivity among personnel (Hamundu et al., 2020). Alhujran et al. (2018) define the organization factor as the traits and assets of an organization that influence the decisions made about the adoption and use of cloud computing technology.

### **2.1.4 Environmental Factor**

An atmosphere that supports growth is essential for a firm or organization to succeed; without it, it will fail (Atiti, 2021). Environmental issues should be studied notably how they relate to technological adoption (Lawan et al., 2021). Similarly, the industry in which the company operates and its interactions with suppliers, rivals, and the government are considered environmental factors by Baharuddin et al. (2018). Furthermore, environmental considerations in the view of Alkather et al. (2017) indicate the environmental aspects that might affect an organization's inclination to use cloud technology. Additionally, the organization's operating environment includes the government, rivals, and industry (Hamundu et al., 2020). Furthermore, the term "environmental factor" describes the conditions under which an organization operates. These variables can include the firm's immediate surroundings, competitors, laws, geographic locations, and relationships with the government (Sithole & Ruhode, 2021). The regulatory and competitive environments are considered environmental factors, in agreement with Albar and Hoque's (2019) perspective.

### **2.1.5 Human Factor**

The term "human factor" describes any aspect or factors that affect how well people execute in relation to the megaproject's safety throughout construction (Ramprasad & Kumar, 2018). Physiological, psychological, socio-psychological, and physical aspects of humans are the main sources of human components. The human element in the adoption of technology is the evaluation of the system by the user with regard to its usage, instruction, experience, knowledge, hope, acceptance, and rejection (Permadi et al., 2018). When adopting new technology, human components evaluate the information system based on user happiness and system utilization (Alfina & Irfan, 2020). Users' expectations, their attitude toward accepting (acceptance) or rejecting (resistance) systems, and their training are all related to how the system is used. This component also examines the system from user satisfaction standpoint. When it comes to both providing and consuming information, Alfina and Irfan (2020) contend that humans are an essential component of the information system. Comprehending the human factor aids in comprehending why a system may not be appropriate for every individual.

### **2.1.6 Perceived Trust**

The adoption of new technology is significantly influenced by perceived trust (Meyliana et al., 2019). People are more inclined to embrace and incorporate new technology into their lives when they feel that it is trustworthy (Senali et al., 2023). In order to allay worries about data security, privacy, dependability, and competence, people and organizations need to have a high level of trust in cloud-based accounting systems (Singh & Sinha, 2020). Cloud-based accounting refers to the use of online platforms and services to manage financial data, conduct transactions, and complete accounting tasks. Senali and others, 2023 Conversely, a lack of trust can result in resistance, mistrust, and an unwillingness to use new technologies. According to Yang Tian et al. (2023), people's intention to utilize e-commerce platforms was highly influenced by their perceptions of the security of the transaction and their level of trust in the online vendor. One of the most important factors influencing people's attitudes and behaviors around the adoption of new technologies is perceived trust. People's intentions to use social networking sites were greatly influenced by their perception of the privacy and security of their personal information on these platforms. Perceived trust is essential to the uptake and sustained use of social networking technologies (Senali et al., 2023).

## **2.2 Empirical Review and Hypothesis Development**

Using the TOE model or HOT fit model in various industries, numerous research were carried out in the field of cloud-based accounting systems and other associated cloud computing technologies. The most noteworthy ones, after review, are all described in detail below. Furthermore, suppositions were made in light of the earlier discoveries.

### **2.2.1 Technological 2.2.1 Factors and Cloud-Base Accounting Adoption**

Ouaadi and Elhaddad (2021) looked at the variables influencing the desire to embrace cloud accounting in order to better understand the relationship between technological elements and technology adoption. The study's findings indicate that while professional category and flexibility have little bearing on the intention to embrace cloud accounting, other factors like the reason for usage, incentive, remote reporting, and business size do. In particular, it was discovered that organizational characteristics had little correlation with cloud-based accounting, whereas technological and environmental aspects had a substantial impact.

The study was not be able to captured human factor and perceived trust, therefore, current study will contribute to the body of the literature by incorporating these additional determinants

In a similar spirit, Sithole and Ruhode (2021) examine the elements that drive acceptance in order to identify the potential and problems associated with cloud computing adoption by SMMEs in South Africa. The study's findings indicate a mixed picture of the elements, with technological aspects showing a strong positive correlation with the use of cloud computing. The study discovered a negligible positive correlation between organizational characteristics and cloud technology adoption, but a strong negative correlation between environmental factors and the same. This suggests that South Africa's adoption of cloud computing may be hampered by environmental issues. The study focuses mainly on SMMEs; therefore, the current study concentrates on deposit money banks that operate in Nigeria.

Similarly, Alghushami et al. (2018) examined the determinants influencing cloud computing adoption in Yemeni higher education institutions. The results showed that technological, organizational, and environmental factors have positive impacts on the adoption of cloud computing in Yemen's higher education institutions.

On the other hand, Modisane and Jokonya (2021) look into the variables that affect the adoption of cloud computing in small, medium, and micro-sized businesses in South Africa's northwest area. The study's conclusion demonstrates that there is a negligible positive correlation between technological factor determinants and technology adoption. The adoption of cloud computing is significantly correlated negatively with organizational characteristics, but the results for environmental factors were inconsistent, albeit negligible. The current study focuses on deposit money banks that operate in Nigeria because the study focused on SMMEs South Africa.

In addition, Sanarathna et al. (2018) examined the important factors that influence SMEs' adoption of cloud computing technology. Drawing upon aspects of the Technology, Organization, and Environment framework and Diffusion of Innovation Theory, the study developed a research model of SMEs' adoption of cloud computing and tested it through an online survey of 149 Australian SMEs. The data was analyzed using the multiple regression method. The result of the study shows that cloud computing adoption in Australian SMEs is significantly influenced by organizational and environmental factors (i.e., relative advantage, quality of service, and awareness). However, for the technological factors (i.e., security, privacy, and flexibility), the relationship was insignificant. The survey was restricted to Australian SMEs, limiting generalizability. Moreover, only TOE model factors cannot determine the adoption of technology in other contexts, considering the believe of the users differs in other contexts. Therefore, including the perceived trust is considered a worthy variable as a contribution.

Given the mixed results from the prior studies mentioned above, some of which indicate significant results while others do not, the following hypothesis is formed as the research's expectation:

**Hi:** *There is significant relationship between technological factors and cloud-based accounting adoption.*

### **2.2.2 Organizational Factors and Cloud-Based Accounting Adoption**

The elements that affect cloud accounting adoption in the financial sectors are explained by Banybakr and Eleima (2021) in their discussion of the relationship between organizational factors and technological adoption. The study's findings, which were limited to variables relevant to this investigation alone, indicate a strong correlation between the adoption of cloud computing and organizational, technological, and environmental aspects. The study's local sample does not accurately reflect financial organizations' adoption patterns throughout the world. Therefore, the contribution that this study takes into consideration is the extension to encompass other sectors in other domains. Comparably, Chong et al. (2021) looked into what influences people's decision to use cloud-based digital signature services. The study's conclusions demonstrate that the intention to adopt was highly influenced by technical, organizational, and environmental factors. Nonetheless, a lot of people are still worried about how secure cloud-based services are. The study was restricted to the TOE variables alone, even though there are several factors that influence the adoption of cloud computing. As such, perceived trust is included as a contribution in the current study.

Furthermore, Habiboglu and Pirtini (2021) used the technology-organization-environment model to assess the enterprises' social media performance targets' degree of achievement. The findings demonstrate that the technology adoption aspects (technology-organization and environment) have a favorable impact on social media performance goals. In particular, the most impacted dimension is the social media performance. Additionally, the target markets in which a company operates determines the success rate in achieving its social media performance objectives.

On the other hand, Sithole and Ruhode (2021) looked at the adoption factors of cloud computing by SMMEs in South Africa in order to analyze the opportunities and problems associated with it. The study's findings indicate a mixed picture of the elements, with technological aspects showing a strong positive correlation with the use of cloud computing. The study discovered a negligible positive correlation between organizational characteristics and cloud technology adoption, but a strong negative correlation between environmental factors and the same. This suggests that South Africa's adoption of cloud computing may be hampered by environmental issues.

Again, Chandra and Kumar (2018) theorized the role of technological factors (technological competence and relative advantage), organizational factors (decision-makers' knowledge, financial strength, and top management support), and environmental factors (consumer readiness and competitive pressure) in influencing an organization's adoption of augmented reality (AR) for e-commerce. Results highlight the significant roles of technology competence, relative advantage, top management support, and consumer readiness in influencing an organization's adoption intention of AR for e-commerce. The study was limited to only three specific nations, so its results cannot be generalized globally. The researchers recommended that future research could be done on this subject for different geographies, which have different regulatory and infrastructural developments.

In addition, Albar and Hoque (2019) examined the factors that influence the adoption of cloud ERP in the Kingdom of Saudi Arabia by combining the diffusion of innovation theory (DOI) and the technology-organization-environment (TOE) framework. Data for this study were analyzed through the partial least squares (PLS) method based on structural equation modeling (SEM). The study found that technological and environmental determinants (competitive environment, complexity, ICT infrastructure, observability, relative advantage, regulatory environment, ICT skill, and top management support) had significant influences on the adoption of cloud ERP, while organizational factors (compatibility, organizational culture, and trialability) had no significant impact. The data for the study was collected in a Saudi Arabian context only. In order to extend the study into other developing countries as suggested by the researchers, this study was conducted in a sub-Saharan African context, with empirical evidence from Nigeria as a contribution to the body of literature. Given the mixed results from the earlier studies mentioned above, some of which indicate significant results while others do not, the following hypothesis is formed as the research's expectation:

**Hi:** *There is significant relationship between organizational factors and cloud-based accounting adoption.*

### **2.2.3 Environmental Factors and Cloud-Base Accounting Adoption**

Gui et al. (2021) examine the impact of cloud computing adoption by outlining the TAM-TOE model on the elements that affect cloud computing to enhance business performance. They accomplish this by examining the relationship between environmental factors and technology adoption. Technology Context (TC), Organizational Context (OC), Environment Context (EC), Perceived Usefulness (PU), Perceived Ease of Use (PE), Attitude (A), and Behavioral Intention (BI) are the independent variables that make up the variables investigated in this study. The findings demonstrated that while OC and PE had no effect on technology adoptions or business success, technological context, environmental context, perceived usefulness, and attitude did. The outcome demonstrates that businesses concurred that cloud computing is useful and may raise productivity. The current study adds perceived trust to the model for analysis, which helps when additional TAM components are added to the model.

Similar to this, Alshahrani (2021) created a conceptual framework based on the resource-based approach and the technology-organization-environmental framework to predictors and repercussions of cloud computing adoption among SMEs in Saudi Arabia. According to research, cloud computing use improves SMEs' organizational performance and has a positive correlation with environmental and technological aspects.

On the other hand, Modisane and Jokonya (2021), who examined the variables influencing cloud computing adoption in small, medium, and micro-sized businesses in the northwest region of South Africa, discovered an inconsequential result. The study's conclusion demonstrates that there is a negligible positive correlation between technological factor determinants and technology adoption. The adoption of cloud computing is significantly correlated negatively with organizational characteristics, but the results for environmental factors were inconsistent, albeit negligible. The study was criticized for using a smaller context (the North West Province context); another study can expand it to another or a larger context as a contribution to the body of knowledge.

In addition, Sithole and Ruhode (2021) look at the elements that drive adoption to identify the possibilities and obstacles that lead to SMMEs in South Africa adopting cloud computing. This is a negative association. The study's findings indicate a mixed picture of the elements, with technological aspects showing a strong positive correlation with the use of cloud computing. The study discovered a negligible positive correlation between organizational characteristics and cloud technology adoption, but a strong negative correlation between environmental factors and the same. Given the mixed results from the earlier studies mentioned above, some of which indicate significant results while others do not, the following hypothesis is formed as the research's expectation:

**Hi<sub>3</sub>:** *There is significant relationship between environmental factor and cloud-based accounting adoption.*

#### **2.2.4 Human Factors and Cloud-Base Accounting Adoption**

Premarathne et al. (2021) looked at perceived factors influencing the uptake of cloud-based accounting in Sri Lanka in order to better understand the interaction between human factors and technological adoption. To determine the elements that influence cloud-based accounting, independent variables such as technological, organizational, environmental, and human factors are used. The findings indicate that all four of the aforementioned characteristics are highly significant and have a beneficial impact on the adoption of CBA. The fact that the study primarily looked at middle-and upper-level accountants in Sri Lanka presented a number of difficulties. As a result, the current study adds perceived trust as a factor that influences the adoption of cloud-based accounting.

Furthermore, using the HOT fit model, Ramprasad and Kumar (2018) examined the impact of three factors technical, organizational, and human on the safety culture surrounding construction in India. The results showed that a variety of HOT variables at work had an impact on the employees. The project organization, work and human (individual) aspects, organizational administration, hierarchy, control, and command are the primary spheres of influence in the workplace. Two critical factors, namely the organization's internal communication system, supervision, and methodical training methodology, have a direct impact on these areas. According to the conclusions drawn from the thoughts of the experts gathered for the study, the human component has a significant influence on the adoption of technology.

On the other hand, Alfina and Irfan (2020) use the Human-Organization-Technology (HOT fit model) to analyze the implementation of e-learning. The study's conclusions showed a mixed outcome. The net benefit of the HOT fit model showed a limited



(insignificant) link with certain aspects of human factor, but a substantial association was found with technological and organizational components.

In addition, Lynn et al. (2020) investigated the determinants and future challenges of cloud computing adoption for high-performance computing. The survey was distributed to 619 HPC decision-makers worldwide using publicly available email addresses. The findings of the study were revealed categorically as follows: for the human factor, the results indicate that, even though innovativeness is high, this does not necessarily lead to cloud computing adoption, which means an insignificant relationship. On the technological factor, none of the factors compatibility, complexity, reliability, and security influence the adoption of cloud computing for HPC, which means there is no relationship. On organizational factors, only perceived indirect benefits significantly influenced the decision to adopt cloud computing for HPC. However, the study used a single informant, a small sample size, and a potential overrepresentation in the sample from the academic community. The results would be more robust with data from multiple respondents and a larger sample. Given the mixed results from the earlier studies mentioned above, some of which indicate significant results while others do not, the following hypothesis is formed as the research's expectation:

**Hi4:** *There is significant relationship between human factors and cloud-based accounting adoption.*

### **2.2.5 Perceived Trust and Cloud-Base Accounting Adoption**

Numerous research has investigated the connection between technology adoption and perceived trust, offering important new perspectives on this phenomenon. A study on the adoption of Financial Technology (FinTech) services in terms of risk and trust was conducted by Meyliana et al. in 2019. The findings suggest that the perceived usefulness of FinTech services is influenced by users' faith in the service. Furthermore, Senali et al. (2023) look into the factors that influence people's intentions to use electronic wallets. The findings demonstrated that intention to use an e-wallet is highly influenced by perceived usefulness, perceived ease of use, perceived danger, and perceived emotions. The impact of perceived compatibility on adoption intention is negatively moderated by personal innovativeness, although the influence of perceived emotion is positively moderated. Perceived utility and simplicity of use are positively tempered by a propensity to trust, while compatibility has an adversely tempered effect on the intention to use e-wallets. The study was not able to address organizational and environmental factors, hence, current study was included.

In a similar vein, Yang Tian et al. (2023) look into the factors that influence how customers in an emerging market use the Alipay e-wallet system, as well as the moderating effects of perceived trust and perceived service quality. The findings show that, with the exception of the moderating effect of perceived trust, all hypotheses were significant with regard to customers' desire to use Alipay in a developing market. The most powerful indicator of consumers' intention to utilize Alipay in an emerging market was perceived utility. The apparent simplicity of usage comes next. They place a lot of emphasis on how much more efficient and convenient Alipay is for handling financial transactions than other e-wallet systems. The study used perceived trust as a moderator while the current study uses as primary factor in determine cloud-based accounting adoption.

In a study by Alsharayri and Drew (2019), the researchers examined the factors influencing small and medium-sized enterprises' (SMEs) adoption of cloud-based accounting systems. The findings indicated that perceived trust, including trust in the service provider's reliability, data security, and competence, significantly influenced SMEs' intention to adopt cloud-based accounting. The study highlighted the critical role of

trust in driving the adoption of cloud-based accounting systems among SMEs. Hence, the current study determines the effect of trust in adoption of cloud-based accounting systems in deposit money banks in Nigeria. Utilizing empirical data from earlier writers going beyond previous research on perceived trust in the adoption of new technology, the following hypothesis is developed as the expectation of this research: Some studies use perceived trust to moderate the effect of other factors on adoption, while others use it as a direct factor toward adoption and their findings show significant results, while some are insignificant.

**H<sub>15</sub>:** *There is significant relationship between perceived trust and cloud-based accounting adoption.*

### **2.3 Theoretical Framework**

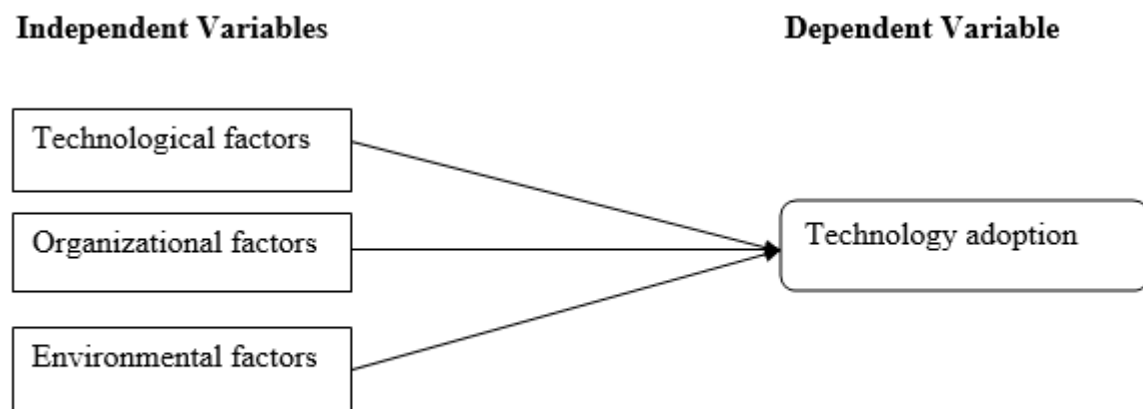
The application of theoretical frameworks such as TAM and UTAUT as well as the TOE in the context of technology adoption is extensively established and accepted. Moreover, various researchers have employed different technology adoption theories to carry out studies on cloud-based accounting adoption by enterprises. These theories include TOE framework, Technology Adoption Model (TAM), Diffusion of Innovation (DOI), HOFIT model and Unified Theory of Acceptance and Use of Technology (UTAUT) among others. However, when it comes to organizational adoption, TAM and UTAUT are restricted to the person level of adoption but TOE as the name states, it is an organizational-based framework (Ouaadi & Elhaddad, 2021). Considering that, this research supports TOE model for three of the variables employed in this study, Diffusion of Innovation Theory was used as supporting theory to infuse human component variable.

#### **2.3.1 Technology-Organization-Environment Framework (TOE)**

The multi-perspective framework and organization-level theory known as the technology-organization-environment (TOE) was developed by Tornatzky and Fleischer in 1990. According to this paradigm, an organization's technical, organizational, and environmental components all have an impact on how quickly a technology breakthrough is adopted (Humundu et al., 2020; Ahujran et al., 2018). When examining technology adoption, utilization, and value production from technology, TOE is superior to other adoption models due to its mix of technical, organizational, and environmental components (Premarathne et al., 2021). Furthermore, there are no restrictions on industry or business size under the TOE framework (Sithole & Ruhode, 2021). Furthermore, a great deal of testing of the TOE framework in IT/IS adoption studies has produced consistent empirical data (Alhujran et al., 2018).

Additionally, TOE is one of the adoption theories that is used the most frequently and operates at the organizational level. It provides a thorough explanation of how innovation adoption and implementation are influenced by the three main contexts of technology, organization, and environment (Premarathne et al., 2021). The TOE framework (Tornatzky & Fleischer, 1990) provides the foundation for adoption based on technological, organizational, and environmental context. Fiedler's contingency theory, which holds that common factors are grouped according to their impact on technology adoption, is the basis for this theory (Eldalabeeh et al., 2021). Previous studies on cloud computing indicate that the TOE framework could provide a suitable platform for problem analysis (e.g., Atiti, 2021; Sastararuji et al., 2021). The determinants of intention towards adopting and using technology, which is integrated into the contexts of technology, organization, and environment, should be taken into consideration by cloud computing adoption theory, according to other related studies like Eldalabeeh et al. (2021); Sobhan (2019); and Premarathne et al. (2021).

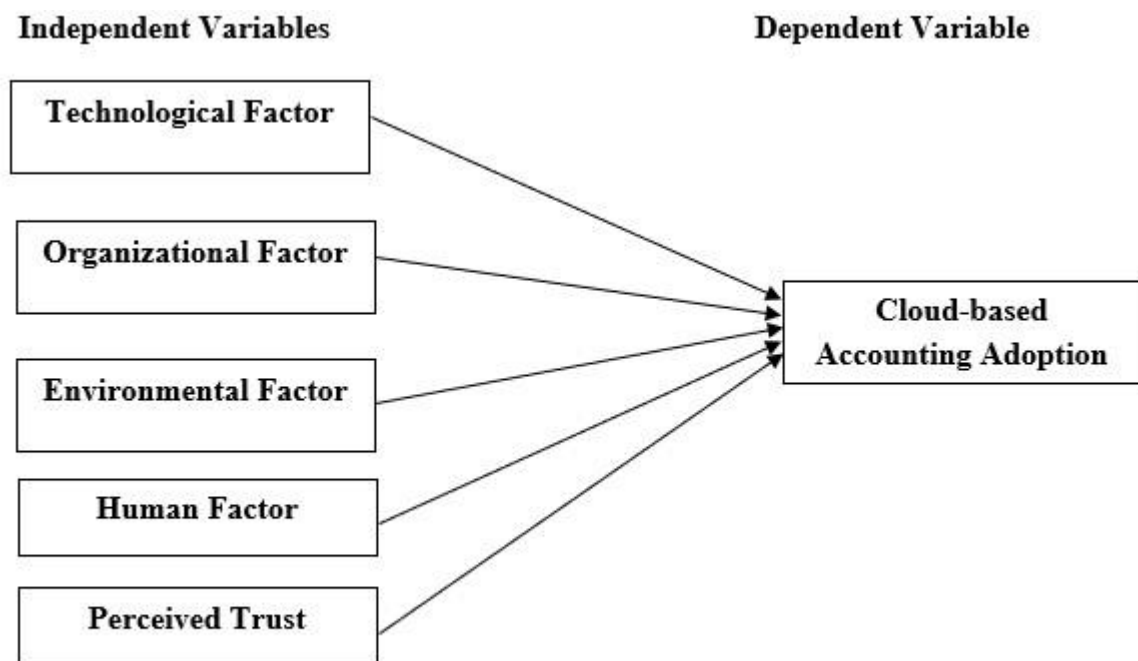
For the purposes of this study, cloud-based accounting is a special case for the acceptance and diffusion of conventional innovation because, typically, third parties provide cloud-based accounting services to other business organizations that require them. For this reason, the TOE framework was used to support the research. Torantzky and Fleischer (1990) offered the TOE model in the following framework form:



**Fig.1: TOE Framework.** Originated from Torantzky, and Fleischer, (1990)

#### **2.4 Research Framework**

The framework used for this study was the adaptation and modifications from the work of Premarathne et al 2021. As shown in figure 3 below, this study uses technological factors, organizational factors and environmental factors as initially used in TOE model, while contribute by including perceived trust adapted from Diffusion of Innovation Theory. Therefore, this study has five exogenous variables (technological factors, organizational factors, environmental factors, human factors and perceived trust), the cloud-based accounting serve as the dependent variable. The framework used for this study was the adaptation and adjustments from the work of Premarathne et al 2021. As indicated in figure 3 below, this study uses technological elements, organizational factors and environmental factors as initially utilized in TOE model, while contribute by integrating perceived trust taken from Diffusion of Innovation Theory. Therefore, this study has five exogenous variables (technological aspects, organizational factors, environmental factors, human factors and perceived trust), the cloud-based accounting serve as the dependent variable.



**Fig.3: Research Framework: Extension of Premarathne et al 2021 Model**

### **3. Methodology**

The study is cross sectional survey research design because it collects data of different organizations at one point. The total population of the study were derived from the number of deposit money banks branches operating in northern Nigeria (391). Therefore, the sample size of this study is 177 banks out of 391 banks operating in northern Nigeria and in selecting the sample size for this study, the structured Taro Yemane (1967) sampling model is employed to justify the sufficiency of the sample size. The study adopted cluster-sampling approach. Questionnaire were utilized as an instrument for data collection in this study. The analysis for this study was undertaken utilizing both descriptive and inferential methods. Descriptive statistics was employed to indicate the distribution of the data and correlation and regression analysis were used as the inferential statistics. The data were analyzed using the Partial Least Squares (PLS)-Structural Equation Modelling (SEM).

### **4. Results and Discussion**

In this study, SmartPLS 4.0 was used to measure the Measurement Model and Structural Model as well as determine the significance of the model. Evaluation of the measurement model involved testing for indicator reliability, internal consistency reliability, convergent validity, discriminant validity, and overall model fit (Henseler, Hubona & Ray 2014). Figure 1 in this study illustrates the complete measurement model before any components were removed.

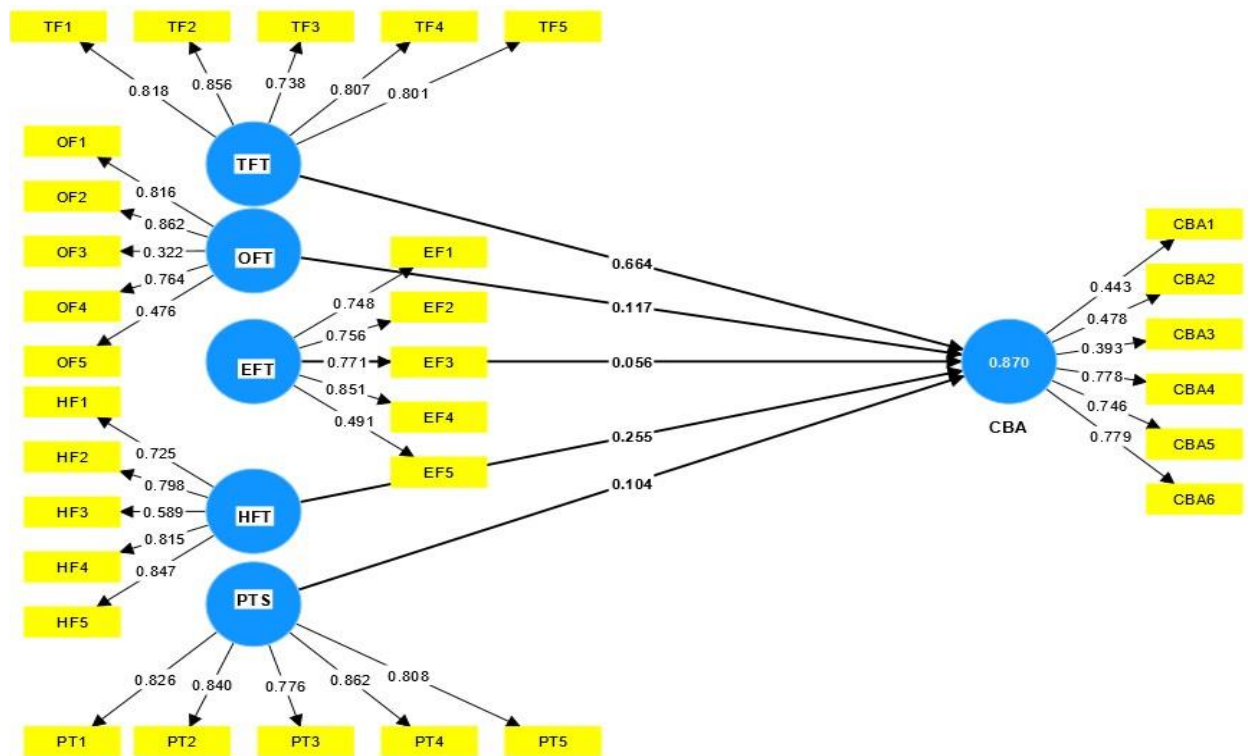


Figure 1. Measurement Model of the Latent Constructs.

Source: Researcher's compilation with PLS-SEM 4.0 (2023)

#### 4.1 Indicator Reliability

The external loadings of each underlying construct are employed to assess the dependability of the measurements (Hair et al., 2013). Traditionally, an item is considered reliable if its loading is at least 0.70 (Hair et al., 2011). However, as suggested by Hair et al. (2013) an item with a loading of 0.4 may be retained if removing it would reduce the overall reliability. Specifically, according to Hair et al. (2011) items with outer loadings between 0.40 and 0.70 should be removed from the scale if their exclusion leads to an improvement in composite reliability and average variance explained. Thus, following the criteria outlined by Hair et al. (2011) and supported by Hair et al. (2013) out of a total of 31 items examined in this study, only 24 were retained seven were eliminated due either based on low loads or to enhance composite reliability. Table 4.4 presents details regarding these retained items alongside their respective loading results.

#### 4.2 Internal Consistency Reliability

Reliability denotes the extent to which a scale consistently and dependably assesses the intended construct (Ramayah, Cheah & Memon, 2018). Among various methods for assessing reliability in quantitative research, internal consistency is widely employed. The commonly utilized metrics for demonstrating reliability are composite reliability value and Cronbach's coefficient alpha. These measures evaluate how well the indicators collectively measure a particular construct. Despite both being popular in PLS route modeling literature, many scholars argue that composite reliability provides a more robust assessment of internal consistency compared to Cronbach's alpha (Hair et al., 2011; 2013). In fact, Cronbach's alpha has been criticized for underestimating true internal consistency reliability of constructs, leading to increased preference for composite reliability (Hair et al., 2016). Hair et al. (2011) suggest that for exploratory research, the minimum threshold should be 0.60 while it should be at least 0.70 for confirmatory studies when using

composite reliability as an indicator of internal consistency. Table 4.4 presents the findings of internal consistency reliability in the current study

**4.3 Convergent Validity**

Validity refers to the degree to which a scale accurately measures the established operational definition of the intended phenomena (Hair et al., 2014). It also indicates the ability to assess research variables through a questionnaire (Ramayah et al., 2018). Convergent validity evaluates the level of agreement among multiple items addressing a specific concept (Hair et al., 2010). The commonly utilized measure for convergent validity is Average Variance Extracted, with a recommended threshold of at least .5 (Hair et al., 2011; Hair et al., 2013). Table 4.4 presents data showing that AVE values for all constructs meet or exceed this minimum criterion.

**Table 4.4: Indicator Loadings, Composite Reliability, and AVE of Latent Constructs**

<b>Latent construct</b>	<b>Item</b>	<b>Item Loading</b>	<b>Composite Reliability</b>	<b>AVE</b>
Cloud-based Accounting Adoption	CBA4	0.828	0.785	0.870
	CBA5	0.843		
	CBA6	0.820		
Technological Factors	TF1	0.823	0.874	0.902
	TF2	0.857		
	TF3	0.738		
	TF4	0.805		
	TF5	0.797		
Organizational Factors	OF1	0.861	0.820	0.881
	OF2	0.910		
	OF4	0.755		
Environmental Factors	EF1	0.815	0.839	0.881
	EF2	0.763		
	EF3	0.775		
	EF4	0.865		
Human Factors	HF1	0.748	0.867	0.894
	HF2	0.812		
	HF4	0.857		
	HF5	0.874		
Perceived Trust	PT1	0.818	0.896	0.912
	PT2	0.832		
	PT3	0.776		
	PT4	0.869		
	PT5	0.813		

*Source: Researcher’s compilation with PLS-SEM 4.0 (2023)*

The Table 4.4 displays the composite reliability of all latent constructs, with values ranging from .785 to .896. These values exceed the minimum requirement of .60 for exploratory study, demonstrating strong internal consistency across all latent components. The average variance extracted values range from .870 to .912 and surpass the minimal requirement of .50, indicating excellent convergent validity for the constructs.

**4.4 Discriminant Validity**

Discriminant validity refers to the degree to which a specific underlying construct distinguishes itself from others (Hair et al., 2022). This means that, in order for an

underlying concept to demonstrate discriminant validity, it should exhibit more shared variation with its designated indicators compared to any other underlying concept in the model (Hair et al., 2011). The Fornell-Larcker criterion is commonly used for assessing the discriminant validity of a construct. According to this criterion, in order for a construct to achieve discriminant validity, the square root of its Average Variance Extracted value should be greater than its inter-construct correlations with other constructs (Fornell & Larcker, 1981; Hair et al., 2011).

Sarstedt et al., (2021), state that establishing discriminant validity is essential as it ensures that the scale utilized measures a distinct construct. Table 4.5 shows the square roots of AVE and by comparing these values with inter-construct correlations, it can be observed that there is less shared variance between pairs of constructs than their respective square roots of AVEs indicate. Thus, based on the Fornell-Larcker criterion, it was confirmed that good discriminant validity was achieved through comparing the square roots of AVEs and inter-construct correlations between constructs within this measurement model.

**Table 4.5: Discriminant Validity**

	CBA	EFT	HFT	OFT	PTS	TFT
CBA	<b>0.872</b>					
EFT	0.183	<b>0.826</b>				
HFT	0.121	0.284	<b>0.798</b>			
OFT	0.096	0.324	0.334	<b>0.769</b>		
PTS	0.354	0.192	-0.206	0.071	<b>0.779</b>	
TFT	0.462	0.511	0.142	0.092	0.304	<b>0.816</b>

**Note:** CBA = Cloud-Based Accounting; EFT = Environmental Factors; HFT=Human Factors; OFT=Organizational Factors; PTS=Perceived Trust and TFT=Technological Factors.

Based on the data in Table 4.5, the initial variance value for cloud-based accounting is 0.872, which surpasses the shared variance values with environmental factors, human factors, organizational factors, perceived trust and technological factors (0.183, 0.121, 0.096, 0.354 and 0.462 respectively). As for environmental factors, the extracted variance was found to be significantly larger at 0.826 compared to its relationship with other constructs (measuring at 0.83,0.284,0.324,0.192 and 0.511).

Additionally, the variance extracted for human factors was 0.798, significantly higher than the values obtained from its correlation with other variables in the model (0.121, 0.284, 0.334, -0.206, and 0.142). Similarly, the extracted variance for organizational factors was found to be 0.769 which is notably greater than all other values derived from different variables in the model (0.096, 0.324, 0.334, 0.071 and 0.092). The perceived trust structure had a value of 0.779, which was significantly higher than the values for other variables in the model (0.354, 0.192, -0.206, 0.071 and 0.304). Additionally, the technical factor’s structure yielded a value of 0.816, demonstrating its superiority over the values associated with other latent constructs (0.462, 0.511, 0.142, 0.092 and 0.304). These findings confirm the discriminant validity of the research model.

**4.5 Correlation Matrix**

Table 4.7 presents the correlation matrix between the exogenous and endogenous latent constructs. The results indicate that there is no multicollinearity, as all the independent variable scores are below the cut-off value of 0.9 (Hair et al., 2016). Furthermore, this outcome could be supported by conducting a Variance Inflation Factor test to examine

multicollinearity. According to Ramayah et al. (2018) data will be free of multicollinearity when the VIF value is less than 10. Table 4.7 also includes the VIF values and tolerance for this study's analysis.

**Table 4.7** Matrix Constructs

	CBA	EFT	HFT	OFT	PTS	TFT	VIF
CBA	1						
EFT	0.164	1					4.091
HFT	0.182	0.268	1				4.101
OFT	0.261	0.152	0.148	1			3.7
PTS	0.21	0.296	0.294	0.215	1		1.139
TFT	0.264	0.167	0.178	0.253	0.206	1	3.71

Source: Researcher's compilation with PLS-SEM 4.0 (2023)

#### 4.6 PLS Structural Model Results

After successfully assessing the measurement model, which is essential for further analyses in PLS, the structural model was also evaluated. This part describes the methods and standards used to assess the structural model. A standard bootstrapping approach with 10,000 bootstrap samples and 334 cases was employed to examine the significance of path coefficients in the structural model. The evaluation of the structural model involved three steps, as detailed in subsequent sections.

#### 4.7 Evaluation of the Significance of Path Coefficients

The importance and applicability of the PLS-SEM structural model were assessed by examining the t-statistics and p-values derived from 10,000 bootstrapped samples (Hair et al., 2011). The statistical estimates of the path coefficients for the structural model are presented in Figure 2 and Table 4.8.

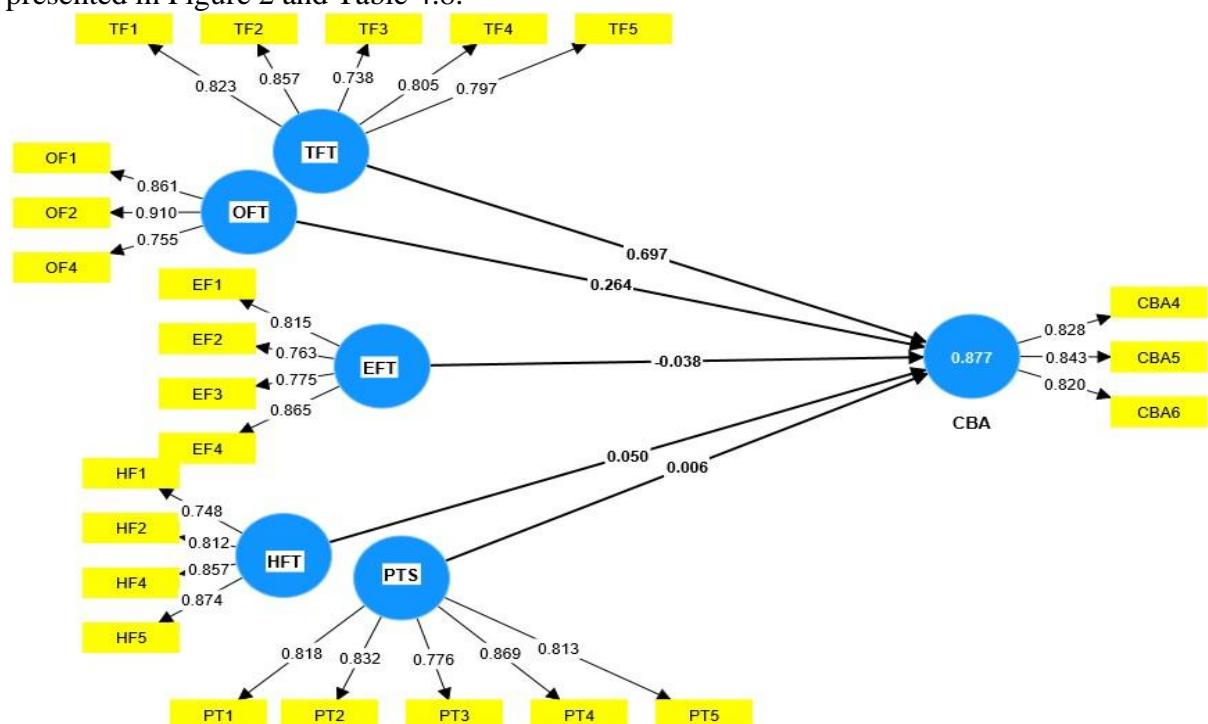


Figure 2: PLS-SEM Structural Model (2023)



**Table 4.8: Structural Estimates**

Hypotheses	Relationships	B	T-statistics	P-value	Decision
H <sub>1</sub>	TFT ->CBA	0.697	0.605	1.059	Not Supported
H <sub>2</sub>	OFT ->CBA	0.264	1.272	0.153	Not Supported
H <sub>3</sub>	EFT ->CBA	-0.038	2.457	0.003**	Supported
H <sub>4</sub>	HFT ->CBA	0.050	2.176	0.005**	Supported
H <sub>5</sub>	PTS ->CBA	0.006	3.174	0.000***	Supported

Note: Significant at the \*p < 0.05 level; \*\* p < 0.01 level; and \*\*\*p < 0.001.

In the literature review, five hypotheses are outlined, all of which involve direct relationships expected to impact cloud-based accounting adoption. Statistical significance is determined by a number that significantly differs from zero, considering factors such as hypothesis directionality, degrees of freedom, and confidence level. The p-value is utilized to assess the significance of these pathways (Hair et al., 2022).

The results of the direct connection are presented in Figure 2 and Table 4.8. The hypothesis about technological factor to cloud-based accounting usage having a strong and positive link was not supported, as indicated by the coefficient values, T-value, and p-values of  $\beta = 0.697$ ,  $t = .605$ , and  $p = 1.509$  respectively. The hypothesis regarding organizational factor having a strong and positive association with cloud-based accounting adoption was also not supported; the coefficient value, T-value, and p-values were  $\beta = 0.264$ ,  $t = 1.272$ , and  $p = 0.153$  correspondingly. On the other hand, H3 predicted that environmental factors would have a significant association with cloud-based accounting adoption; this hypothesis was supported in terms of significance but opposed concerning the direction of the link ( $\beta = -0.038$ ,  $t = 2.457$ ,  $p = 0.003$ ).

Additionally, H4 proposed that there would be a noteworthy and favorable connection between human factors and cloud-based accounting; this proposition was fully substantiated by a significant and positive correlation ( $\beta = .050$ ,  $t = 2.176$ ,  $p = 0.005$ ). Finally, H5 indicated that the perceived trust would exhibit a substantial positive relationship with the adoption of cloud-based accounting. The findings presented in Figure 2 and Table 4.8 affirmed this hypothesis through the coefficient value, T-value, and corresponding p-values of  $\beta = .006$ ,  $t = 3.174$ ,  $p = 0.000$  respectively.

#### 4.8 Evaluation of Coefficient of Determination ( $R^2$ )

In PLS analysis, following the study of the fitting of measurement models, it is prominent to deal with the fitting of the structural model. One key measure, among others, for analyzing the fitting of the structural model is determination coefficient ( $R^2$ ).  $R^2$  is a criterion that shows the effect of an exogenous variable on an endogenous variable, whose value is only determined for endogenous constructs of the model. As for endogenous constructs, the value of this criteria is zero. Three values; 0.19, 0.33 and 0.67 are considered as a criterion for  $R^2$ 's weak, medium, and considerable levels correspondingly (Hair et al., 2019). According to Figure 2, the value of  $R^2$  for the model's endogenous variables in this study is 0.877, which suggests the selected exogenous factors of the study has a variation level of 87.7% on cloud based accounting adoption in Nigerian banks. The finding shows that the predictor variables explained 87.7% of the variance in cloud based accounting adoption of deposit money institutions in Nigeria, while other factors not

included in the model explained the remaining 12.3%. Looking at this value, the model is satisfactory and nevertheless substantial based on Hair et al. (2019).

#### **4.9 Discussion of Findings**

Subsequent to the substantial literature review and considering of the environment of this study (i.e. Nigeria's banking industry), five variables of cloud-based accounting were predicted. Four of these determinants were adapted from a combine TOE and HOT-fit models where perceived trust was included to the models as an extension. All these determinants were proposed to have considerable beneficial link with cloud-based accounting. With evident from the result of the relationship of the structural equation model, two hypotheses (human factors and perceived trust) revealed a significant positive relationship with cloud-based accounting adoption as predicted whereas technological and organizational factors revealed an insignificant relationship. On the other hand, environmental factors demonstrated a strong but unfavorable correlation with cloud-based accounting adoption. The following discussion contrasts the results of the current study with respect to the results of earlier investigations.

##### **4.9.1 Technological Factors and Cloud-Based Accounting Adoption**

Technological variables in the context of cloud computing pertain to the characteristics that can be beneficial or detrimental to its adoption in any capacity. In this work, the technical component was defined and measured as a first-order formative construct using the Partial Least Squares (PLS) method. Consequently, a hypothesis was formulated and examined, suggesting that there would be a positive and substantial correlation between technological factors and the use of cloud-based accounting. In contrast to the anticipated premise, the outcome revealed that technological considerations had a negligible correlation with the adoption of cloud-based accounting. Therefore, hypothesis H1 is invalidated.

This outcome supports the conclusions of Modisane and Jokonya (2021), who examined the factors influencing the adoption of cloud computing by small and medium-sized enterprises (SMEs) in the north-west province of South Africa. The multiple regression result of the study identified technological considerations, among other variables, as unimportant drivers of cloud-based accounting adoption. In addition, this result aligns with Sanarathna et al. (2018), which evaluated the significant elements that influence SMEs' adoption of cloud computing technology in Australia. The study concluded that there is no significant relationship between the determinants of technological elements and the use of cloud accounting. On the other hand, the conclusions of this study are not in agreement with other studies in similar settings, such as Ouaadi and Elhaddad (2021); Sithole and Ruhode (2021); Moradi and Nia (2020); and Alghushami et al. (2018), among others. These studies found that technological characteristics greatly impact technology adoption in different circumstances.

The minimal link between technological variables and cloud-based accounting adoption in the Nigerian banking sector could be because of the issue of privacy concerns cloud-based accounting in the sector. Cloud-based accounting has caused a lot of anxiety in the banking sector by making the financial data of clients significantly more vulnerable to third parties (Eldalabeeh et al., 2021). Hence, the respondents might consider this rationale causes other institutions reluctant to implement cloud-based accounting. In addition to that, the security of the financial information of the bank's customers could be threatened with cloud-based accounting because the vendors are the ones handling the information; hence, financial institutions could think their customers might not appreciate having their accounting records handled by another party, which would make them hesitant to adopt the technology.

#### **4.9.2 Organizational Factors and Cloud-Based Accounting Adoption**

Secondly, the structural equation model results for organizational factors and cloud-based accounting are favorably insignificant, with a positive coefficient and p-values of 0.264 and 0.153, respectively. The positive association shows that organizational characteristics boost the likelihood or otherwise of technology adoption in Nigerian deposit money banks. However, the construct was insignificantly associated to the adoption, which means there was no influence. Therefore, this conclusion is not in conformity with the formulated hypothesis stated in the earlier chapter of this study. Thus, hypothesis H2 is rejected. Hence, this study suggests that organizational characteristics are not a key determinant of cloud-based accounting adoption in the Nigerian banking sector.

This findings on organizational factors aligns with the study of Albar and Hoque (2019), which evaluated the factors that influence the adoption of cloud ERP in the Kingdom of Saudi Arabia. The PLS-SEM outcome of the study demonstrated that technological and environmental factors are the main predictors of cloud ERP adoption, while organizational factors are not. In addition, this conclusion corroborates Chandra and Kumar (2018), which study the factors that impact the adoption of augmented reality (AR) in Singapore, India, and the USA. It was discovered that organizational characteristics were insignificantly associated to AR adoption. On the other hand, the outcome of this study is not in agreement with other studies on the relationship between organizational characteristics and technology adoption, such as Banybakr and Eleima (2021); Chong et al. (2021); Habiboglu and Pirtini (2021); Kandil et al. (2018), among others. These studies indicated that organizational characteristics greatly determine adoption.

The obvious reason for the small link could be because the organizational structures of Nigerian banks are focused more on competitiveness (Atiti, 2021), which makes them cautious to embrace any technology unless it is widely adopted by other banks in the market. Therefore, adopting cloud-based accounting could not be highly driven by organizational characteristics because most of the banks embrace it for competitive defense rather than merely because they are creative. In addition, the top management support for cloud-based accounting could be weaker and could lead to an inconsequential result because the adoption demands a substantial cash outlay, which is taken from the profits of the banks. Yet, it is evident that management always wants to declare a bigger annual profit in order to safeguard their image with the public.

#### **4.9.3 Environmental Factors and Cloud-Based Accounting Adoption**

The next determinant of cloud-based accounting adoption considered in this study is the environmental factor, which was conceptualized in this study as the environment in which the entity operates and can be associated with factors around it such as industry, rivals or competitors, and technology service carriers, among others. The environmental component was operationalized in this work as a first-order formative construct in PLS. Therefore, a hypothesis was put out and investigated; it was claimed that the association between environmental characteristics and cloud-based accounting adoption would be positive and significant. Contrary to the projected hypothesis, the study suggested that technological aspects are substantial but negatively associated to cloud-based accounting adoption. Thus, hypothesis H3 is accepted. However, the association was negative, implying that environmental variables are discouraging the adoption of cloud-based accounting.

This result is corroborated by the findings of Sithole and Ruhode (2021), which study the factors that determine cloud computing adoption by SMMEs in South Africa. The study indicated that environmental factors were negatively connected to cloud computing adoption, technological factors were favorable, and organizational factors were insignificantly related. Conversely, this conclusion is not in line with Modisane and

Jokonya (2021), who researched the factors that determine the adoption of cloud computing in SMEs in the north-west region of South Africa and found a substantial association. It also goes against Sanarathna et al. (2018), Albar and Hoque (2019), Alshahrani (2021), Gui et al. (2021), among others. These studies demonstrated that environmental factors significantly and positively impact technology adoption in different circumstances.

The likely reason for the unfavorable association of environmental elements could be because of the terrible image banks have about their online financial services, with countless electronic financial scams being reported on a daily basis (Idris, 2020). Therefore, the environment (people) may tend to reject any technology brought in their way by financial entities. Furthermore, the banks' customers are particularly sensitive about their financial information privacy; consequently, they could reject cloud-accounting technology on the basis that it renders their financial information and records exposed to third parties unknown to them. In view of that, along with the natural lack of innovativeness of residents in some sections of underdeveloped countries, it is evident that environmental variables could have a negative influence on the adoption of cloud-based accounting in Nigeria.

#### ***4.9.4 Human Factors and Cloud-Based Accounting Adoption***

Subsequently, the SEM results of human factor and cloud-based accounting are favorably and strongly associated, with a coefficient and p-values of 0.050 and 0.005, respectively. To this effect, the study implies that the human component is a statistically significant predictor of cloud-based accounting adoption. Therefore, a rise in the efficiency of human factors in Nigerian banks will raise the odds of adopting cloud-based accounting. This finding validates the first predicted notion that human factors have a substantial positive link with cloud-based accounting adoption. Hence, hypothesis H4 is supported, implying that a rise in human factors is directly improving the odds of adoption and vice versa. Hence, this study suggests that the human factor is a key determinant of cloud-based accounting adoption in Nigerian banks.

The justification of this conclusion might be done by comparing the findings with those of prior investigations in the same area. Evidently, this conclusion is in line with Premarathne et al. (2021), which explored the determinants of adopting CBA in Sri Lanka. The study revealed human factors, among other drivers, to have a substantial positive link with CBA adoption. In addition, this conclusion is justified by Shahzad et al. (2020), who evaluated the elements that are significantly driving or hindering the choice to adopt a hospital information system (HIS) and identified a positive and significant association between human factors and HIS adoption. Furthermore, the data corroborates Ramprasad and Kumar (2018), who employed the HOT-fit model and discovered human factors as a significant determinant of technology adoption. On the other hand, the result of this study is not in agreement with other studies on the relationship between human factors and technology adoption, such as Alfina and Irfan (2020) and Lynn et al. (2020), among others. These studies indicated that human variables insignificantly relate to adoption.

The possible reason for the large positive link could be because the responders are the human aspect of the technology under discussion. Therefore, they have faith that their IT skill and innovativeness are enough for the banks to embrace cloud-based accounting because they do not have to invest the cost of training or outsourcing the knowledge for their operations. In addition, considering that adopting technology requires adequate teamwork among the staff of an entity to support one another, the respondents (bank managers) believe they have coordinated team spirit among their employees to ensure

smooth adoption and sustainability of cloud-based accounting, which led to a significant positive association.

#### **4.9.5 Perceived Trust and Cloud-Based Accounting Adoption**

Lastly, the fifth determinant of cloud-based accounting adoption explored in this study is perceived trust, which is conceived as the individual's belief in the system provider's honesty and dependability and that the service providers have traits that are advantageous to consumers. The SEM's result on the variable in this study demonstrated a positive and significant link between perceived trust and cloud-based accounting adoption, with coefficients and p-values of 0.006 and 0.000, respectively. The positive connection shows that perceived trust greatly boosts the odds of cloud-based accounting adoption in Nigerian institutions. Therefore, an increase in the perceived trust of cloud-based accounting in Nigerian banks will raise the odds of adopting it. This result verifies the initial fifth projected hypothesis that perceived trust has a substantial positive association with cloud-based accounting adoption. Hence, hypothesis H5 is validated, implying that an increase in perceived trust is directly boosting the odds of adoption and vice versa.

This result can be justified by the findings of prior investigations on comparable correlations. For instance, the findings corroborate the finding of Senali et al. (2023), which explored the factors of intention to use e-wallets in Malaysia. The PLS-SEM-SEMult demonstrates that trust among other TAM factors has a strong positive influence on adopting an e-wallet. Besides, Meyliana et al. (2019) support the conclusions of this study by analyzing the elements that impact the adoption of fintech. The PLS-SEM outcome of the study supported the role of perceived trust in determining the adoption of fintech. Also, Giovanis et al. (2018) support the result of this study on perceived trust by investigating factors impacting the uptake of mobile self-service retail banking in Greece. As an extension of the UTAUT model, the study demonstrated trust to be a significant driver of self-service retail banking. However, the result contradicts other studies on the relationship between trust and technology adoption, such as Kenesei et al. (2022), which investigated how trust and perceived risk affect the adoption of autonomous vehicles and found an insignificant negative effect of perceived trust on the adoption.

The possible reason for the significant effect of perceived trust and cloud accounting adoption is because the respondents have confidence that the perceived benefits of adopting cloud-based accounting outweigh its challenges, considering that it provides easy access to information and also reliable storage of financial data. This attitude is primarily based on the view of the bank managers, unlike the opinion of the public that it exposes their financial information to third parties. Furthermore, the positive effect of perceived trust could be because the bank management has so much confidence that cloud-based accounting vendors are very trusted and dependable to deliver honest and secure cloud storage services. Besides, it could also be because adopting cloud-based accounting is trusted to be in line with the overall financial aims of the banks, as it minimizes their financial storage costs and the degree of recurrent expenditures incurred.

#### **5.1 Conclusion**

The study revealed that technology component has an insignificant link with cloud-based accounting adoption. Therefore, this study indicated that the technological component of cloud-based accounting is not a determinant of adopting the technology in Nigerian banking business. In addition, based on the outcome of environmental factor, the factor was determined to significantly oppose the adoption of the cloud-based accounting adoption in Nigerian banking industry. This study finds that, environmental element has considerable yet negatively connected with cloud-based accounting adoption.

Furthermore, this study finds that organizational component is not a key determinant of cloud-based accounting adoption in Nigerian banking sector. The result further reveals that human factor is a statistically important predictor of cloud-based accounting adoption. Therefore, this study suggests that human factor is a key determinant of cloud-based accounting adoption in Nigerian institutions.

Lastly, this study shows that the management of banks had perceived faith in the cloud-based accounting, and they considered that the trust they have on the technology is the key trigger to stimulate the adoption of the technology.

## **5.2 Recommendations**

In line with the findings and conclusion of this study, it was obvious that there is a substantial correlation between most of the identified factors with cloud-based accounting adoption of Nigerian banks. It also means that despite all the adoption-related variables, there is great requirement for the element of trust between the sellers of the technology, the clients (banks) and the general public as the final consumers. Accordingly, this study makes recommendations for policy makers in the Nigerian banking industry in line with the acquired findings of the study on the approaches of improvements to realize the full potential of cloud-based accounting. Specifically, this study makes the following recommendations:

- i. Banks need to thoroughly examine the installation of cloud accounting system based on its specific technology characteristics and business nature in banks.
- ii. To improve the cloud-based accounting sustainability in Nigerian banks, authorities in banking industry should boost the effect of the organizational context on top-level management in making the proper judgments in employing cloud accounting information.
- iii. Banks need to assess their internal and external characteristics that could be influenced by implementing the cloud-based accounting system before they can decide on the recommended infrastructure, software, personnel, procedures and data based on that review that suit for them.
- iv. Banks to carry out a strong public awareness initiative that can help in enlightening the general public about the security and other benefits of cloud accounting adoption by the banks.
- v. Vendors of cloud-accounting technology should increase client's trust in cloud-based apps by guaranteeing that sensitive personal information is reliably protected and by presenting evidence that the system allows users to maintain control over the data they provide.

## **5.3 Limitation and Suggestions for Future Studies**

This study has expanded the current knowledge in literature by providing evidence on the factors that determine the adoption of cloud-based accounting in Nigerian banking sector. However, the study suffers certain restriction that has to be solved by future investigations, which is clear in scientific research. For example, the study was limited to deposit money banks in northwestern Nigeria exclusively. Despite the fact that this will not affect the generalizability of the findings considering that all the banks have essentially comparable operations nationally, there is need for future studies to consider Nigeria as a whole for analysis. In addition, the survey was limited to deposit money banks where most of them have incorporated the technology already. Hence, there is need for future investigations to consider different microfinance institutions. Also, other developing sector in the economy will be good contribution. Furthermore, there is need for further studies to assess the influence of cloud-based accounting on the financial performance of deposit money institutions in Nigeria.

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