DIGITALES ARCHIV

ZBW – Leibniz-Informationszentrum Wirtschaft ZBW – Leibniz Information Centre for Economics

Isah Shittu; Salisu, Yahuza

Article

Attitude, subjective norm, perceived behavioural control and digital sukūk adoption in Nigeria: the mediating effect of awareness

ISRA international journal of islamic finance

Provided in Cooperation with:

International Shari'ah Research Academy for Islamic Finance, Kuala Lumpur

Reference: Isah Shittu/Salisu, Yahuza (2023). Attitude, subjective norm, perceived behavioural control and digital sukūk adoption in Nigeria: the mediating effect of awareness. In: ISRA international journal of islamic finance 15 (2), S. 4 - 19. https://journal.inceif.edu.my/index.php/ijif/article/download/539/419/953. doi:10.55188/ijif.v15i2.539.

This Version is available at: http://hdl.handle.net/11159/703263

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics Düsternbrooker Weg 120 24105 Kiel (Germany) E-Mail: rights[at]zbw.eu https://www.zbw.eu/

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte. Alle auf diesem Vorblatt angegebenen Informationen einschließlich der Rechteinformationen (z.B. Nennung einer Creative Commons Lizenz) wurden automatisch generiert und müssen durch Nutzer:innen vor einer Nachnutzung sorgfältig überprüft werden. Die Lizenzangaben stammen aus Publikationsmetadaten und können Fehler oder Ungenauigkeiten enthalten.

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence. All information provided on this publication cover sheet, including copyright details (e.g. indication of a Creative Commons license), was automatically generated and must be carefully reviewed by users prior to reuse. The license information is derived from publication metadata and may contain errors or inaccuracies.



https://savearchive.zbw.eu/termsofuse





ATTITUDE, SUBJECTIVE NORM, PERCEIVED BEHAVIOURAL CONTROL AND DIGITAL ŞUKŪK ADOPTION IN NIGERIA: THE MEDIATING EFFECT OF AWARENESS

Isah Shittu

Department of Accounting, ABU Business School, Ahmadu Bello University, Zaria, Nigeria Yahuza Salisu

Department of Banking and Finance, Central Bank of Nigeria Postgraduate Collaborative Programme, Ahmadu Bello University, Zaria, Nigeria

Received

15 November 2020

Revised

30 December 2020

30 June 2021

18 December 2022 31 December 2022

15 February 2023

Accepted

15 February 2023

ABSTRACT

Purpose – There is an increasing number of digital $suk\bar{u}k$ issuances worldwide but the level of awareness and adoption in Nigeria is very low. This research examines the mediating effect of awareness on the relationship between attitude, subjective norm, perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria.

Design/Methodology/Approach – The data for the research were collected from 750 questionnaires that were distributed using the systematic sampling technique to operators of the capital market and individuals in Nigeria, out of which 410 were retained. The partial least squares structural equation modelling (PLS–SEM) algorithm was used for the reliability measurement and constructs validity while the bootstrapping technique was used for testing the study hypotheses.

Findings – The findings reveal that awareness mediated the relationship that exists between subjective norm, attitude, perceived behavioural control, and digital $suk\bar{u}k$ adoption in Nigeria. Overall, the empirical findings rejected seven out of 10 null hypotheses developed to answer the research questions.

Originality/Value – The study serves as a pioneering effort towards unlocking the viability of digital $suk\bar{u}k$ adoption amongst the Nigerian populace.

Research Limitations/Implications – The findings provide empirical evidence that awareness mediated the interrelationship between the explanatory variables (subjective norm, attitude and perceived behavioural control) towards digital $suk\bar{u}k$ adoption in Nigeria.

Practical Implications – The findings suggest the need for the Debt Management Office (DMO) in partnership with the Central Bank of Nigeria (CBN) to facilitate the required regulation and standard pertaining to digital $suk\bar{u}k$ issuances and structures.

Keywords – Attitude, Awareness, Digital *şukūk* adoption, Perceived behavioural control, Subjective norm

Article Classification – Research paper





ISRA International Journal of Islamic Finance (IJIF)

Vol. 15 • No. 2 • 2023 pp. 4-19

eISSN:

2289-4365

DOI:

doi.org/10.55188/ ijif.v15i2.539

© Isah Shittu and Yahuza Salisu. Published in ISRA International Journal of Islamic Finance by ISRA Research Management Centre, INCEIF University. This article is published under the Creative Commons Attribution License 4.0 (CC BY). Anyone may reproduce, distribute, translate and create derivative works of this article, subject to full attribution to the original publication and authors. The full terms of this licence may be seen at http://creativecommons.org/licences/by/4.0/legalcode

INTRODUCTION

A country can realise its economic growth potential by building a stable and sustainable infrastructure. Recent research and reports by multinational organisations have revealed widespread evidence of a massive infrastructure gap in Nigeria, which has resulted in its low level of economic development. For instance, there is glaring evidence that lack of adequate electricity and roads led to total shutdown of many industries thereby causing significant loss of jobs (Arowolo & Perez, 2020). According to Abdelkafi and Bedoui (2016), experience from several countries indicates that the government alone will not be able to finance the necessary infrastructure for development. The involvement of the private sector in infrastructure financing is regarded as the most effective way of mobilising the additional resources required. On the other hand, private sector capital infrastructure financing is mostly associated with high costs, especially for developing countries like Nigeria.

 $Suk\bar{u}k$ (Islamic bonds) represent one of the Sharī ah-compliant financial instruments that could be used to efficiently mobilise the required resources for financing infrastructural projects. This instrument has been developed to serve as an alternative to interest-based bonds. A $suk\bar{u}k$ represents equal value certificates in the ownership of physical assets, services and usufruct (Hoque, 2014). As a means of achieving long-term and sustainable funding for infrastructure projects, the popularity and acceptability of $suk\bar{u}k$ have been on the rise since the first issuance in 1990. Malaysia was the first country to issue $suk\bar{u}k$; it was followed by Qatar, Pakistan and Dubai. In Africa, $suk\bar{u}k$ issuances have continued to grow in size. The Nigerian government issued the first sovereign $suk\bar{u}k$ for a road project in 2017; it issued the second one in 2019 and another one in 2021. It is noteworthy that in all three issuances, the $suk\bar{u}k$ were oversubscribed due to the desire of the investing public to invest money in that regard.

In 2013, the Nigerian Securities and Exchange Commission (SEC) promulgated regulations on the *şukūk* structure and its issuance to boost Islamic finance transactions, particularly in the country's capital market. The regulations relate to, but are not limited to, the Investments and Securities Act (ISA) 2007. The SEC also introduced supplementary rules in 2013 to standardise *şukūk* issuances in Nigeria. Federal, state, and local governments, including public corporations, are permitted to serve as special purpose vehicles (SPVs) under Rule 572 of the SEC Rules, subject to the commission's approval. These regulations facilitated the first *ṣukūk* issuance in the country by the State Government of Osun through the SPV, Osun Sukuk Company PLC (Oladunjoye, 2014).

There has been a rise in recent times of digital $suk\bar{u}k$ issuances. Digital $suk\bar{u}k$ simply means the use of financial technology in the issuance and management of $suk\bar{u}k$ (Saad & Fisol, 2021). Digital $suk\bar{u}k$ adoption is important and in certain instances necessary, particularly during pandemics, as digitally issued $suk\bar{u}k$ are administered and managed through electronic means, thereby cushioning the adverse effects of a locked down economy. A significant number of citizens in Nigeria live in rural areas where the number of participating $suk\bar{u}k$ -issuing banks is limited. Digital $suk\bar{u}k$ issuances would alleviate this problem by allowing any interested citizen to subscribe to $suk\bar{u}k$. According to Kunhibava $suk\bar{u}k$ transactions, thereby increasing the transparency of the underlying $suk\bar{u}k$ assets and the reduction of issuing costs.

This current study is motivated by the growing prominence of digital $suk\bar{u}k$ issuances across the globe and arguments about whether subjective norms, attitudes, and perceived behavioural control can have an influence on digital $suk\bar{u}k$ adoption in Nigeria. It follows previous research on the mediating effects of these variables on digital $suk\bar{u}k$ adoption in other parts of the world (Awn & Azam, 2020a). Despite regulatory efforts to create an enabling environment for $suk\bar{u}k$ issuances in Nigeria, there is no empirical evidence that has examined the influence of subjective norms, attitudes, and perceived behavioural control on digital $suk\bar{u}k$ adoption in Nigeria. Therefore, this study fills in this knowledge gap by adopting diffusion of innovation theory (DOI) in predicting investors' digital $suk\bar{u}k$ adoption in Nigeria. Precisely, this research attempts to answer the following research question:

Do attitude, subjective norm and perceived behavioural control have a significant relationship in digital $suk\bar{u}k$ adoption in Nigeria?

The remaining sections of the paper include: the literature review; the methodology used to achieve the study's objectives; the presentation and discussion of the results; and a summary of the research findings and recommendations based on these findings.

LITERATURE REVIEW

Among the few studies of digital $suk\bar{u}k$ is the study of Saad and Fisol (2021) on the first Malaysian digital $suk\bar{u}k$ ($suk\bar{u}k$ Prihatin) and its distribution through fintech services. The authors established that digital $suk\bar{u}k$ issuance is in line with objectives of Islamic law ($maq\bar{a}sid$ al- $Shar\bar{i}$ 'ah) and, as such, could be issued to stimulate socio-economic development. On their part, Kunhibava et al. (2021) examined $suk\bar{u}k$ on blockchain from the legal, regulatory and Shar \bar{i} 'ah perspectives and established that digitalising $suk\bar{u}k$ issuances minimises cost and increases transparency in the underlying $suk\bar{u}k$ assets. Similarly, Khan et al. (2020) examined the tokenisation of $suk\bar{u}k$ using Ethereum. The authors reported that small and medium firms hardly meet traditional $suk\bar{u}k$ issuance requirements because of the high costs involved while blockchain through tokenisation reduces the cost of $suk\bar{u}k$ issuance.

Adoption of Digital Şukūk and Public Awareness

Awareness refers to knowing or having some understanding of how a specific product functions (Rogers, 1983). According to Bananuka *et al.* (2019), awareness is an important part of Islamic finance adoption, particularly in non-Islamic countries. Therefore, this study reviewed some empirical studies on the relationship between explained and explanatory variables as follows.

Ramdhony (2013) conducted research on the awareness of customers of Islamic banking products. The study indicated that 82 per cent are aware of Islamic banking products, while the remaining 14 per cent responded negatively. From Ramdhony's work, awareness plays an important role in the adoption of Islamic banking products. As a result, awareness can mediate the relationship between endogenous and exogenous variables in the adoption of digital $suk\bar{u}k$ in Nigeria. It is also assumed that the more people are aware of digital $suk\bar{u}k$ the more likely they will be to use it. Moreover, Abdullah and Abdul Rahman (2007) conducted a survey on Islamic banking education and strategy using Malaysian bank managers and found that participants got to know about Islamic finance products in less than five years. Similarly, Rammal and Zurbruegg

(2007) examined the awareness of Islamic banking products among Muslims in Australia and postulated that some respondents are not aware of the profit-and-loss sharing concept of Islamic finance. Awn and Azam (2020a) investigated awareness as a moderator in their investigation of Libyan investors' intentions towards investment in $suk\bar{u}k$. The study administered 309 questionnaires, and the evidence explains the effect of $suk\bar{u}k$'s compatibility with the Sharī'ah and the investor's attitude towards investing in $suk\bar{u}k$. The findings also revealed the critical role of subjective pressure exerted by Islamic scholars in raising investor awareness and encouraging investment in $suk\bar{u}k$.

In 2017, the Nigerian Debt Management Office (DMO) announced its plan to issue a sovereign $suk\bar{u}k$ worth 100 billion Nigerian Naira (USD240 million) for the development of infrastructure such as roads, railways and electricity across the six zones (north west, north east, north central, south east, south south) of the country; hence, the need for public awareness and a campaign on the benefits of the issuance. This will go a long way towards the diversification of government funding, the deepening of the market for domestic securities, and financial inclusion (DMO, 2017).

Based on the above literature review, awareness is likely to mediate the association between attitude, subjective norm, perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria. The study thus tests the following null hypotheses:

- H_01 : Awareness does not mediate the relationship between attitude and digital $suk\bar{u}k$ adoption.
- H_02 : Awareness does not mediate the relationship between perceived behavioural control and digital $suk\bar{u}k$ adoption.
- H_03 : Awareness does not mediate the relationship between subjective norm and digital $suk\bar{u}k$ adoption.
- H_04 : Awareness does not mediate the relationship between attitude, perceived behavioural control, subjective norm and digital $suk\bar{u}k$ adoption.

Attitude and Use of Digital Software

Attitude can be seen as a mindset to act in a particular way as a result of an individual's experience and knowledge (Buchari *et al.*, 2014). In most cases, attitude is regarded as the foundation of an intention. Attitude is hypothesised to influence investors' intentions towards digital $suk\bar{u}k$ adoption in this research paper, and can be defined as the extent to which individuals' attitudes are favourably or unfavourably related to $suk\bar{u}k$ adoption (Suki, 2011). Awn and Azam (2020b) examined the association between intention and attitude towards investing in $suk\bar{u}k$ amongst investors in Libya, using data drawn from 291 respondents across three regions, notably Benghazi, Tripoli and Sabha, and the study's findings revealed a significantly positive relationship between Libyan investors' attitudes and intentions to invest in $suk\bar{u}k$. The expectation is that attitude will influence stakeholders' behavioural intention towards the adoption of digital $suk\bar{u}k$ in the Nigerian capital market.

From the above literature review, it can be deduced that some studies have established a positive and significant relationship between attitude and $suk\bar{u}k$ adoption, while others have documented a negative relationship. It is important to note that in all the literature reviewed no one used awareness as a mediating variable to mediate the relationship between the explained

and the explanatory variables (attitude and adoption), despite the logical reasoning that awareness is the origin of attitude. Therefore, this research tests the following null hypotheses:

- H_05 : A significant relationship does not exist between attitude and digital $suk\bar{u}k$ adoption in Nigeria.
- H_06 : A significant relationship does not exist between attitude, awareness and digital $suk\bar{u}k$ adoption in Nigeria.

Subjective Norms and Adoption of Digital Software

According to the theory of planned behaviour, subjective norm is sometimes referred to as the second antecedent behaviour for intention. According to Ajzen and Fishbein (1975), what could be referred to as societal pressure influences individual beliefs and is usually weighted by innovative compliance. The study conducted by Ramdhony (2013) for both Muslim and non-Muslim banking customers reported that returns from invested assets and religion motivate a potential customer to choose Islamic banking products and services. The study also emphasises the importance of third-party influence in persuading people to use Islamic banking products. It is also found that subjective norms have a significant impact on business zakat (Islamic tax) payment (Saad & Haniffa, 2014).

Ab Rahim and Amin (2011) collected data from 176 valid responses and found that subjective norms have an influence on the acceptance of Islamic insurance. Most prominently, this construct was sourced from the Ajzen and Fishbein (1975) theory of planned behaviour. The theory predicts an individual's intention to engage in a behaviour at a specific time and place. It explains all types of behaviour over which people have the ability to exert self-control. Therefore, this current study tests the following null hypotheses on the subjective norms and digital $suk\bar{u}k$ adoption in Nigeria:

- H_07 : A significant relationship does not exist between subjective norm and digital $suk\bar{u}k$ adoption in Nigeria.
- H_08 : A significant relationship does not exist between subjective norm, awareness and digital $suk\bar{u}k$ adoption in Nigeria.

Perceived Behavioural Control and Adoption of Digital Software

The extent to which a person interprets a situation to be under his own control is referred to as perceived behavioural control (Ajzen, 1985). The more resources a person has at his disposal, the higher the perception of his behavioural control. According to Kura *et al.* (2013), there are basically two aspects of perceived behavioural control. The first is 'control belief' that reflects the extent to which a person controls his or her own behaviour. The other has to do with 'control of belief', which is based on a person's confidence concerning his or her aptitude to act in a particular manner. Perceived behavioural control is reported to be one of the main factors that determine consumers' behaviour in various domains (Ajzen & Fishbein, 1975).

In the context of this research, perceived behavioural control is expected to predict the perception of individuals towards the adoption of digital $suk\bar{u}k$ as a result of experiences of online transactions. Previous works have established the significance of perceived behavioural control, including its contextual relevance to this research. In this regard, the work of Bhatti and Husin (2019) reported a significant positive relationship between perceived behavioural control

and the adoption of Islamic insurance by investors of the United Arab Emirates. The regression results revealed that participants' attitudes influenced their decision to invest in Islamic insurance. Similarly, Antara *et al.* (2016) empirically examined the influence of perceived behavioural control on the intention of Muslims to invest in green investment using a sample of 270 respondents. The authors reported a significant influence of perceived behavioural control and intentions of Muslims towards green investments.

Having established a logical connection between perceived behavioural control and adoption, it is expected that awareness would mediate the association between perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria. Therefore, this study tests the following null hypotheses on the relationship between perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria:

 H_09 : A significant relationship does not exist between perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria.

 H_010 : A significant relationship does not exist between perceived behavioural control, awareness and digital $suk\bar{u}k$ adoption.

RESEARCH METHODOLOGY

The study makes use of a survey research design where questionnaires were distributed to various categories of respondents including investors, practitioners and individuals considered as important stakeholders in Nigeria's capital market. The study has a total population of 750 respondents from Kano, Lagos, Port Harcourt and Abuja. The first three cities are main centres of business activity in Nigeria while Abuja is the federal capital of Nigeria where most of the practitioners of the capital market are located. The questionnaires were administered over the period September 2018 to March 2019. The survey questionnaire consisted of the following six parts:

- 1. Respondents' demographic details consisting of religion, gender, employer, qualification and social responsibility.
- 2. Respondents' opinion on digital *şukūk* adoption.
- 3. Respondents' self-evaluation of their attitude towards digital *sukūk* adoption.
- 4. Respondents' awareness about investment in online *şukūk* issuances.
- 5. Respondents' perceived behavioural control.
- 6. Respondents' subjective norms.

The survey also required respondents to complete observed variables for the theory of planned behaviour (TPB) model, consisting of five elements, namely, subjective norms, attitude, perceived behavioural control, awareness, and digital *şukūk* adoption.

After retrieving the distributed questionnaires from the respondents, the data collected were analysed using the partial least squares structural equation modelling (PLS–SEM) software application, and the results were presented in the software format. The PLS-SEM software is an excellent and flexible tool for statistical prediction and analysis (Hair *et al.*, 2012). The data screening and coding were carried out using the SPSS software application package.

RESULTS AND DISCUSSIONS

This section presents the results from the analyses of data through the PLS-SEM path modelling. All measurement models were also assessed for verification of their reliability, discriminant validity and individual item internal consistency. The structural model results were equally reported (e.g., significance of path coefficients, R-squared level values, significance of the model and the effect of size). Lastly, the complementary results of the PLS-SEM analysis are presented, which examined the mediating effect of awareness on the structural model.

Demographic Profile of Respondents

As presented in **Table 1**, males constituted the majority of the respondents, representing 74 per cent. The respondents were mainly from the age group 20–29 years, followed by the age group 30–39 years. Moreover, a high proportion of the respondents were degree holders, representing 40.6 per cent of the sample. This is followed by those with masters, representing 23.8 per cent, while 2.8 per cent were PhD holders. The respondents came from two major religions in Nigeria, notably Islam (85 per cent) and Christianity (13 per cent).

Table 1: Demographic Profile of Respondents

Item	Frequency	Percentage
AGE		
Under 20 years	45.1	11
20–29 years	184.5	45
3039 years	98.4	24
40–49 years	61.5	15
50–59 years	12.3	3
60 years and above	8.2	2
GENDER		
Male	303.4	74
Female	106.6	26
STATUS		
Capital market investor	82	20
Capital market operator	65.6	16
Others	262.4	64
RELIGION		
Islam	348.5	85
Christianity	53.3	13
Others	8.2	2
QUALIFICATION		
Bachelor degree	166.46	40.6
Masters	97.58	23.8
PhD	11.48	2.8
Others	134.48	32.8
EMPLOYER		
Government institution	156	27.5
Private	278	49.2
Others	132	23.3

Source: Authors' own

Response Rate

A total of 750 questionnaires were distributed to various respondents comprising practitioners, investors and individuals. To achieve a higher response, telephone calls including short messages (SMS) were made as a reminder to the respondents as suggested by Salim *et al.* (2002). A total of 567 respondents returned their questionnaires, representing a 75.6 per cent response rate. However, only 410 questionnaires were used for the analysis, as 157 questionnaires were not properly completed by the respondents. Valid responses thus accounted for 55 per cent of the responses, which met Sekaran's (2003) suggestion that a response rate above 30 per cent could be adequate for survey research.

Constructs' Validity and Reliability

This study uses composite reliability to measure the research constructs for the following reasons. The use of composite reliability enables the researcher to take into account those indicators that have different factor loadings which can be interpreted the way Cronbach's is interpreted. Hair *et al.* (2011) suggested internal consistency reliability to be above 70 per cent, while 60 per cent and below indicated a lack of reliability. It is important to note that the study's internal consistency was based on the suggestion of Bagozzi and Yi (1988) that it should be above 40 per cent. Therefore, out of the 24 items used in the questionnaires, four were identified and subsequently deleted because they represented a loading below a threshold of 40 per cent. Hence, only 20 items were retained, representing a loading of 0.54 to 0.85. The data pertaining to the constructs' validity and reliability are presented in **Table 2**.

Table 2: Constructs' Validity and Reliability

Tubic 2. Collecti acts	anary ana remanni	J		
Constructs	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
Attitude	0.683	0.687	0.807	0.512
Awareness	0.535	0.552	0.760	0.516
Perceived behaviour	0.699	0.700	0.816	0.526
Subjective norm	0.777	0.786	0.857	0.600
Digital şukūk adoption	0.750	0.762	0.834	0.504

Source: Authors' own

Table 3. According to the table, all variables are positively correlated, and the results obtained on all explanatory and explained variables have no perfect correlation; the $suk\bar{u}k$ subjective norm has the highest correlation with a value of 0.77, while the subjective norm and awareness have a correlation of 0.37. The correlation between digital $suk\bar{u}k$ adoption and attitude is 0.63, representing the correlation between the explained variable (digital $suk\bar{u}k$ adoption) and the explanatory variable (attitude). Overall, the correlation between the variables is within acceptable bounds.

Table 3: Discriminant Validity

Variables	Attitude	Awareness	Perceived Behavioural Control	Subjective Norm
Attitude	0.716			
Awareness	0.502	0.718		
Perceived behavioural control	0.552	0.461	0.726	
Subjective norm	0.475	0.376	0.586	0.774
Digital şukūk adoption	0.625	0.468	0.512	0.485

Source: Authors' own

One of the primary reasons for screening data is to identify, examine and treat 'outliers' which may have a negative impact on the results. An outlier is an observation that lies at an abnormal distance from other values in a random sample from a population (Hair *et al.*, 2003). As a result, applying multivariate analysis has become necessary for outlier treatment. Thus, univariate outliers were checked using the SPSS software, and coded values of 157 were identified and deleted accordingly in the analysis. Furthermore, no unusual outliers were discovered after running the Mahalanobis in SPSS, but the data coefficient was not greater than 0.05.

Chin (1998) suggested higher factor loadings as compared to cross-loadings. **Table 4** compares the indicator loadings with other indicators. It shows that all the indicator loadings are higher than the cross-loadings. This suggests that discriminant validity should be investigated further.

Structural Model

This section presents the outcome of the structural model used to test the hypotheses formulated to achieve the objective of the study. Therefore, the PLS path approach was used to conduct the main effects tests. In addition, using the PLS bootstrapping output, the effects of mediation were also calculated. The standard bootstrapping procedure as suggested by Ringle *et al.* (2015) assesses the significance of path coefficients with a 5000 number of bootstrap samples. **Table 5** presents the results of the hypotheses testing.

PLS Boostraping Structural Result

Based on the PLS-SEM results, awareness as a mediating variable provided significant support for the mediation effects on the association between subjective norms, attitude, perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria. Specifically, the path coefficients found a significant negative relationship between subjective norm and digital $suk\bar{u}k$ adoption. This result is consistent with the findings of Khurshid et al. (2020), which established that subjective norm is statistically not significant in measuring the relationship with $suk\bar{u}k$ adoption in Qatar. On the other hand, the research findings indicated a positive and significant association between perceived behavioural control and digital $suk\bar{u}k$ adoption, while awareness mediated the relationship between attitude and digital $suk\bar{u}k$ adoption.

Table 4: Cross-Loading

Variables	Attitude	Awareness	Perceived Behavioural Control	Subjective Norm
AT1	0.700	0.293	0.393	0.314
AT2	0.728	0.369	0.332	0.232
AT4	0.752	0.421	0.435	0.443
AT5	0.681	0.344	0.414	0.356
AW1	0.384	0.726	0.350	0.267
AW3	0.404	0.790	0.370	0.325
AW4	0.281	0.631	0.262	0.202
PB1	0.422	0.288	0.774	0.469
PB2	0.372	0.327	0.723	0.413
PB3	0.364	0.363	0.721	0.399
PB4	0.442	0.363	0.682	0.419
SA1	0.339	0.344	0.331	0.265
SA2	0.428	0.335	0.410	0.376
SA3	0.492	0.317	0.379	0.364
SA4	0.415	0.283	0.302	0.322
SA5	0.521	0.381	0.387	0.380
SN1	0.317	0.301	0.440	0.728
SN2	0.350	0.314	0.418	0.826
SN3	0.402	0.227	0.464	0.756
SN4	0.404	0.316	0.499	0.783

Source: Authors' own

Table 5: Results of the Hypotheses Testing

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation	t-statistics	P values
	•	` /			
Attitude \rightarrow	0.049	0.049	0.019	2.531	0.012
Awareness →					
Digital <i>şukūk</i>					
adoption					
Perceived	0.033	0.032	0.014	2.397	0.017
behavioural					
$control \rightarrow$					
Awareness →					
Digital <i>şukūk</i>					
adoption					
Subjective norm	0.012	0.013	0.010	1.189	0.235
→ Awareness →					
Digital <i>şukūk</i>					
adoption					

Source: Authors' own

Confidence Level

The confidence levels of 0.089 and 0.059 in the structural model as presented in **Table 6** are within the expected range, which suggests that attitude and perceived behavioural control have a significant positive relationship with digital $suk\bar{u}k$ adoption in Nigeria. On the other hand, subjective norms reveal a negative relationship with digital $suk\bar{u}k$ adoption in Nigeria. The p-value of 0.235 indicates an insignificant relationship between subjective norms and digital $suk\bar{u}k$ adoption in Nigeria.

Table 6: Structural Model

Constructs	Original Sample (O)	Sample Mean (M)	2.5%	97.5%
Attitude → Awareness	0.049	0.049	0.013	0.089
\rightarrow Digital <i>şukūk</i>				
adoption				
Perceived behavioural	0.033	0.032	0.008	0.059
$control \rightarrow Awareness \rightarrow$				
Digital şukūk adoption				
Subjective norm →	0.012	0.013	-0.003	0.036
Awareness → Digital				
şukūk adoption				

Source: Authors' own

Table 7 presents the summary of the results from the hypotheses testing and the decision for supporting or not supporting the hypotheses formulated.

Table 7: Summary of Hypotheses Testing

Hypothesis	Statement	Findings
H_01	Awareness does not mediate the relationship between attitude and digital <i>ṣukūk</i> adoption.	Reject
H_02	Awareness does not mediate the relationship between perceived behavioural control and digital $\underline{suk\bar{u}k}$ adoption.	Reject
H_03	Awareness does not mediate the relationship between subjective norm and digital $suk\bar{u}k$ adoption.	Fail to reject
H_04	Awareness does not mediate the relationship between attitude, perceived behavioural control, subjective norm and digital <i>ṣukūk</i> adoption.	Reject
H ₀ 5	A significant relationship does not exist between attitude and digital $suk\bar{u}k$ adoption in Nigeria.	Reject
H_06	A significant relationship does not exist between attitude, awareness and digital <i>ṣukūk</i> adoption in Nigeria.	Reject
H_07	A significant relationship does not exist between subjective norm and digital <i>ṣukūk</i> adoption in Nigeria.	Fail to reject
H_08	A significant relationship does not exist between subjective norm, awareness and digital <i>ṣukūk</i> adoption in Nigeria.	Fail to reject
H ₀ 9	A significant relationship does not exist between perceived behavioural control and digital <i>şukūk</i> adoption in Nigeria.	Reject
H_010	A significant relationship does not exist between perceived behavioural control, awareness and digital $suk\bar{u}k$ adoption.	Reject

Source: Authors' own

Summary of Findings

The findings of the research indicate that among the variables used in the study, perceived behavioural control and attitudes have positive and significant associations with digital *şukūk* adoption in Nigeria. On the other hand, the relationship between subjective norm and digital *ṣukūk* adoption in Nigeria is negatively related with a p-value above 5 per cent as depicted in the structural model in **Table 6**. The regression analysis contributed 80 per cent towards explaining the relationship that exists between the explained and the explanatory variables of the research. In the structural model, the regression results also show that all the constructs have average variance that is above 0.5, further suggesting that awareness, attitude, subjective norm and perceived behavioural control as explanatory variables are statistically significant.

In addition, the regression results indicated a positive and significant association between the explanatory variables (awareness, attitude, and perceived behavioural control) and digital $suk\bar{u}k$ adoption (explained variable). In particular, the results of the analysis have also shown a positive correlation between all the variables in the study. In the bootstrapping analysis, awareness has positively mediated the relationship between attitude and digital $suk\bar{u}k$ adoption, with a p-value of 0.012. In essence, the path coefficients found a negative association between subjective norm and digital $suk\bar{u}k$ adoption in Nigeria, with a t-value of 1.189 and a p-value of 0.235. A positive association was also established between perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria, with a t-value of 2.397 and a p-value of 0.017. In regard to the mediating effect of awareness and digital $suk\bar{u}k$ adoption, the results established a positive relationship between attitude, perceived behavioural control and digital $suk\bar{u}k$ adoption in Nigeria, thus supporting the hypothesised positions.

Theoretically, the study contributes to the empirical literature by providing practical evidence on the influence of awareness (mediator) on the relationship between explanatory variables used in the study and digital sukūk adoption in Nigeria. This study has enriched the literature by further validating the previous findings of Bhatti and Husin (2019) and Khurshid et al. (2020). Methodologically, the PLS-SEM was utilised for the analysis, which validates the processes of the construct measurements. This study used PLS-SEM modelling tool, which provides an opportunity for rigorous testing and analytical power of the techniques in a study that integrates the association between perceived behavioural control, attitude (explanatory variable) and digital sukūk adoption in Nigeria. Also, the insignificant relationship of subjective norm and sukūk adoption may be attributed to the fact that large numbers of individuals in Nigeria are not aware of sukūk and most likely some respondents might have subjected themselves to their religious belief or to the people whom they emulate or consider important in the society. This is in line with the theory of planned behaviour proposed by Ajzen and Fishbein (1975), who argued that subjective norm has to do with the perception of people to reject or adopt certain services or products. Therefore, in Nigeria, religious connotation plays a vital role in the individual decision to adopt or reject a new product. For instance, the first sukūk issued by Osun State Government in 2013 was confronted with strict resistance by the Christian counterpart in the state, who perceived it as an attempt by the Government to Islamise the state public fund (Lawal & Imam, 2016). Thus, the negative relationship between subjective norm and digital sukūk adoption might not be unconnected to normative religious belief of the respondents considering the contexts of a country such as Nigeria, a multi-ethnic and multi-religious nation.

Practically, the findings of this study will be beneficial to Nigeria's SEC, the highest regulatory institution of the capital market, in intensifying awareness campaigns towards promoting $\bar{s}uk\bar{u}k$ financing for economic growth and development of Nigeria.

CONCLUDING REMARKS

This study tested awareness as a mediator in the relationship between explanatory variables (subjective norms, attitude, perceived behavioural control) and digital $suk\bar{u}k$ adoption in Nigeria. The empirical results rejected seven out of 10 null hypotheses developed in the research questions. The overall findings suggest that attitudes and perceived behavioural control have a significant relationship with digital $suk\bar{u}k$ adoption in Nigeria. Equally, attitudes and perceived behavioural control are significantly related to the awareness of digital $suk\bar{u}k$ in Nigeria. Similarly, the current study concludes that awareness plays a significant role in mediating the association between perceived behavioural control, attitude, subjective norms and digital $suk\bar{u}k$ adoption in Nigeria. Therefore, the study concludes by establishing a positive relationship between awareness and perception of digital $suk\bar{u}k$ as explained by the theory of planned behaviour.

In view of the conclusions drawn above, the study makes some recommendations as follows: Governments at all levels should patronise the digital sukūk structure to finance the huge infrastructural deficit confronting the entire country. This is because of the limited resources available to Nigeria's federal, state, and local governments for infrastructure purposes. The issuance of digital sukūk may be a better option. Nigeria's capital market regulator should encourage governments at all levels, Islamic institutions, and other corporate organisations to issue digital sukūk as a liquidity management tool. However, there is a need for regulatory harmonisation to conform to Islamic guidelines pertaining to digital sukūk issuances in Nigeria. Accordingly, the DMO must work in partnership with the Central Bank of Nigeria (CBN) to facilitate the required regulations and standards pertaining to digital *şukūk* issuances. The federal government should establish an Islamic money market to boost the online trading of sukūk instruments on the Nigerian Stock Exchange by constituting a strong Sharī'ah Advisory Council (SAC) that will comprise notable scholars from Nigeria and abroad who will advise on the operation of online $suk\bar{u}k$ issuances. Finally, there is a need for the SEC of Nigeria to intensify an awareness campaign about digital sukūk processes, as the findings revealed a positive relationship between awareness, attitude, perceived behavioural control and digital sukūk adoption in Nigeria.

REFERENCES

Abdelkafi, R. & Bedoui, H.E. (2016), 'Challenges in infrastructure financing through ṣukūk issuance', In *IRTI Policy Paper*, https://doi.org/10.13140/RG.2.2.22554.64963.

Abdullah, F.R.S. & Abdul Rahman, A.R. (2007), 'Factors influencing knowledge of Islamic banking services: the case of Malaysian bank managers', *Review of Islamic Economics*, Vol. 11 No. 2, pp. 31–54.

Ab Rahim, F.A. & Amin, H. (2011), 'Determinants of Islamic insurance acceptance: an empirical analysis', *International Journal of Business and Society*, Vol. 12 No. 2, pp. 37–54.

- Ajzen, I. (1985), 'From intentions to actions: a theory of planned behavior', in J. Kuhl & J. Beckmann (Eds.), *Action Control: SSSP Springer Series in Social Psychology*, Springer, Berlin, Heidelberg, https://doi.org/10.1007/978-3-642-69746-3_2.
- Ajzen, I. & Fishbein, M. (1975), *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, Addison-Wesley, Reading, MA.
- Antara, P.M., Musa, R. & Hassan, F. (2016), 'Theorising attitude towards Islamic financing adoption in an integrative model of behavioural prediction: a proposed conceptual framework', *Journal of Administrative and Business Studies*, Vol. 1 No. 1, pp. 35–41, https://doi.org/10.20474/jabs-1.1.6.
- Arowolo, W. & Perez, E. (2020), 'Market reform in the Nigeria power sector: a review of the issues and potential solutions', *Energy Policy*, Vol. 144, https://doi.org/10.1016/j.enpol.2020.111580.
- Awn, A.M. & Azam, S.M.F. (2020a), 'The influence of attitude and subjective norm on intention to invest in Islamic bonds [bonds (\$\sigmu uk\bar{u}k\)]: a study of Libyan investors', *International Journal of Business and Society*, Vol. 4 No. 4, pp. 27–33, https://doi.org/10.30566/ijo-bs/2020.13.
- Awn, A.M. & Azam, S.M.F. (2020b), 'The role of awareness and Shari'ah-compliant as moderator on the intention to invest in Islamic *şukūk*: a study of Libyan investors: theory of reasoned action approach', *European Journal of Economic and Financial Research*, Vol. 4 No. 1, pp. 145–165, https://doi.org/10.5281/zenodo.3843482.
- Bagozzi, R.P. & Yi, Y. (1988), 'On the evaluation of structural equation models', *Journal of the Academy of Marketing Science*, Vol. 16, pp. 74–94, https://doi.org/10.1007/BF02723327.
- Bananuka, J., Katamba, D., Nalukenge, I., Kabuye, F. & Sendawula, K. (2019), 'Adoption of Islamic banking in a non-Islamic country: evidence from Uganda banking', *Journal of Islamic Accounting and Business Research*, Vol. 11 No. 5, pp. 989–1007, https://doi.org/10.1108/JIABR-08-2017-0119.
- Bhatti, T. & Husin, M. (2019), 'An investigation of the effect of customer beliefs on the intention to participate in family *takaful* schemes', *Journal of Islamic Marketing*, July, https://doi.org/10.1108/JIMA-04-2018-0066.
- Buchari, I., Rafiki, A. & Al Qassab, M.A.H. (2014), 'The employees' awareness and attitudes towards Islamic banking products: a survey of Islamic banks in Bahrain', *World Applied Sciences Journal*, Vol. 32 No. 3, pp. 436–443, https://doi.org/10.5829/idosi.wasj.2014.32.03.1092.
- Chin, W.W. (1998), 'The partial least squares approach to structural equation modeling', in G.A. Marcoulides (Ed.), *Modern Methods for Business Research*, Laurence Erlbaum Associates, Mahwah, New Jersey, pp. 295–336.
- DMO (2017), Annual Report and Statement of Accounts, Debt Management Office, Abuja Nigeria.
- Hair, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. (2003), A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), Sage, Thousand Oaks.
- Hair, J.F., Ringle, C.M. & Sarstedt, M. (2011), 'PLS-SEM: indeed a silver bullet', *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139–151.

- Hair, J.F., Sarstedt, M., Ringle, C.M. & Mena, J.A. (2012), 'An assessment of the use of partial least squares structural equation modeling in marketing research', *Journal of the Academy of Marketing Science*, Vol. 40 No. 3, pp. 414–433.
- Hoque, M.N. (2014), 'Development and challenges in Bangladesh capital market', *International Journal of Business and Social Science*, Vol. 2 No. 2, pp. 14–25
- Khan, N., Kchouri, B., Nissar A.Y., Kräussl, Z., Patel, A. & State, R. (2020), 'Tokenization of *şukūk*: Ethereum case study', *Global Finance Journal*, Vol. 51, https://doi.org/10.1016/j.gfj.2020.100539.
- Khurshid, M., Ghauri, I.u.R. & Mahmood, M.R. (2020), 'Empirical investigation of awareness level of customers about Islamic banking in Pakistan', *Al-Adwā Journal*, Vol. 35 No. 53, pp. 1–12
- Kunhibava, S., Mustapha, Z., Muneeza, A., Sa'ad, A.A. & Karim, M.E. (2021), 'Sukūk on blockchain: a legal, regulatory and Sharī'ah review', *ISRA International Journal of Islamic Finance*, Vol. 13 No. 1, pp. 118-135, https://doi.org/10.1108/IJIF-06-2020-0120.
- Kura, K.M., Shamsudin, F.M. & Chauhan, A. (2013), 'Perceived group norms as predictors of deviant behaviour at work', *International Business Management*, Vol. 7, pp. 121–126.
- Lawal, I.M. & Imam, U.B. (2016), 'Islamic finance: a tool for realizing sustainable development goals (SDG) in Nigeria', *International Journal of Innovative Research and Advanced Studies* (*IJIRAS*), Vol. 3 No. 9, pp. 10–17.
- Oladunjoye, M.O. (2014), 'Sukūk as a tool for infrastructural development in Nigeria', Journal of Islamic Banking and Finance, Vol. 2 No. 1, pp. 335–344.
- Ramdhony, D. (2013), 'Islamic banking awareness attitudes and bank selection criteria', *International Journal of Humanities and Applied Sciences*, Vol. 2 No. 2, pp. 29–35.
- Rammal, H.G. & Zurbruegg, R. (2007), 'Awareness of Islamic banking products among Muslims: the case of Australia', *Journal of Financial Services Marketing*, Vol. 12 No. 1, pp. 65–74
- Ringle, C.M., Wende, S. & Becker, J.M. (2015), SmartPLS 3, SmartPLS GmbH, Bönningstedt.
- Rogers, E.M. (1983), 'Diffusion of innovations', University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship, available at: https://ssrn.com/abstract=1496176 (accessed 8 December 2022).
- Saad, M.A.M. & Fisol, W.N. (2021), 'Rebuilding the national economy by issuance of the first Malaysia digital *ṣukūk* (*Ṣukūk* Prihatin) and its distribution through fintech services: a view from the perspective of *maqasid al-Shari'ah'*, *Journal of Contemporary Issues in Business and Government*, Vol. 27 No. 1, pp. 95–101.
- Saad, R.A.J. & Haniffa, R. (2014), 'Determinants of zakah (Islamic tax) compliance behavior', *Journal of Islamic Accounting and Business Research*, Vol. 5 No. 2, pp. 158–181, https://doi.org/10.1108/JIABR-10-2012-0068.
- Salim, S.M., Smith, W.T. & Bammer, G. (2002), 'Telephone reminders are a cost effective way to improve responses in postal health surveys', *Journal of Epidemiology and Community Health*, Vol. 56, pp. 115–118,https://doi.org/10.1136/jech.56.2.115.
- Securities and Exchange Commission (2013), 'Corporate bonds issued in Nigeria (1960 to 2013)', available at: https://sec.gov.ng/corporate-bonds-issued-in-nigeria-1960-to-2013/ (accessed 3 February 2023).

Sekaran, U. (2003), *Research Methods for Business: A Skill Building Approach*, 4th Edn., John Wiley and Sons, Inc., New York, NY.

Suki, N. (2011), 'Relationship between perceived usefulness, perceived ease of use, perceived enjoyment, attitude and subscribers' intention towards using 3G mobile services', *Journal of Information Technology Management*, Vol. XXII No. 1, pp. 1–7.

ABOUT THE AUTHORS

Isah Shittu, PhD, is an assistant professor of accounting at Ahmadu Bello University, Zaria, Nigeria. He has presented papers at international conferences in the areas of Islamic finance, capital markets, and banking in Asia, Europe and Africa. He also published several research articles in peer reviewed and Scopus-indexed journals. Isah Shittu is the corresponding author and can be contacted at: isahshittu15@gmail.com

Yahuza Salisu, PhD, teaches for the Central Bank of Nigeria Postgraduate Collaborative Programme, Ahmadu Bello University, as an adjunct lecturer. He has presented papers at conferences in Nigeria and other countries.