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# Effects of User Experience on Identity Authentication in the Nigerian E-banking Environment

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## **ABSTRACT**

A positive user authentication experience in e-banking is becoming increasingly challenging for providers of banking services. Users experience is crucial in justifying money spent in technologies. The use of Technology and its acceptance is a field of learning that researchers are working assiduously to discover factors affecting user identity authentication experience in e-banking. The study will investigate the factors affecting user experience on identity authentication in Nigeria e-banking environment using UTAUT model. Statistical methods will be used for analysis. The geographical scope of this work will be restricted to federal capital territory (FCT) in North Central Nigeria. Bank officials and customers will be selected from FCT and samples will be drawn through purposive sampling technique. Findings will disclose factors affecting user identity authentication experience. Recommendations will be made and the model derived which is UTAUT elements will contributions extensively to the body of literature.

**Keywords:** user experience, identity authentication, e-banking, Nigeria

## **BACKGROUND TO THE STUDY**

The introduction of Electronic banking (e-banking) into the banking sector brought widespread changes in the industry. With electronic banking, buying and selling are conducted at home or office through the Internet (Driga and Isaac, 2014). The use of electronic banking in carrying out banking transactions has reduced the cost incurred by banks and customers, made it easy for customers to check products and offerings between banks, accelerate the geographical areas of banks and gave nations that are growing their monetary structures the opportunity to develop. The use of wireless communication systems made it convenient for users to have direct and fast access

to financial institution offerings abroad. Electronic banking has enabled banks to win their client loyalty, have big market share, accelerate efficiency and offer value added services. E-banking is the use of Internet to carry out monetary services (Jolly, 2016). These services encompass fund transfer, checking and managing account balances, paying bills, asking for loans. The three approaches through which customers can use e-banking are: to get information from banks website about its products, services, policies and transaction (Vaciago et al, 2016).

The development of digital banking in Nigeria dates back to 1986 during the Structural adjustment program (SAP) era. During this period, banks in Nigeria were deregulated. Electronic banking changed customers taste on service delivery thereby posing serious challenge to the banks. The banks provided computerized teller machines (ATMs) to ease the constraints. This resulted in more customers' satisfaction and in increased revenue for the banks (Okra and Kibati, 2016). Bank customers now can use their smart gadgets to carry out banking activities from any region (Okoye et al., 2019). E-banking is predicted to develop astronomically due to the fact that there are many customers using e-commerce application.

### THEORETICAL FOUNDATION

Since the study is on individual IT use behavior, the UTAUT idea will be used to provide an explanation for individual IT utilization conduct and possible principles in technology adoption. The UTAUT model was developed by Venkatesh et al., in 2003 to describe user's intentions to use information system and their previous usage behavior. The theory centered on the individual-level factors affecting technological know-how acceptance and the incidents that would extend the effect. The theory has four important constructs namely: overall performance expectancy, effort expectancy, social influence and facilitating conditions. Performance expectancy, effort expectancy and Social influence, impacts on intention and behavior while facilitating conditions is solely on user behavior. The four interim individual variables: age, gender, education and voluntariness of use, states the relationship between predominant factors, behavioral intention and use behavior. The UTAUT model has been used in different fields such as e-banking (Afshan and Sherif, 2016; Baptisa and Oliveira, 2015; martins, Olivera and Popovic, 2016), e-commerce (Asatani, Harisno, Kusuma wardhana and Warnars, 2018; Kabanda and Brown, 2017; Sim et al., 2018; verkijika, 2018). Though the UTAUT model is broadly used in the subject of Information System (IS), it has some limitations.

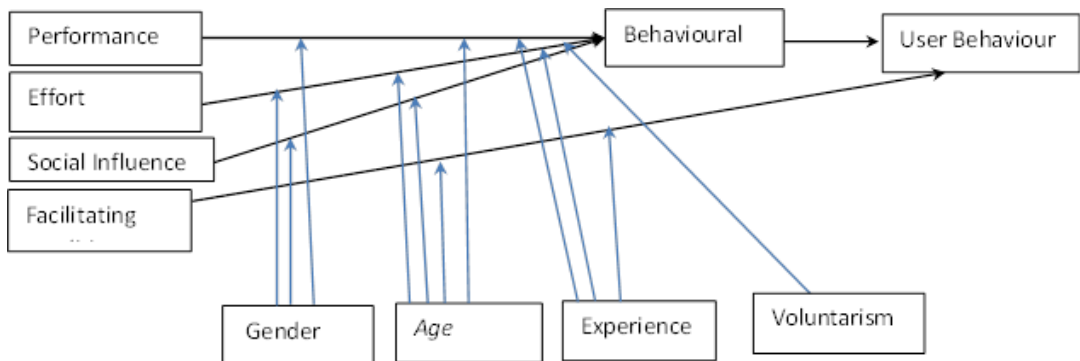


Figure 1.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

Source: adapted from Venkatesh et al. (2003)

## **CULTURAL BACKGROUND**

Nigeria is the most populated state in Africa. It is located in West Africa. Nigeria has a land mass of 923,768 km<sup>2</sup> (356,669 sq. mi). It is the world's 6th -largest nation and has a population of over 200 million, (U.S census bureau, 2021). Nigeria is a cosmopolitan state with about 250 ethnic groups and five hundred exclusive languages. Nigeria is a secular nation and English language is her official language. Nigeria is a growing market and the second-largest economic system in Africa (The Round Table. 50 (197): 55–63). Nigeria is a combined financial system and is rated 27th-largest in the world by using nominal GDP and 24th-largest by using purchasing power parity (PPP). Nigeria is a middling financial system with prosperous natural resources (Campbell, John 2020, the Christian Science Monitor, 2020).

## **CONTEXTUAL BACKGROUND**

Nigerian financial services are developing and the ICT is developing. In 2018, the national GDP in ICT is 10% in contrast to 1% in 2001(DeRouen, Karl R. & Bellamy, Paul, 2008). Lagos is amongst the leading technology hubs in Africa. Many startups companies are taking advantage of the science to solve problems in distinctive sectors (Encarta.2003). Nigeria telecommunication market is rated amongst the fastest growing in the world (DeRouen, Karl R. & Bellamy, Paul, 2008). In 2020, Nigeria has about 136,203,231 net customers out of an estimated population of 205,886,311(Telecoms Data, Q12020) .This suggests that in 2020 alone, that about 66 per cent of the Nigerian populace is related to the net and is using the Internet actively. Internet is used by Nigerians for specific functions like educational, social networking, and entertainment purposes. It is also used in carrying out fraud.

## **PROBLEM STATEMENT AND JUSTIFICATION**

Most banks in digital-economic countries including Nigeria have integrated e-banking services into their operations. This is due to the fact of the promises it has for the banks and customers. In spite of the many advantages of e-banking, many people in Nigeria are still not using it to raise their transaction because they lack confidence in its safety and privacy. Customers are not at ease with most of the authentication methods used by banks in Nigeria. The more safety measures the banks introduced, the more unease user become. The existing authentication methods have their challenges. Many Nigerians are not using e-banking service due to fear of leaking their vital information to an unknown person. This is affecting the adoption of cashless policy by CBN (Central Bank of Nigeria) and the Nigerian economy.

The UTAUT model has been used in e-banking (Afshan and Sherif, 2016; Baptisa and Oliveira, 2015; martins, Olivera and Popovic, 2016) and also in e-commerce (Asatani, Harisno, Kusuma wardhana and Warnars, 2018; Kabanda and Brown, 2017; Sim et al., 2018; verkijika, 2018). It has been used extensively to investigate technology utilization and behaviour but users experience on identity authentication has not been given much attention. The study will use the UTAUT factors:

Performance Expectancy, Effort Expectancy, Social Influence and facilitating conditions to analyze user identity authentication experience in Nigeria e-banking.

### **AIM/PURPOSE OF STUDY**

The purpose of this study is to examine the effects of user experience on identity authentication in the Nigerian e-banking environment. The specific objectives are to investigate user identity authentication experience using UTAUT factors (Performance Expectancy, Effort Expectancy and Social Influence ), how facilitating conditions (organizational and technical infrastructures) influences user identity authentication experience in e-banking and if user identity authentication experience influences the use of e-banking products and services.

### **RESEARCH QUESTIONS**

**The research questions are:**

- i. To what extent do performance expectancy, effort expectancy and social influence affect user identity authentication experience in e-banking?
- ii. To what extent does facilitating conditions (organizational and technical infrastructures) influence user identity authentication in e-banking?
- iii. To what extent does users' identity authentication experience affect e-banking usage?
- v. What needs to change in the existing authentication methods?

### **RESEARCH HYPOTHESES**

The following hypotheses cited in alternative structure will be tested:

- i. H<sup>1</sup>: There is a significant relationship between performance expectancy, effort expectancy, social influence and user identity authentication experience in e-banking.
- ii. H<sup>1</sup>: There is a significant relationship between facilitating conditions (organizational and technical infrastructures) and user identity authentication experience in e-banking.
- iii. H<sup>1</sup>: There is a significant relationship between the use of e-banking products and services and user identity authentication experience in e-banking.

### **SIGNIFICANCE OF THE STUDY**

The study is important to bank operators as it will assist them in deciding the best identity authentication method to implement. It will help the regulating authorities in Policy making and goals settings for the banking institutions. It will establish realistic evidence on factors affecting identity authentication in the Nigerian e-banking environment. The outcome of the study will assist researcher who want to study further on the topic. In addition, developing nations will learn from factors affecting users experience on identity authentication in e-banking in the Nigerian context.

### **PRACTICAL CONTRIBUTIONS OF THE STUDY:**

The research will identify the fundamental elements affecting users experience in the identity authentication in the Nigerian e-banking, the consequences of the phenomenon, and provide suggestions that will help to enhance users experience in identity authentication. This will help to build users' confidence in e-banking products and offerings in Nigeria.

## **FOR WHOM THE STUDY IS IMPORTANT**

The banks, regulators, the public and the Nigerian financial system will benefit remarkably from the study due to the fact that an improved identity authentication will build users confidences on e-banking products and services. Many Nigerians will embrace e-banking as quite a number of them are unbanked due to security reasons, banks liquidity ratio will increase thereby making loans reachable for medium and small scale businesses, it will enhance the adoption of CBN cashless policy. All these will have tremendous impact on the Nigerian economy.

## **METHODOLOGICAL CONTRIBUTION**

This study brings in a paradigm supported by way of the ontology of objectivism and positivism epistemology. The analyses, entails data that is quantifiable to analyze factors affecting users experience in identity authentication in the Nigerian e-banking.

## **MODEL DEVELOPMENT**

Using the structural equation model techniques, the study will be concluded by way of developing a model that will enhance users experience on identity authentication in Nigerian e-banking.

## **SCOPE OF STUDY**

The research is focus on the effects of user experience on identity authentication in Nigerian e-banking. Appropriate samples will be drawn from staff and customers of selected banks in FCT. The authentication methods use in the banks will be analyses. UTAUT model will be the concept on which this study will be anchored.

## **GEOGRAPHICAL SCOPE:**

The research will be centered on Federal capital territory in North central Nigeria. FCT is selected due to the fact it is the administrative centre of the nation, all heads of authorities, ministries, agencies and departments are located in it. It has a population of about 4million. It is additionally a converging area for human beings from all class of walk.

## **EMPIRICAL SCOPE:**

Studies have been carried out by many scholars on identity authentication including, Multilevel Authentication System for Stemming Crime in Online Banking ( Alese, B.K., et al., (2018). But none has been done on users experience on identity authentication in the Nigerian e-banking environment. This study is therefore limited to the authentication methods used in the Nigerian e-banking, users' experience on the identity authentication and what needs to change in the existing authentication methods.

## **THEORETICAL SCOPE:**

The UTAUT concept will be used to analyses the effects of user experience on identity authentication in the Nigeria e-banking.

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