*International Journal of Intellectual Discourse (IJID)*
**ISSN: 2636-4832 Volume 8, Issue 4. December, 2025**

# A survey of determining factors of eNaira adoption in Nigeria.

*Sani Yahaya[1], Akilu Aliyu Shinkafi[2], Muhammad Abdullahi[3], Shuaibu Shehu Kura[4] and Lawan Yusuf Saleh[5]

[1,2,3,4&5]*Department of Banking and Finance, Federal University Dutse, Jigawa- Nigeria,*

*Corresponding Author: saniytm@yahoo.com

**Abstract**

*This study examined the determinants of eNaira adoption in the northwest and northeast of Nigeria being represented by Jigawa and Bauchi States respectively. The study employed the use of Diffusion of innovation theory (IDT) in conjunction with the Technology acceptance model (TAM). The combination of variables that includes Compatibility, Complexity, Trialability and Observability were cowered from IDT and Perceived ease of use was selected from TAM. Perceived risk was added to the evolving conceptual framework considering the nature of the study. Sample of 459 questionnaires were administered of which 312 were returned and dully completed. The questionnaire were analyzed with the help of SPSS and Smart-PLS. The findings of the study revealed that Perceived Risk and Observability are crucial determinants of eNaira adoption. While the Perceived Ease of Use and observability influences eNaira adoption in a significantly positive direction, complexity and perceived risk relate negatively to eNaira adoption with perceived risk appearing to be a strong determinant. Both Trialability, Compatibility and Complexity appeared to be less important variables in eNaira adoption as there was no significant impact observed from the variables in relation to eNaira adoption. The study recommended that enhancing public visibility and demonstrations, putting strong risk reduction measures into place, streamlining the user experience through better app usability, fewer transaction steps, and multilingual support, re-evaluating the low impact factors, and expanding education and awareness programs particularly those that target underserved populations and rural areas by the CBN.*

**Keywords:** Determinants, eNaira adoption, IDT, TAM, Nigeria.

## 1. Introduction

Several nations around the world focus their attention in the area of financial technology and the rising digital economy. The development of digital currency has offered central banks range of cashless, financial instruments, effective advantage of monetary policy, and solutions to development. The development further provides opportunities for central banks effective digital currencies transfers and payment systems; and digital currencies management systems. It also provides end-to-end solution for designing and minting digital currencies and flexible infrastructure that is essential in generating steady balance between privacy and regulatory compliance. This means that digital currency has to do with the technological development, financial inclusion, economic changes, monetary policies, political conditions, and economic development (Mu, & Mu, 2022).Thus, in the contemporary global arena, digital currencies adoption has recently been the target of various nations and spread worldwide (Roussou & Stiakakis, 2019).

Technological advancement is making financial dealings more sophisticated on daily basis thereby making financial intermediaries more innovative to meet up with the global demand for digital currency. Nigeria as an evolving player in the digital financial services (DFS) in Africa as reported by World Bank Group, 2017 was being proactive to introduce Central Bank Digital Currency (CBDC) popularly known as e-Naira. The idea is capable of promoting financial wellbeing of the users (Esoimeme, 2021; Mu, & Mu, 2022) and is proved to have a substantial impact on financial performance of the adopters (Obiora et al., 2022)

However, as of February 2025, there has been little penetration of the eNaira, Nigeria's central bank digital currency (CBDC). The eNaira was introduced in October 2021 with the goal of modernizing the payment system and promoting financial inclusion. Less than 0.5% of Nigerians used the eNaira within a year of its inception, indicating slow adoption (Mu, & Mu, (2022). This slow uptake has been caused by a number of issues. These include technical and infrastructure difficulties that are connected to problems with inadequate technology infrastructure and unstable electricity, which work together to negatively impact the smooth operation of digital currencies, of which eNaira is not exempt (Ree, 2023; Mu & Mu, 2022).

Along with the trust issue and doubt regarding the use of such digital currencies, public perception is another area of worry, particularly given the prohibition on cryptocurrencies before the introduction of eNaira (Ree, 2023). Likewise, privacy is another issue, as some believe that the eNaira is set up to allow complete transaction tracing, which opens the door for possible government monitoring (Ree, 2021; Ozili, 2022). The idea that eNaira could pose a challenge to traditional banks is another significant area of concern. This could result in employee layoffs as a result of their decreased engagement as clients switch to the new digitalized services.

Central Bank of Nigeria has consistently promoted the potential advantages of eNaira, emphasizing its capacity to support financial inclusion, economic transparency, and economic development, despite all of these obstacles (Ozili, 2023). Therefore, further work is required to address the current impediments and examine the factors that influence the adoption of eNaira, which aligns with the goal of this study, which is to discover the factors that influence the adoption of eNaira. The study illustrates the necessity of using the diffusion of innovation theory and the technology acceptance model as a guide to identify factors thought to be significant in eNaira adoption. This introduction is followed by the literature review and then methodology in the following sections. Sequentially, the results findings and discussion are given, and the conclusion was offered in the final section.

## 2. Literature Review and Hypothesis Development

This section provide explanation on the concepts and review of related literature based on the variables captured in the study thereby paving the way for hypothesis development.

### 2.1 Compatibility

Compatibility, according to Rogers (2003), is the extent to which an innovation is thought to be in line with the requirements, prior experiences, and values of possible adopters. In the past, Tornatzky and Klein (1982) understood it to mean in line with the norms or ideals of possible adopters. It might as well be a representation of congruence with the adopters' current practice. Numerous empirical studies have demonstrated that compatibility significantly increases the

likelihood that a given product, concept, idea or service will be adopted. According to Suryaatmaja, Susanto, and Alamsyah (2024) discovered that compatibility significantly increases the use of mobile payments. According to Yahaya et al. (2017), compatibility significantly and favorably influences the uptake of Islamic banking. The findings of a study conducted by Echchabi and Aziz (2012) on Moroccan consumers' attitudes toward Islamic banking services revealed that compatibility significantly influenced their acceptance of these services. In a similar connection Jamshidi and Kazemi, (2020) found that Islamic credit card adoption is mostly determined by compatibility. Therefore, compatibility is anticipated to boost Nigeria's adoption of eNaira. Hence, we hypothesized thus:

H1: Compatibility would have a significant impact on eNaira Adoption in Nigeria

**2.2 Complexity**

Complexity is defined as the degree to which consumers perceive a particular adoption to be challenging to use (Rogers, 2003). It is thought to be the mental effort a person does to use a specific good, service, or concept. Some innovations are straightforward to use. Potential adopters find some innovations easy to use because they are easily understood, whereas others are challenging and are viewed as complex by potential adopters, which has a negative impact on their utilization. According to Arts et al. (2011), complexity had a positive impact on adopters in the early stages of their intention to adopt a particular innovation, but upon actual usage, the effect abruptly shifted to a negative one.

Notwithstanding the view of Tan and Teo (2000), that users' adoption of online banking services may not be significantly impacted by perceived complexity, numerous researches have documented its importance in adoption (Yahaya et al., 2017; Wright & Kaine., 2022; Thambiah et al., 2011; Butt et al., 2011). Although it has been suggested that complexity can help understand customer attitudes toward mobile banking, perceived transaction complexity and product ambiguity have both been identified as obstacles that deter non-users of Islamic banks from using the bank's goods and services (Butt et al., 2011). As a result, Ho and Wu (2011) proposed that a lower perception of complexity is significantly linked to a greater adoption rate since a higher perception of complexity has a negative impact on adoption rates. In this study therefore, we hypothesized that: H2: Complexity would have a negative impact on eNaira adoption in Nigeria.

**2.3 Perceived ease of use**

Davis (1989) defines perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort." It gauges a person's perception that using or manipulating a system is easy and not challenging (Yusuf, Kabir & Umar (2024).Therefore, users are more inclined to accept an application that they believe is easy to use than another. According to Jahangir (2007), one of the main factors influencing a customer's attitude toward using an information system is perceived ease of use (PEOU). Perceived ease of use is a strong predictor of mobile money uptake, according to Ezeh and Nwanko (2018). Similarly, Nayanajith, Damunupola, and Ventayen (2019) found a correlation between the adoption of e-learning and perceived ease of use. Supporting this, Abdullahi et al. (2023) found that Nigerian students' adoption of mobile money is more influenced by perceived ease of use. Even in teaching and learning, the perceived ease of use of technology encourages its use (Davoodi et al., 2021). The adoption of fintech was found to be aided by perceived ease of use (Nangin, Barus, & Wahyoedi, 2020). The

adoption of health information systems is positively and significantly impacted by perceived ease of use (Luo et al. 2024). Recently, a research conducted by Ahmed, Al-Hussaini and Ibrahim (2025) on eNaira adoption intention among retailers in Nigeria confirmed the significant importance of Perceived ease of use in influencing the intention to adopt eNaira. Therefore, we hypothesized that:

H3: Perceived ease of uses would have a positive impact on eNaira adoption in Nigeria.

**2.4 Observability**

According to Bennett and Bennett (2003), observability is the degree to which the technology is easy for prospective users to see, envision, or explain. According to Yahaya et al. (2016) and Lee, Hsieh, and Hsu (2011), it is the extent to which the impact of innovations can be clearly seen by others. Bampaloukas (2022) therefore believed that there are four levels of observability: (1) public, (2) private, (3) technology-enhanced, and (4) conceptual. According to Rogers' theory, adoption decision and observability are positively correlated (Rogers, 2003). Previous studies have shown that observability is a key factor in deciding whether or not to use the Internet as a teaching tool (Martins et al., 2004).

The new technology is thought to be more likely to be adopted by potential users when they perceive it as visible. According to recent research, observability significantly influences people's intentions to use mobile payments (Suryaatmaja, Susanto, & Alamsyah, 2024). This study corroborated the findings by Santiago (2017) who discovered that observability was more important in the decision-making process for IT service management. Correspondingly, Lskavyan (2025) demonstrated that the strategic connection between the inspector and the inspectee is influenced by the observability of technology.

H4: Observability would have a positive impact on eNaira adoption in Nigeria.

**2.5 Perceived Risk**

Consumer researchers typically use the concept of perceived risk, which is based on consumers' perceptions of potential failure resulting from uncertainty and unfavorable outcomes of purchasing and using any goods and services (Howcroft, Hamilton, & Hewer, 2007; Srivastava & Sharma, 2011; Straub, 1989). Perceived risk, according to Cox and Rich (1964), is the type and degree of uncertainty that a customer encounters in an attempt to utilize a specific goods or services. As postulate by Stone and Winter (1987), it is an expectancy of loss. This indicates that using a product or service may cause anxiety about the potential consequences. This is anticipated to have a negative impact on adoption habits.

Additionally, risk has been identified by numerous investigations as one of the primary obstacles to prospective customers' skepticism regarding the adoption of a product or service (Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé, & Sanz-Blas, 2009; Gerrard et al., 2006). For instance, Zhao et al. (2010) examined the impact of perceived risk in their study on the adoption of online banking services in China and discovered that it significantly hampered the uptake of these services. High levels of perceived risk were discovered to be able to delay or prevent consumers from purchasing certain products altogether. A comparable result from Al-Fahim (2012) on the acceptance of internet banking services in Malaysia showed that among 200 sampled respondents who were International Islamic University Malaysia (IIUM) students, there was a negative and negligible correlation between perceived risk and the adoption of internet banking services. Omar (2007) observed the

selection criteria used by Nigerian retail bank customers, and the findings indicated that the customers were cautious about taking on riskier projects. Therefore, a product or service's adoption would be lower if people thought it was riskier. Thus, this study's hypothesis was as follows:

H5: Perceived Risk would have a negative effect on eNaira adoption in Nigeria.

**2.6 Trialability**

Trialability is the degree to which a new idea can be tested under specific conditions. The degree to which an innovation may be studied within a limited foundation is another way to define trialability (Shiau, Huang, Yang, & Juang, 2018). In relation to e-banking adoption in developing nations, trialability was found to be a key element that could moderate the relationship between consumers' behavioral intentions and their actual platform usage (Pobee, 2022). In Jaradat (2021) study, which cut across disciplines, showed that trialability was a significant factor in predicting and influencing deliberate behavior to adopt decision support systems.

Although trialability has not been utilized extensively in adoption studies, despite being proposed as an adoption criterion. Nevertheless, the few studies that did include the variable, concluded that it was a significant determinant in the acceptance of financial services. According to Davoodi, Akbarpour, and Hadipour (2021), trialability seemed to have the greatest impact on attitudes pertaining to technology use. Similarly, research by Ali, Kumar, and Prasad (2024) showed how viable and effective it is for micro, small, and medium-sized businesses to use Islamic banking financing choices. Suryaatmaja, Susanto, & Alamsyah (2024) also confirmed to the importance of trialability regarding mobile payment usage adoption.

The above studies were in tandem with the findings from Martins et al. (2004) who found that the most important factor affecting a foreign language school's acceptance of the Internet as a teaching tool was trialability. As a result, it is anticipated that trialability and adoption will be positively correlated. Additionally, Mohamad Hsbollah, Kamil, & Idris. (2009) has demonstrated the significance of trialability in comprehending the decision to adopt new online technology and instructional delivery in education. In Islamic fintech Adoption, Trialability played a significant role in a study conducted by Hayat & Hameed (2024).

H6: Trialability would have a positive impact on eNaira adoption in Nigeria

**2.7 Conceptual Framework**

In accordance with the existence literature reviewed above and the hypothesized relationships, figure 1 illustrates how the diffusion of innovation theory and the Technology Acceptance Model were conceptualized in this study. While perceived ease of use was derived from the Technology Acceptance Model, compatibility, complexity, trialability, and observability were obtained from the Diffusion of Innovation Theory. However, perceived risk was added due to its suitability for eNaira adoption in Nigeria and aptness for the design of the study.

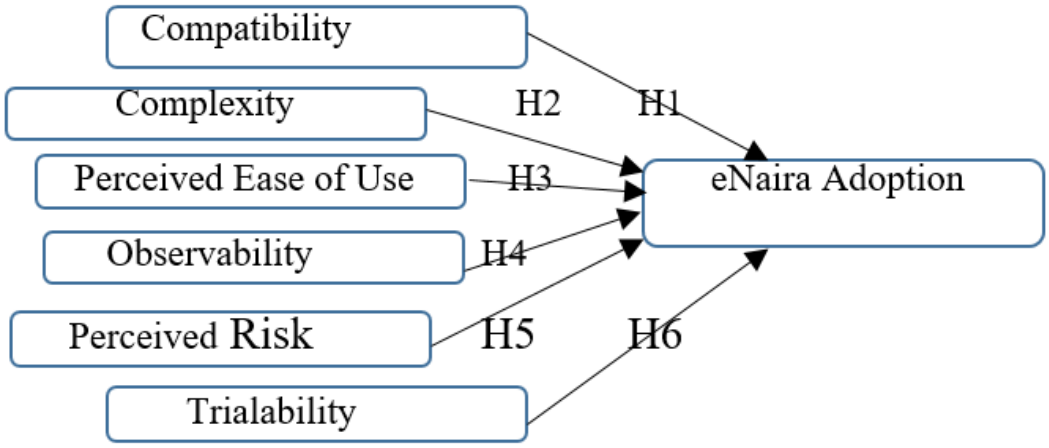


Figure 1: Conceptual Framework

**2.8 Theoretical Framework**

The theories Diffusion of Innovation Theory (DIT) (Rogers, 2003) and Technology Acceptance Model (TAM) (Davies, 1989) offer a framework for examining how people behave when it comes to using, accepting, and adopting a certain good, service, behavior, or concept. One thing that these theories had in common was their attempt to forecast human behavior. According to Couros (2003), diffusion is the process by which an innovation is accepted and embraced by members of a community. As a result, one of the most popular models in adoption research continues to be Diffusion of Innovation Theory (Rogers, 2003). Its applicability has consistently helped researchers in many settings (Thambiah et al., 2010). The relationship between relative advantage, compatibility, complexity, observability, and trialability has been proposed by DIT theory to assess an innovation's adoption.

On the other hand, Davis (1989) introduced the Technology Acceptance Model (TAM), which Venkatesh and Davis (2000) further expanded. Users' acceptance and adoption of new technology can be explained by this popular theoretical paradigm. According to TAM, perceived usefulness and perceived ease of use are the two main factors that influence a user's acceptance of a technology. When combined, these theories can shed light on how users see digital currencies issued by central banks, such as eNaira. As the name suggests, TAM is frequently used to examine an individual's technology-related acceptance behavior, whereas DIT captures a more complete collection of perceptions that explain adoption as well as ongoing usage behavior (Karahanna et al., 2006).

This research employed the use of Diffusion of Innovation Theory (DIT) combined with Technology Acceptance Model (TAM) to unveil the determinants of adoption of e-Naira. DIT is proved to be a sound theory to study adoption of innovation across different discipline and suitable in all jurisdictions (Yahaya et al 2017). Similarly, TAM is always appealing in the study of technology related affairs (Abdullahi et al., 2023). These are the reason why this study applied these theories and incorporate other variable perceived risk which is considered suitable for eNaira adoption as a theoretical contribution.

**3. Methodology**

This study was conducted in the two geopolitical zones of Northwest and Northeast. Specifically, Jigawa and Bauchi states were the areas selected for the study as the representation of

Northwest and Northeast respectively. The study is quantitative in nature where the use of a structured questionnaire was employed. The participants were from different businesses (Whole and retail sellers), and consumers/customers of variety economic and trading activities. Civil servant, Artisan and students were also included. The sample 459 was purposively drawn across the categories of the targeted participants whose population was difficult to determine due to informality and their diverse nature couple with the fact that those who have at least a little experience were of e-Naira were considered. The sample size of 459 was consistent with the assertion of Roscoe (1975) and Sekaran (2000), who argued that a sample size of more than 30 but less than 500 is adequate for the majority of studies.

The questionnaire was self-administered on a hand to hand delivery method to the participants. Five point-Likert scale was used where strongly disagree was represented by 1, disagreed by 2, undecided by 3, agreed by 4, and strongly agreed by 5. The returned questionnaires were subjected to a statistical analysis of multiples regression with the help of SPSS and Smart-PLS. All the constructs were measurement by items adopted from previous studies and adjusted to suit the needs of this research.

## 4. Result and Discussion

In this section, results are presented starting with the demographic profile of the respondents. Tables 1 and 2 represented the demographic information of the respondents.

**Table 1: Demographic Profile of Respondents (Age, Education, Occupation and Income)**

| **Age** | | | | | | |
|---|---|---|---|---|---|---|
| Category | 0-20 | 21-29 | 30-39 | 40-49 | ≥ 50 | Total |
| Frequency | 40 | 97 | 111 | 60 | 4 | 312 |
| Percentage | 13 | 31 | 36 | 19 | 1 | 100 |
| **Education** | | | | | | |
| Category | Primary/Sec | Diploma | Degree | Masters/PG | PhD | Total |
| Frequency | 46 | 56 | 191 | 14 | 5 | 312 |
| Percentage | 15 | 18 | 61 | 5 | 2 | 100 |
| **Occupation** | | | | | | |
| Category | C/Servant | Business | Farming | Artisan | Student | Total |
| Frequency | 94 | 23 | 93 | 46 | 56 | 312 |
| Percentage | 30 | 7 | 30 | 15 | 18 | 100 |
| **Monthly Income** | | | | | | |
| Category | 0 - 100K | 101 - 200K | 201-300K | 301- 450K | 451-600K | ≥ 601 |
| Frequency | 59 | 71 | 100 | 73 | 4 | 5 |
| Percentage | 19 | 23 | 32 | 23 | 1 | 2 |

The analysis of the respondents' demographic profile is shown in Table 1 above. The age distribution of the respondents was as follows: 111 respondents, or 36 percent, were in the 30- to 39-year-old age group, while 97 respondents, or 31 percent were in the 21- to 29-year-old age group. The 40–49 age group is equally well-represented, with 60 respondents, or a respectable 19 percent. 40 and 4 respondents, or 13 and 1 percent, respectively, are represented in the two

extreme groups of 0–20 and 50 and over. This suggests that the majority of respondents are young people, since the age groups of 21 to 39 accounted for the majority of respondents, accounting for almost 65 percent of the total. 191 of the participants had a degree or its equivalent in terms of education. At 61 percent, this is the highest percentage, indicating that much more than half of the respondents hold at least a degree or its equivalent. 56 (18 percent) of the respondents have an NCE or diploma, which is the second-highest rate. 46 people, or 15 percent of the total, have a primary or secondary certificate. Five percent of the respondents, or fourteen people, had a postgraduate diploma or master's degree. And last, five respondents, or 2 percent of the total, had a PhD. The respondents' makeup demonstrates their high level of education and ability to make well-informed decisions, such as the adoption of eNaira.

There is a wide range of occupations among the respondents, with 94 (30%) being civil servants, 93 (30%) being businessmen, and 23 (7%) being farmers. The remaining 46 (15 percent) and 56 (18 percent) were students and artisans, respectively. The respondents' monthly incomes range widely, with the bulk (100 respondents, or 30%) falling in the 201K and 300K range. The income groups of 101K to 200K and 301K to 450K each account for 23% of the total. The income group of 0 to 100K makes up 19% of the total, while the income groups of 451K to 600K and 601K and above share the lowest percentages of 1% and 2%, respectively.

**Table 2: Demographic Profile of Respondents (Gender, Marital Status and State)**

| **Gender** | | | |
|---|---|---|---|
| Category | Male | Female | Total |
| Frequency | 222 | 90 | 312 |
| Percentage | 71 | 29 | 100 |
| **Marital Status** | | | |
| Category | Single | Married | Total |
| Frequency | 87 | 225 | 312 |
| Percentage | 28 | 72 | 100 |
| **State** | | | |
| Category | Bauchi | Jigawa | Total |
| Frequency | 179 | 133 | 312 |
| Percentage | 57 | 43 | 100 |

According to gender representation, male make up the vast majority of the sample (71%), with female making up only 29%. The cultural norms of the research regions may be linked to this gender disparity. In a related example, marital status shows that a higher percentage of respondents (72%) are married, while the percentage of respondents (28%) who are single is comparatively smaller. Finally, the state affiliations of the respondents show that Bauchi constitute the highest with 57 percent, leaving Jigawa with the remaining 43 percent. Overall, the demographic profile of the respondents signifies a potential influence on the decision they might have taken which highlighted another area for further research exploration.

**4.1 PLS-SEM Path Modeling**

Path models in PLS-SEM are diagrams that show the proposed connections between the variables used in the model (Hair et al., 2017). The path model

provides a visual framework that makes it easy to quickly understand the current relationship between the variables. The PLS-SEM path model consists of two primary components: 1. the measurement model, also called the outer model, and 2. the structural model, also called the inner model. The measuring model explains how a construct's observable indicators relate to the construct itself. However, the structural model specifies how the constructs relate to one another.

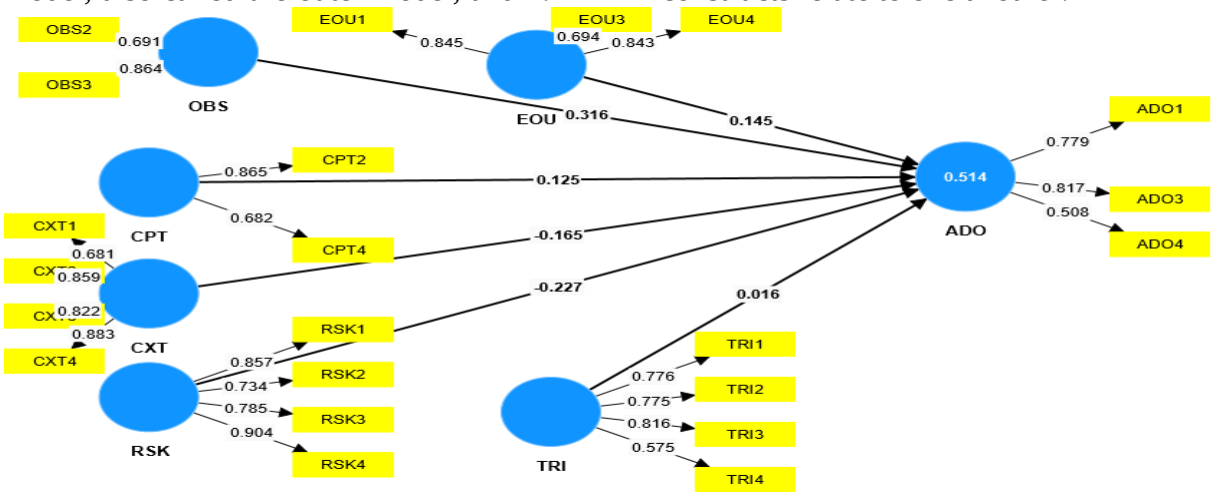


Figure 2: Path Model

**4. 2 Assessment of Measurement Model**

This study contained seven reflective constructs namely: Adoption, Compatibility, Complexity, Perceived Risk, Trialability, Observability and Perceived Ease of Use. The measurement Model was analyze based on certain criteria that encompasses indicators reliability, internal consistency reliability, convergent validity and discriminant validity (Hair *et al.* 2017).

**Table 3: Indicator Reliability**

| Construct | Indicator | Outer Loading |
|---|---|---|
| Adoption | ADO1 | 0.77 |
| | ADO3 | 0.81 |
| | ADO4 | 0.50 |
| Compatibility | CPT2 | 0.86 |
| | CPT4 | 0.68 |
| Complexity | CXT1 | 0.68 |
| | CXT2 | 0.85 |
| | CXT3 | 0.82 |
| | CXT4 | 0.88 |
| Ease of Use | EOU1 | 0.84 |
| | EOU3 | 0.69 |
| | EOU4 | 0.84 |
| Observability | OBS2 | 0.69 |
| | OBS3 | 0.86 |
| Perceived Risk | RSK1 | 0.85 |
| | RSK2 | 0.73 |
| | RSK3 | 0.78 |
| | RSK4 | 0.90 |
| Trial ability | TRI1 | 0.77 |
| | TRI2 | 0.77 |

| | |
|---|---|
| TRI3 | 0.81 |
| TRI4 | 0.57 |

To examine the individual items (indicators) reliability, the outer loading of the items was observed to have reach the threshold of 0.7 (Hair *et al.,* 2013). The total number of indicators across all the variables under the study were 28. Most of the indicators attained the suggested threshold with the exception of 6 items that were deleted based on the Hair *et al.* (2017) suggestion that item with outer loading of between 0.4 and 0.7 can be considered for deletion where that would improve the level of composite reliability (CR) and average variance extracted (AVE). Consequently, six items with lower loadings were deleted, two each from the constructs compatibility (CPT1 and CPT3), and observability (OBS1 and OBS4). Others are one each from the constructs Perceived Ease of Use (EOU2) and Adoption (ADO2). These reduced the number of items to 22.

**Table 4: Internal Consistency and Convergent Validity (Reliability)**

| Construct | Composite Reliability (CR) | Average variance Extracted (AVE) |
|---|---|---|
| Adoption | 0.751 | 0.511 |
| Compatibility | 0.753 | 0.607 |
| Complexity | 0.887 | 0.664 |
| Ease of Use | 0.838 | 0.635 |
| Observability | 0.757 | 0.613 |
| Perceived Risk | 0.893 | 0.677 |
| Trial ability | 0.828 | 0.550 |

Composite reliability is used to examine the reliability of the measure used in the study. To achieve the reliability of a measures, a generally acceptable threshold was provided as 0.70 (Hair, et al., 2010). The composite reliability of all the constructs under study have attained the values above the minimum threshold. Perceived risk having the highest value of 0.89 followed by Complexity, 0.88; perceived ease of use, 0.83 and Trialability, 0.82 suggested an excellent internal consistency. Compatibility, Adoption and Observability has the composite reliability values of 0.75 each. This indicates a good internal consistency and the achievement of reliability of the measures used for the constructs.

The average variance extracted (AVE) was used to evaluate the convergent validity, which shows how well the indicators explained the construct. More than half of the variance in the constructs is explained by their indicators, as shown by the AVE values of all the constructs, which range from 0.51 (Adoption) to 0.67 (Perceived Risk), as seen in the above table. These demonstrate that a high degree of convergent validity has been attained.

**4.2.1 Discriminant Validity**

The degree to which the constructs differ from one another is measured by discriminant validity (Duarte & Raposo, 2010). A construct must be unique and encompass phenomena that are not represented by other constructs in the model in order to be considered discriminantly valid. Researchers heavily rely on two measures of discriminant validity: cross loading and the Fornell and Larcker criteria. Thus, in this study, discriminant validity was evaluated using cross loading and the Fornell and Larcker criteria.

**Table 5: Fornell-Larcker Criteria**

| Construct | ADO | CPT | CXT | EOU | OBS | RSK | TRI |
|---|---|---|---|---|---|---|---|
| Adoption | **0.715** | | | | | | |
| Compatibility | 0.448 | **0.779** | | | | | |
| Complexity | -0.493 | -0.336 | **0.815** | | | | |
| P. Ease. Use | 0.480 | 0.315 | -0.490 | **0.797** | | | |
| Observability | 0.572 | 0.427 | -0.320 | 0.386 | **0.783** | | |
| Perceived Risk | -0.527 | -0.353 | 0.462 | -0.381 | -0.379 | **0.823** | |
| Trialability | 0.442 | 0.416 | -0.543 | 0.396 | 0.488 | -0.321 | **0.741** |

According to the Fornell and Lacrker criteria, the average variance extracted (AVE) square roots must be higher than the correlation of all the latent variables. The square roots of the average variance extracted are represented by the bolded figures in the above table. These figures are sufficiently larger than the correlations of all the latent variables to indicate that the constructs are distinct from one another and that discriminant validity has been achieved (Hair et al, 2010).

**Table 6: Cross Loading**

| | ADO | CPT | CXT | EOU | OBS | RSK | TRI |
|---|---|---|---|---|---|---|---|
| **ADO1** | **0.779** | 0.225 | -0.375 | 0.189 | 0.439 | -0.427 | 0.302 |
| **ADO3** | **0.817** | 0.451 | -0.462 | 0.575 | 0.438 | -0.497 | 0.359 |
| **ADO4** | **0.508** | 0.246 | -0.135 | 0.151 | 0.364 | -0.096 | 0.298 |
| **CPT2** | 0.405 | **0.865** | -0.286 | 0.122 | 0.386 | -0.353 | 0.344 |
| **CPT4** | 0.279 | **0.682** | -0.237 | 0.433 | 0.267 | -0.170 | 0.305 |
| **CXT1** | -0.225 | -0.223 | **0.681** | -0.400 | -0.122 | 0.209 | -0.464 |
| **CXT2** | -0.419 | -0.301 | **0.859** | -0.374 | -0.316 | 0.444 | -0.451 |
| **CXT3** | -0.372 | -0.317 | **0.822** | -0.573 | -0.276 | 0.374 | -0.462 |
| **CXT4** | -0.511 | -0.260 | **0.883** | -0.317 | -0.281 | 0.420 | -0.439 |
| **EOU1** | 0.395 | 0.151 | -0.362 | **0.845** | 0.282 | -0.347 | 0.268 |
| **EOU3** | 0.206 | 0.246 | -0.258 | **0.694** | 0.233 | -0.251 | 0.245 |
| **EOU4** | 0.469 | 0.350 | -0.492 | **0.843** | 0.379 | -0.306 | 0.403 |
| **OBS2** | 0.361 | 0.168 | -0.283 | 0.224 | **0.691** | -0.268 | 0.361 |
| **OBS3** | 0.518 | 0.458 | -0.233 | 0.364 | **0.864** | -0.324 | 0.405 |
| **RSK1** | -0.487 | -0.293 | 0.460 | -0.396 | -0.358 | **0.857** | -0.300 |
| **RSK2** | -0.441 | -0.225 | 0.237 | -0.117 | -0.374 | **0.734** | -0.162 |
| **RSK3** | -0.375 | -0.300 | 0.410 | -0.464 | -0.125 | **0.785** | -0.289 |
| **RSK4** | -0.414 | -0.344 | 0.409 | -0.289 | -0.360 | **0.904** | -0.306 |
| **TRI1** | 0.311 | 0.336 | -0.401 | 0.218 | 0.432 | -0.193 | **0.776** |
| **TRI2** | 0.278 | 0.246 | -0.331 | 0.227 | 0.282 | -0.214 | **0.775** |
| **TRI3** | 0.428 | 0.410 | -0.574 | 0.513 | 0.433 | -0.390 | **0.816** |
| **TRI4** | 0.250 | 0.185 | -0.214 | 0.104 | 0.262 | -0.073 | **0.575** |

An additional technique for assessing discriminant validity is cross loading. According to Hair et al. (2014), the outer loading of indicators on the connected construct ought to be higher than the loading on every other construct. The above table's cross loading estimation shows that the indicators' outer loading on

the associated construct (bold figures) is greater than it's loading on the other constructs. This demonstrates that rather than having a high association, the constructs are distinct from one another. Consequently, the outcome of discriminant validity is positive (Hair et al., 2014).

### 4.2 Assessment of Structural Model

The structural model (inner model) specifies the relationships between the constructs. Using the structural model, the hypothesis is tested. Thus, the structural model was used to evaluate the hypothesis. Evaluations of the route coefficient significance, coefficient of determination (R2), effect size (f2), and predictive relevance (Q2) are among the criteria used by Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the structural model (Hair et al., 2017).

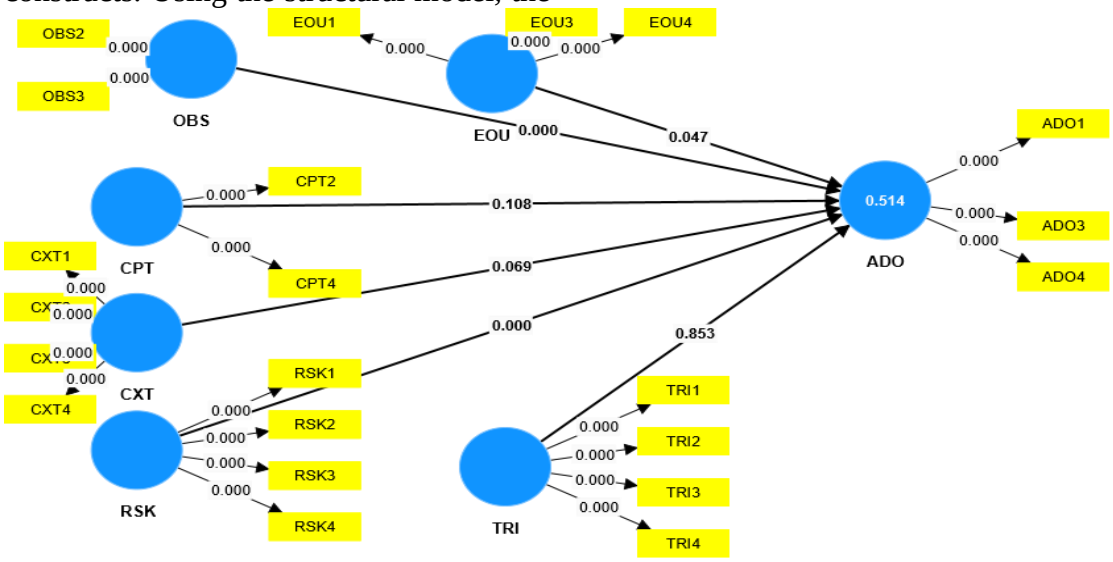


**Figure 3: Structural Model**

**Table 7: Path Coefficients/Hypothesis Testing**

| Relationship | Beta | STD | T Statistics | P Value | Decision |
|---|---|---|---|---|---|
| CPT -> ADO (Compatibility -> Adoption) | 0.126 | 0.078 | 1.607 | 0.108 | Not Supported |
| CXT -> ADO (Complexity -> Adoption) | -0.168 | 0.091 | 1.816 | 0.069 | Not Supported |
| EOU -> ADO (P. Ease. Use -> Adoption) | 0.145 | 0.073 | 1.985 | 0.047 | Supported |
| OBS -> ADO (Observability -> Adoption) | 0.316 | 0.062 | 5.130 | 0.000 | Supported |
| RSK -> ADO (Perceived Risk -> Adoption) | -0.229 | 0.058 | 3.881 | 0.000 | Supported |
| TRI -> ADO (Trialability -> Adoption) | 0.024 | 0.087 | 0.186 | 0.853 | Not Supported |

Table 7 presents the results of hypothesis testing, examining the relationships between Adoption, Compatibility, Complexity, and Perceived Ease of use, Observability, Perceived Risk, and Trialability. These relationships are quantified using Beta values, Standard Deviation, T Statistics, and P Values. The relationship between adoption and compatibility is positive but weak, with a Beta value of 0.12. The Standard Deviation is 0.07, indicating relatively low variability around this estimate. The T Statistic of 1.607 is insignificant, with a P Value of 0.10, suggesting a very weak and insignificant statistical relationship. This implies thought the relationship is positive, compatibility does not have a significant influence on the adoption of eNaira. Therefore, compatibility is less important factor determining the adoption of eNaira. Complexity indicates a negative and weak relationship with Adoption, with a Beta value of -0.168. The Standard Deviation is 0.09, and the T Statistic is 1.81, which is statistically insignificant with a P Value of 0.06. This indicates that complexity has a negative but insignificant contribution forward eNaira adoption signifying that the eNaira is not perceived to be complex to use, hence no much impact on the adoption. The lack of a significant impact from complexity may be due to the high level of education of the majority of study participants. The respondent did not find using eNaira to be challenging, hence it had no effect on their adoption.

Nonetheless, there is a statistically significant correlation between perceived ease of use and eNaira adoption. The T statistic is 1.98, the P value is 0.04, the beta value is 0.14, and the standard deviation is 0.07. This suggests that eNaira adoption is significantly influenced by perceived ease of use. The statistical significance linked to perceived ease of use suggests that eNaira users found it simple to relate to, in contrast to complexity, which seems to be unimportant. This finding supported the stated hypothesized relationship indicating that Perceived ease of use would have a positive impact on eNaira adoption in Nigeria. Additionally, observability and eNaira adoption have a positive, substantial, and strong link. T statistics of 5.13, a P value of 0.00, a beta value of 0.31, and a standard deviation of 0.6 all emphasize how crucial observability is to eNaira adoption. This shows that eNaira adoption is significantly influenced by the higher degree of observability. Its adoption is higher when its use is more visible. Hence the hypothesized relationship that Observability would have a significant impact on eNaira adoption in Nigeria is supported.

Similarly, there is a significant negative relationship between perceived risk and eNaira adoption, with a beta value of -0.22, a standard deviation of 0.05, a T statistic of 0.38, and a P value of 0.00 indicating a strong negative relationship: perceived risk has a greater impact on eNaira adoption, with a negative beta value suggesting a potential adverse effect and statistical significance indicating that high levels of risk perception negatively affect eNaira adoption. The association between trialability and eNaira adoption, with a beta value of 0.02, standard deviation of 0.08, T statistics of 0.18, and a P value of 0.08, seemed to be positive but not statistically significant. This demonstrates unequivocally that Trialability has had little impact on the acceptance of eNaira.

In conclusion, the findings of the hypothesis test show that, although they go in different directions, observability and perceived risk are the main factors influencing the adoption of eNaira. As opposed to perceived risk, which has a negative effect on eNaira adoption, observability has a positive effect. The

impact of perceived ease of use is comparatively smaller, while compatibility, complexity, and trialability all seemed to be negligible factors in determining the adoption of eNaira. These results highlight how crucial perceived risk and observability are in influencing eNaira adoption.

**Table 8: Coefficient of Determination ($R^2$)**

| Construct | R-Square | Adjusted R-Square |
|---|---|---|
| Adoption | 0.514 | 0.505 |

According to Hair et al. (2017), the coefficient of determination ($R^2$) is a measure of how much of the variation in the dependent variable or variables can be accounted for by one or more predictor variables. It shows how the exogenous variable or variables affect the endogenous variable (Hair et al., 2014). The $R^2$ value is in the range of 0 and 1. More variance is explained when the R-square is near 1. Even though the research discipline determines the acceptable amount of $R^2$, Chin (1988) however, suggests that endogenous latent constructs with $R^2$ values of 0.67, 0.33, and 0.19, can be considered substantial, moderate, and weak, respectively. Therefore, the endogenous construct's $R^2$ value of this study is shown in Table 8.

The table shows that the coefficient of determination ($R^2$) for the relationships in eNaira Adoption is 0.51; this implies that the exogenous factors have a combined influence on the endogenous variable, i.e., the model explains 51% of the variability in eNaira Adoption. A more accurate measure of fit is provided by the adjusted R Square value of 0.50, which takes into consideration the number of predictors in the model and demonstrates that the percentage of explained variance stays constant even after controlling for model complexity.

**4.3 Assessment of the effect size**

The effect size ($f^2$) is used to determine the influence of a certain exogenous variable on the associated endogenous variable. According to Chin (1998), the change in the $R^2$ value indicates the relative influence of a specific predictor on a response variable. Yahaya et al. (2017) saw effect size as a numerical representation of how much the inclusion or absence of a specific variable affected the model's efficacy. The effect size is calculated using the formula below:

$$Effect\ Size\ (f^2) = \frac{R2\ \text{Included} - R2\text{Exluded}}{\text{Effect Size (f2)}}$$

Where: $f^2$ = F-square value that determines the effect size of a specific exogenous on the endogenous.

$R^2_{\text{Included}}$ = $R^2$ value of the endogenous variable before omitting a particular exogenous construct.

$R^2_{\text{Exluded}}$ = the changes in the $R^2$ value of the endogenous variable after excluding a particular exogenous variable from a model.

According to Cohen, (1988), the $f^2$ values of 0.02, 0.15, and 0.35, indicate small, medium, and large effects respectively.

**Table 9: Effect Size**

| Constructs | f-square | Effect Size |
|---|---|---|
| Compatibility | 0.023 | Small |
| Complexity | 0.031 | Small |
| Perceived Ease of Use | 0.030 | Small |
| Observability | 0.133 | Small |
| Perceived Risk | 0.074 | Small |
| Trialability | 0.000 | None |

Table 9 displays the effect sizes for different constructs related to the adoption of eNaira. The effect size ($f^2$) for compatibility, as determined by Cohen's Guidelines, is 0.023, suggesting a small effect on eNaira adoption. Complexity also indicates a small effect size with $f^2$ of 0.031. Additionally, the $f^2$ of 0.030 for perceived ease of use suggests a small impact size. The effect sizes of every other variable are small, with the exception of trialability, which has no effect at all ($f^2 = 0.00$). Observability and perceived risk are among them, with respective $f^2$ values of 0.133 and 0.074.

**4.4 Discussion of Findings**

According to the study's findings, compatibility does not significantly affect eNaira adoption, indicating that it is a less significant element in this regard. However, this result contradicts previous findings of by Suryaatmaja, Susanto, and Alamsyah (2024), who found that compatibility greatly boosts mobile payment usage. As a result, it also opposes Jamshidi and Kazemi's (2020) study, which concluded that compatibility plays a major role in the use of Islamic credit cards.

Additionally, the results show a weak and negative link between complexity and adoption, indicating that the eNaira is not thought to be difficult to use, which has little effect on adoption. This result supported Tan and Teo's (2000) hypothesis that perceived complexity may not have a substantial effect on users' adoption of online banking services. The result, however, runs counter to earlier studies that have shown its significance in adoption (Yahaya et al., 2017; Wright & Kaine., 2022; Thambiah et al., 2011; Butt et al., 2011). The high level of knowledge of the majority of study participants may be the reason for the lack of a meaningful impact from complexity. It was not difficult for the respondent to use eNaira.

The results of the study also indicate that perceived ease of use has a major impact on eNaira adoption, which is consistent with Ezeh and Nwanko's (2018) conclusion that perceived ease of use is a strong predictor of mobile money uptake. The results also support those of Abdullahi et al. (2023), who discovered that perceived ease of use has a significant impact on Nigerian students' adoption of mobile money. Similarly, the results corroborated those of Nangin, Barus, and Wahyoedi (2020), who discovered that perceived ease of use contributed to the adoption of fintech. And as well supported Luo et al. (2024). Additionally, this result validated the recent findings by Ahmed, Al-Hussaini, and Ibrahim (2025) who discovered that Nigerian retailers' intentions to adopt eNaira were significantly influenced by perceived ease of use.

The results also showed a large and positive correlation between observability and eNaira adoption, highlighting the importance of observability for eNaira adoption. This demonstrates that the increased degree of observability has a major impact on eNaira adoption. When its application is more obvious, adoption is higher. This result is consistent with that of Suryaatmaja, Susanto, and Alamsyah (2024). It also supported Lskavyan's (2025) findings, which showed how effective observability is in matters pertaining to technology.

Finding of this study further revealed showed a strong negative correlation between perceived risk and eNaira adoption, suggesting that high levels of risk perception had a negative impact on eNaira adoption. This corroborated the findings of Zhao et al. (2010), who looked at how perceived risk affected the acceptance of online banking services in China and found that it considerably hindered this process. It also supports the findings of Al-Fahim (2012), that the use

of online banking services is negatively correlated with perceived risk.

Additionally, this study shows that trialability affects eNaira acceptance, which is consistent with studies by Pobee (2022), Jaradat (2021), and Davoodi, Akbarpour, and Hadipour (2021) that demonstrated trialability was a significant factor in predicting and influencing behavior pertaining to technology use. The results of this study also concurred with the findings of studies by Ali, Kumar, and Prasad (2024) and Suryaatmaja, Susanto, and Alamsyah (2024), who established the significance of trialability in relation to the acceptance of mobile payment usage.

## 5. Conclusion and Recommendation

The combination of variables associated with eNaira adoption were presented in this study, and each variable's potential to influence eNaira adoption was assessed, along with the direction of that influence. The study was successful in identifying the key elements associated with the adoption of eNaira. In particular, observability and perceived risk seemed to be the most significant factors influencing the adoption of eNaira. This indicated that the degree to which eNaira was used was directly correlated with its visibility. People are more inclined to trust and use eNaira themselves when they observe others utilizing it effectively, for instance, to make payments and by observing other people's apparent success, which helps in generating social validation. Users are more likely to use eNaira if it is evident how quick, affordable, or secure it is in comparison to cash or conventional banking. Therefore, adoption is boosted by visibility or favourable results like quick transactions and lower fees. This led to attainment of confidence, and determination. The higher the observed usage, the more likely individuals are to adopt it. The perception of risk was found to be another significant component. The adoption of eNaira is negatively correlated with perceived risk, indicating that people perceive its use as risky, which is linked to their fear of fraudsters and other online crimes because its usage is exclusively dependent on the internet platform, which poses a threat, particularly in terms of security, where users worry about potential losses. Innovations, such as digital currency, is accompanied by dread and uncertainty, but potential users' worries are allayed by seeing actual users and applications work seamlessly. Therefore, in order to keep people who currently subscribe to its usage while also fostering confidence in future users, the government need to concretely build confidence among the potential adopters.

It is crucial to note that compatibility, which was once a key component in the adoption of technology-related phenomena, had no noticeable effect on the adoption of eNaira. This may be because, in the places being studied, inadequate internet connectivity, smartphone penetration, or energy may prevent eNaira from being widely adopted, even if it is technically consistent with adopters' demands. In the absence of the fundamental tools required to operate eNaira, compatibility becomes meaningless. It's possible that adopters would not notice any obvious advantages to using eNaira over more established options like cash, bank transfers, and mobile money. Additional factors may include cultural and behavioral tendencies linked to long-standing cash use and informal financial practices within the population under consideration. Similarly, if it does not meet actual user expectations when combined with formal banks, it might be deemed compatible but trades who are more inclined to informal economies might disagree.

Similarly, complexity had no significant impact on the adoption of eNaira. This

may be because the majority of respondents are highly educated and may have knowledge of e-wallets, the internet, and mobile money usage; as a result, they may not have considered eNaira usage to be complicated. Users may be more worried about other facets of trust and security. Furthermore, younger people who are familiar with smartphones and mobile banking frequently pick up tech skills by observing others. Thus, complexity appears to be less of an issue, especially when early adopters, particularly those who are respected and considered influential in a community mentor others.

Finally, the study recommends that government especially CBN should work toward enhancing public visibility and demonstrations, putting strong risk reduction measures into place through effective technological tools, streamlining the user experience through better app usability, fewer transaction steps, and multilingual support, re-evaluating low impact factors, and expanding education and awareness programs particularly those that target underserved populations and rural areas.

**Acknowledgement**

This is to acknowledge the Tertiary Education Fund (Tetfund) for sponsoring this research project titled "eNaira Adoption in the Era of Digital Currencies for Financial Inclusion in Nigeria: A Diffusion of Innovation Approach".

**References**

Abdullahi, M., Yahaya, S., Shinkafi, A. A., Saleh, L. Y., Kura, S., S., and Bala, B. A (2023) Acceptability of Mobile Money Among University Students: The Moderating Effects of Peer Group Influence, Polac Journal of Social and management Sciences Volum: 1, Issue: 2

Ahmed, M., Al-Hussaini, A. I. S., & Ibrahim, A. A. (2025). Factors influencing the intention to use the Nigerian central bank digital currency (E-Naira) among Nigerian retailers. *Journal of Financial Services Marketing, 30*(1). https://doi.org/ARTN 1

Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C., & Sanz-Blas, S. (2009). The role of consumer innovativeness and perceived risk in online banking usage. *International Journal of Bank Marketing, 27*(1), 53-75.

Al-Fahim, N. H. (2012). Factors Affecting the Adoption of Internet Banking Amongst IIUM' students: A Structural Equation Modeling Approach. [Article]. *Journal of Internet Banking & Commerce, 17*(3), 1-14.

Ali, J., Kumar, S. S., & Prasad, V. H. (2024). Exploring the Role of Knowledge on Adoptability of Islamic Banking and Financing Options for Micro, Small and Medium Enterprises: The Mediating Role of Trialability. *Journal of Ecohumanism, 3*(8), 107-116.

Arts, J. W., Frambach, R. T., & Bijmolt, T. H. (2011). Generalizations on consumer innovation adoption: A meta-analysis on drivers of intention and behavior. *International Journal of Research in Marketing, 28*(2), 134-144.

Bampaloukas, I. (2022). A Case for Observability. *Perspectives on Behavior Science, 45*(3), 579-596.

Bennett, J. M., Bennett, M. J., & Allen, W. (2003). Developing intercultural competence in the language classroom. *Culture as the core: Perspectives on culture in second language learning*, 237-270.

Butt, I., Saleem, N., Ahmed, H., Altaf, M., Jaffer, K., & Mahmood, J.

(2011). Barriers to adoption of Islamic banking in Pakistan. *Journal of Islamic Marketing, 2*(3), 259-273.

Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling: Manaagement information system research center, university of Minnesota http:www.jstor.org/stable/249674.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.

Couros, A. (2003). Innovation, change theory and the acceptance of new technologies: a literature review. *Unpublished manuscript*.

Cox, D. F., & Rich, S. U. (1964). Perceived risk and consumer decision-making: The case of telephone shopping. *Journal of Marketing Research*, 32-39.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Davoodi, S., Akbarpour, L., & Hadipour, E. (2020). Investigating the Effects of Subjective Norms and Trialability on English TeachersAttitude toward the Use of Technology. *Vision: Journal for Language and Foreign Language Learning*, *9*(2), 159-172.

Davoodi, S., Akbarpour, L., & Hadipour, H. (2021). Effect of Psychological Factors on EFL Teachers' Attitude about Technology Use: Perceived ease of use, trialability, and subjective norms in focus. International Journal of Foreign Language Teaching and Research, 9 (37), 79-88. DOI: 10.52547/JFL.9.37.83

Duarte, P., & Raposo, M. (2010). A PLS model to study brand preference: An application to the mobile phone market. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares* (pp. 449-485). Springer. https://doi.org/10.1007/978-3-540-32827-8_21

Echchabi, A., & Aziz, H. A. (2012). Empirical Investigation of Customers' Perception and Adoption Towards Islamic Banking Services in Morocco. *Middle-East Journal of Scientific Research, 12*(6), 849-858.

Ezeh, P., and Nwanko , N. (2018) Factors that Influence the acceptance of mobile money in Nigeria. Journal of Research in Marketing. Volume No. 2.

Gerrard, P., Cunningham, J. B., & Devlin, J. F. (2006). Why consumers are not using internet banking: a qualitative study. *Journal of Services Marketing, 20*(3), 160-168.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate Data Analysis A Global Perspectives. (7th ed.). *Pearson Education, Inc., Upper Saddle River, New Jersy*.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2013). *Multivariate data analysis* (7th ed.). Pearson Education.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM),* . Los Angels: Sage Publication Ltd.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.

Hayat, R., & Hameed, W. U. (2024). Exploring the role of Islamic FinTech innovation trialability and compatibility in enhancing Islamic financial inclusion: a data-driven approach. *The Asian Bulletin of Big Data Management*, *4*(1), 217-228

Ho, C.-H., & Wu, W. (2011). Role of Innovativeness of Consumer in Relationship between Perceived Attributes of New Products and Intention to Adopt. *International Journal of Electronic Business Management*, *9*(3).

Howcroft, B., Hamilton, R., & Hewer, P. (2007). Customer involvement and interaction in retail banking: an examination of risk and confidence in the purchase of financial products. *Journal of Services Marketing*, *21*(7), 481-491.

J., Huang, C. Y., Yang, C. L., & Juang, J. N. (2018). A derivation of factors influencing the innovation diffusion of the OpenStreetMap in STEM education. *Sustainability*, *10*(10), 3447.

Jahangir, N., & Begum, N. (2007). Effect of perceived usefulness, ease of use, security and privacy on customer attitude and adaptation in the context of e-banking. *Journal of Management Research*, *7*(3), 147-157.

Jamshidi, D., & Kazemi, F. (2020). Innovation diffusion theory and customers' behavioral intention for Islamic credit card: Implications for awareness and satisfaction. *Journal of Islamic Marketing*, *11*(6), 1245-1275.

Jaradat, M. I. R. M. (2021). Exploring the influence of security/privacy, trialability, output quality and anxiety on the adoption of mobile decision support systems among nurses: a developing country context. *International Journal of Mobile Learning and Organisation*, *15*(3), 251-281.

Kaine, G., & Wright, V. (2022). Relative advantage and complexity: Predicting the rate of adoption of Agriculcural Innovation. Frontiers in Agronomy, 4,967605.

Karahanna, E., Agarwal, R., & Angst, C. M. (2006). Reconceptualizing compatibility beliefs in technology acceptance research. *Mis Quarterly*, 781-804.

Lee, Y. H., Hsieh, Y. C., & Hsu, C. N. (2011). Adding innovation diffusion theory to the technology acceptance model: Supporting employees' intentions to use e-learning systems. *Journal of Educational Technology & Society*, *14*(4), 124-137.

Lskavyan, V. (2025). Inspection Technology: Observable vs. Unobservable Choice. *International Advances in Economic Research*, *31*(1), 79-91.

Luo, J., Ahmad, S. F., Alyaemeni, A., Ou, Y., Irshad, M., Alyafi-Alzahri, R., ... & Unnisa, S. T. (2024). Role of perceived ease of use, usefulness, and financial strength on the adoption of health information systems: The moderating role of hospital size. *Humanities and Social Sciences Communications*, *11*(1), 1-12.

Mohamad Hsbollah, H., Kamil, & Idris. (2009). E-learning adoption: the role of relative advantages, trialability and academic specialisation. *Campus-Wide Information Systems*, *26*(1), 54-70.

Mu, Y., & Mu, A. (2022). CBDC: Concepts, benefits, risks, design, and implications. *Benefits, Risks,*

*Design, and Implications (October 1, 2022)*.

Nangin, M. A., Barus, I. R. G., & Wahyoedi, S. (2020). The effects of perceived ease of use, security, and promotion on trust and its implications on fintech adoption. *Journal of Consumer Sciences*, *5*(2), 124-138.

Nayanajith, G., Damunupola, K. A., & Ventayen, R. J. (2019). Impact of innovation and perceived ease of use on e-learning adoption. *Asian Journal of Business and Technology Studies*, *2*(1), 19-27.

Obiora, F., Omaliko, E., & Okeke, C. J. (2022). E-Naira Digital Currency and Financial Performance of Listed Deposit Money Banks in Nigeria. *International Journal of Trend in Scientific Research and Development, 6* (2), 222-229. Retrieved from www.ijtsrd.com/papers/ijtsrd49206.pdf

Ozili, P. K. (2022). Central bank digital currency in Nigeria: opportunities and risks. In *The new digital era: Digitalisation, emerging risks and opportunities* (Vol. 109, pp. 125-133). Emerald Publishing Limited.

Ozili, P. K. (2023). Central bank digital currency research around the World: a review of literature. *Journal of Money Laundering Control*, *26*(2), 215-226.

Pobee, F. (2022). Non-Probabilistic Approach to e-Banking Adoption: The Moderating Impact of Trialability. Management and Labour Studies, 47(2), 183-198. https://doi.org/10.1177/0258042X211054248

Ree, J. (2021). Five observations on Nigeria's central bank digital currency. *IMF Country Focus.–2021.–16.11.–URL: https://www.imf.org/en/News/Articles/2021/11/15/na111621-five-observations-on-nigerias-central-bank-digital-currency (дата обращения 16.02.2022)*.

Ree, J. (2023). *Nigeria's eNaira, one year after*. International Monetary Fund.

Rogers, E. M. (2003). Diffusion of innovation (Fifth ed.) Free, Press, New york.

Roscoe, J. T. (1975). Fundamental Research Statistics for the Behavioural Sciences, 2nd edition. New York: Holt Rinehart & Winston.

Roussou, I., & Stiakakis, E. (2019). Adoption of Digital Currencies: The Companies' Perspective. *Operational Research in the Digital Era - Ict Challenges*, 47-64. doi:10.1007/978-3-319-95666-4_4

Santiago, J. R. (2017). *Observability and the Decision-Making Process in Information Technology Service Management: A Delphi Study* (Doctoral dissertation, Northcentral University).

Sekaran, U. (2000). *Research methods for business: A skill-building approach*: John Wiley & Sons.

Shiau, S. J., Huang, C. Y., Yang, C. L., & Juang, J. N. (2018). A derivation of factors influencing the innovation diffusion of the OpenStreetMap in STEM education. *Sustainability*, *10*(10), 3447.

Srivastava, K., & Sharma, N. K. (2011). Exploring the multidimensional role of involvement and perceived risk in brand extension. *International Journal of*

*Commerce and Management, 21*(4), 410-427.

Straub, D. W. (1989). Validating instruments in MIS research. *Mis Quarterly*, 147-169.

Suryaatmaja, D. N., Susanto, N. R., & Alamsyah, D. P. (2024). Sustainable Mobile Payment Adoption: Correlates of Compatibility and Observability Apps. In *2024 International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS)* (pp. 923-928). IEEE.

Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the AIS, 1*(1es), 5.

Thambiah, S., Eze, U. C., Santhapparaj, A. J., & Arumugam, K. (2011). Customers' Perception on Islamic Retail Banking: A Comparative Analysis between the Urban and Rural Regions of Malaysia. *International Journal of Business & Management, 6*(1).

Thambiah, S., Eze, U. C., Santhapparaj, A. J., & Arumugam, K. (2010). Customers' perception on Islamic retail banking: a comparative analysis between the urban and rural regions of Malaysia. *International journal of Business and Management, 6*(1).

Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *Engineering Management, IEEE Transactions on*(1), 28-45.

Venkatesh, V & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies, Management Science, INFORMS, vol. 46(2), pages 186-204, February.

Yahaya, S., Abdul Hamid, I., Idris, A. F. B and Haji-Othman, Y. (2016) The Impact of Compatibility and Perceived risk on Customers' Acceptance of Islamic banking in Nigeria. *International Journal of Business Marketing and Management (IJBMM) Vol. 1 Issue 4, November, 2016*

Yahaya, S., Shinkafi, A. A., and Haji-Othman, Y (2017). The Relevance of relative Advantage and Complexity on Customer's Usage of Islamic Banking products in Nigeria. International Journal of Management and Applied Sciences Vol.3, Issue-4, April-2017

Yusuf, A. M., Kabir, M. A., & Umar, I. A. (2024). Determinants of e-Naira use intention among undergraduate students in Nigerian tertiary institutions. *International Journal of Intellectual Discourse, 7*(2), 349-361.

Zhao, A. L., Koenig-Lewis, N., Hanmer-Lloyd, S., & Ward, P. (2010). Adoption of internet banking services in China: is it all about trust? *International Journal of Bank Marketing, 28*(1), 7-26.