Available online: https://journals.researchsynergypress.com/index.php/ijeiis
International Journal of Emerging Issues in Islamic Studies (IJEIIS)
ISSN 2807-2049(Online)| 2807-2057 (Print)
Volume 2 Number 1 (Year): 73-90

The Empirical Analysis of Islamic Finance on Economic Growth in Nigeria: an ARDL bounds testing approach

Abubakar Sadiq Salisu, Musa Munkaila, Abubakar Abdullahi
Gombe State Polytechnic, Bajoga, Nigeria

Abstract

Islamic finance model has been a cause of paradigm shift in global financial system because of its capacity to propel economic growth even in the face of global financial crisis and recent Covid-19 pandemic. This study intends to empirically examine the short run and long run impact of islamic modes of finance on economic growth in Nigeria. The study employs autoregressive Distributed lag (ARDL) and Error correction model to explore the relationship using quarterly data from 2013Q4 to 2020Q4. The result of the bound test indicates the presence of long run relationship between islamic modes of finance and economic growth in Nigeria, it also reveals that Murabaha have both long run and short run positive impact while Qardhassan modes of finance have only positive long run impact on economic growth. The result also shows that istisna and ijara modes of finance were found to have insignificant impact on economic growth.

Keywords: *islamic modes of finance, economic growth, ARDL, Nigeria.*

INTRODUCTION

The 2008 financial crises and Covid-19 that wreaked havoc on the global economy have evidently proven that islamic finance model is a better alternative in providing the needed funding that is required to drive economic growth. In spite of the scale of the challenges, the Islamic finance industry posted a double-digit growth for the second year in a row, albeit by a slower 14% compared to 15% in 2019, to reach $3.4 trillion by the end of 2020 (IFDR, 2021). According to (Mirjalili, 2021) islamic banks connection to real and productive sectors of the economy and their avoidance to deal with toxic financial derivatives is what help them remain stable and healthy during the global financial crises. The risk sharing feature of islamic finance and its strong connection of credit to collateral that is most suited for small and medium size enterprises (SME) and start up financing is a cause of inclusive growth (Lagarde, 2015).

The principles of islamic banking system had been in existence for hundred years, it only came under limelight about two decades ago (Dabor, 2017). With its massive success in Asia and some parts of Africa islamic finance instruments, assets and products have been a stimulating factor of growth among the leading economic and development stakeholder from other parts of the western world (Olawoyin, 2019). As noted by Tabash and Dhankar (2014) Islamic finance is community-oriented and entrepreneur-friendly whose central concern is real productivity and physical expansion of production and services, hence its focus on entrepreneur's trustworthiness and the project's viability and usefulness rather than financial collateral or the financial worth of a borrower which is the predominant practice by conventional financial system.

Corresponding author
abubakarsadiqsalisu669@gmail.com
DOI: 10.31098/ijeiis.v2i1.1008

Nigeria with its advantage of the most populous and largest economy in sub-Saharan Africa has the potential to be the leading islamic finance power house in the continent. With the large segment of Nigeria's Muslim population who lost confidence in conventional finance because of interest that is highly prohibited, this makes it a breeding ground for islamic banking and finance to mobilize funds that will serve as a catalyst for economic growth of the economy (Ogunbado et al., 2017). Nigeria's islamic fiancé architecture has experience unprecedented development in recent years, in 2015, the central bank of Nigeria (CBN) set up a centralized advisory body that oversees the interest free banking products comply to sharia principles, in 2016, Nigeria deposit insurance corporation (NDIC) introduced a non interest deposit scheme for islamic banks, in 2017 CBN introduced lender of last resort instrument for the sector. The total assets of the country's two fully fledge islamic banks reached NGN214.8 billion (USD 564Million) at the end of 2020 first quarter (Fitch Rating, 2021). Available literature has shown that islamic modes of finances have been a catalyst that complements conventional finance products in stimulating the growth of an economy. Islamic financial product like Murabaha, ijara, istisna and Qardhassan have been playing roles of financial intermediation on the basis of shariah principles which in turn help in promoting economic growth (Bakhita, 2017)

According to Olawoyin (2014) Despite the huge potential of introducing and strengthening Islamic finance products on the capital market and the larger Nigerian economy, challenges to include regulatory and tax issues; issues around Sharia scholars and Sharia-compliant products; as well as the dearth of knowledge on Islamic finance products.

There are scanty empirical studies in the literature that explore the impacts of islamic finance on economic growth such as Ali (2021), Ahmad and Ihsan (2018), Muhammad, Khan and Rehman (2019), Zainur (2021). Few studies have investigated the relationship between islamic finance and economic growth in the case of Nigeria like Muhammad and Dauda (2018), Sabiu and Abduh (2020). However, these studies concentrated on the impacts of islamic financial development proxied by non-interest to private sector. To the best of our knowledge there is no study that explores the impact of different modes of islamic finance on economic growth. Thus, the main thrust of this study is to investigate the impacts of islamic modes of finance such as Murabaha, ijara, istisna and Qardhassan on economic growth of Nigeria using quarterly data from 2013 to 2020. Accordingly, the paper is structured as follows: following this introduction, section two provides literature review, section three dwells on methodology, section four contain results and discussion and finally section five dwells on conclusion and recommendation.

LITERATURE REVIEW

The Concept of Islamic Finance

According to Akintan et al. (2021) the most basic tenets of Islamic finance are the prohibition of risk-taking, interest generating ventures, non- sharia compliant activities, and speculative trading. Islamic finance is system of financing that only permits transactions which are in total compliance with all the principles of sharia as enshrined in the Holy Quran and Hadiths of the prophet of Islam. As noted by Tabash & Dhankar (2014) Islamic finance goes beyond interest free lending and borrowing, it also includes avoiding to do business with enterprises that operates in morally impermissible sectors such as gambling. According to Akram (2014) as cited in Akintan et al. (2021) Islamic finance incapsulates ethics in to finance by discouraging unethical investment practices and activities such as Riba (usury),

ISSN 2807-2049(Online)| 2807-2057 (Print)

Gharar (uncertainty), Maisir (gambling), Zulm (oppression) and Tadlis (cheating) while emphasizing justice and fairness (Adl) as well as equality (Musawah) in financial transactions. Core objective of sharia (Maqāṣid al-Sharī`ah) of promoting human wellbeing (Maṣlaḥah) and repelling harm and difficulties (Mafsadah) in people's lives are the basis upon which the principles of Islamic finance are found (Laldin & Furqani, 2012)Islamic finance is a financial system that derives all its principles from Islamic law whose main objective is promoting equity and social justice.

Spiritual Value

Hussain et al. (2015) all islamic finance models fall under one of the three categories (a) profit-and- Loss sharing (PLS) (b) Nonprofit- and -Loss sharing products (c) fee- based products. They identified the following as islamic modes of finance.

I. Musharakah. This is a profit and loss sharing partnership where two or more partners provide capital to fund a particular project, own assets, or engage in profits generating enterprises under a permanent or diminishing basis. All the partners have right in management of the business, profits are shared in accordance with pre-agreed ratio while losses according to capital contributions.

II. Mudârabah. This is a profit and loss sharing mode of islamic finance that is regarded as sleeping/dormant partnership where one partner provides the capital (funding of the project) and the contributes managerial and entrepreneurial acumen to manage the business or project. Profits are shared based on predetermined mutual agreed ratio but losses are borne by the financier in its entirety unless it is as a result of negligence, misconduct or breach of contract terms by the managing partner.

III. Diminishing Musharakah. This is a profit and loss sharing mode of islamic finance is applied on fixed assets transactions like house, machinery, shops, car, commercial building etc. it may also involve "sale and leaseback" arrangement in cases where the property is already in the ownership of the customer (Akintan, Dabiri and Salaudeen, 2021).

IV. Murabahah. This is a nonprofit and loss sharing islamic finance model that is applicable in trade and assets financing. In this transaction the bank or financier purchase a product on behalf of a benefiting party, deferring payment to an agreed date by the two parties involve. It is a cost-plus mark type of transaction where one party purchase a good or an asset and sell to another party at a pre-determined price that includes the original cost plus a negotiated profit margin.

V. ijarah (sale and leaseback). This is a non-profit loss sharing mode of finance that involves transfer of asset and right to use for a period of time, it is a lease contract: A bank buys an asset for a customer and then leases it to the customer for a certain period at a fixed rental charge.

ISSN 2807-2049(Online)| 2807-2057 (Print)

Shariah (Islamic law) permits rental charges on property services, on the precondition that the lessor (bank) retains the risk of asset ownership (Tabash and Dhankar, 2014).

VI. Salam (Future delivery). Salam is structured based on a forward sale concept. This method allows an entrepreneur to sell some specified goods to a bank at a price determined and paid at the time of contract, with delivery of the goods in the future (Tabash and Dhankar, 2014).

VII. Istisna (Construction / manufacturing).: Istisna contracts are based on the concept of commissioned or contract manufacturing, whereby a party undertakes to produce a specific good for future delivery at a pre-determined price. It can be used in the financing of manufactured goods, construction and infrastructure projects. All above instruments are based on the principle of riba (interest) prohibition, and all seek to maintain Islamic business ethics.

VIII. Sukuk. This is islamic finance version of bond, it is a certificate of an ownership of an underlying asset, the issuer sells the certificate of ownership to a buyer. The buyer rents it back from the issuer based on a pre-determined rental fee (Akintan, Dabiri and Salaudeen, 2021).

IX. Qard Hassan (Beneficence loans): These are zero-return loans that the Qur'an encourages Muslims to make to the needy. Banks are allowed to charge borrowers a service fee to cover the administrative expenses of handling the loan. The fee should not be related to the loan amount or maturity (Akintan, Dabiri and Salaudeen, 2021).

Theoretical Background

One of the leading theoretical foundations in the field of finance-growth nexus is Schumpeter (1934) famous supply-leading hypothesis. To Schumpeter, financial sector is the key driver and life wire of an economy through its role of proving funding to the real and productive sectors of the economy. Patrick (1966) contribution to finance -growth literature can be view through two angles of demand-following and supply leading hypothesis in which all two versions of the hypotheses supports the proposition that finance leads to economic expansion through provision of funds to productive ventures (Tabash and Dhankar, 2014). The 2008 global financial crisis hits conventional banks more than their islamic counterpart and this raised a lot of doubts over the roles of conventional financial system to drive economic growth and consequently attention have been shifted toward ethical and moral finance. The check and balance mechanism total abstinence from interest-based financing, excessive speculation (gharar) and gambling; its corporate governance also protects Islamic financial institutions from crisis (Abd. Majid & Kassim, 2015). As noted by Tabash and Dhankar (2014) the theoretical background to finance and economic growth and development nexus falls under of supply -leading, Demand following and bi-directional causal relationship and each one confirms the importance of finance in propelling the wheel of economic growth.

According to Khan & Mirakhor (1987) The theoretical models upon which Islamic financial intermediation are built are superior to their conventional counterparts in promoting equity, efficiency and stability. Islamic finance is anchored on the principles islamic law which prohibits the charging of

ISSN 2807-2049(Online)| 2807-2057 (Print)

interest and engaging in excessive risky and speculative practices and thus promotes social justice and equity that consequently promotes economic growth.

Empirical literature

There are abounds empirical studies in the literature that explored the role of finance in stimulating economic growth, however, studies that concentrated on the impacts of islamic finance on economic growth are very few. For instance Tabash and Dhankar (2014), (Ali, 2021), (Zainur, 2021), (Olayiwola ,2021), (Sabiu & Abduh, 2020) and (Ali & Uddin,2016)

Tabash and Dhankar (2014) empirically explore the relationship between islamic financial development and economic growth in middle east three important countries that includes Qatar, Bahrain, and United Arab Emirates (UAE). The study used annual time series data that used islamic bank financing and real GDP as proxies of islamic finance development and economic growth. They applied cointegration and Granger causality, the results of their study showed an evidence of significant long run impact of islamic finance on economic growth and granger causal impact in the countries studied. Similarly, an attempt was made by Boukhatem and Moussa (2018) to investigate the effect that Islamic banking loans had on the economic growth of 13 countries in the MENA region during the 2000 to 2014 period, The study applied panel cointegration and fully modified Ordinary least square (FMOLS). Their result indicated long run impact of islamic finance on economic growth of the studied countries. using cointegration, vector error correction model, variance decomposition and impulse response econometric techniques (Ali, 2021) explored nexus between islamic banks and economic growth in Bahrain with a time series data spanning from 2000 to 2020. Findings shows that Islamic banking in Bahrain have positive long run and positive short run relationship with economic growth. Also result indicates that Islamic bank asset take the leading variable on the affect the GDP in Bahrain which supported by VECM. Using quarterly data from 2006Q3– 2017Q4or the period and applying Generalized method of moment GMM in Pakistan (Malik Muhammadd et al., 2019) conducted similar study and examined the impact of Islamic viz a viz conventional finance on economic growth and found Islamic finance enhances economic growth of Pakistan.

(Zainur, 2021) using qualitative method and document analysis studied impact of islamic finance on economic growth and development and aimed to describe the models and applications of sharia-based financial models in the economy of Indonesia. His result revealed that islamic financial system has an impact on the growth and development of Indonesian economy. Likewise, (Muhammad & Dauda, 2018) indicated similar result on the contribution of Islamic finance towards the growth of Nigeria economy. Applying annual time series data from 2012-2015.Gross Domestic Product and Trade were used as explanatory variable while islamic banks Financing as indicator of islamic finance, for the analysis, granger causality and ordinary least square (OLS) tests were used. In the same vein, with reference to Nigerian economy (Sabiu & Abduh, 2020) explores short run and long run dynamic relationship between islamic financial development and economic growth using quarterly time series data 2012q1 to 2019q3 applying Autoregressive distributed lag ARDL model, non-interest bank financing to private sector and real GDP were used as a proxy of islamic financial development and economic growth. The results of the study reveal a significant short- and long-run relationship between Islamic financial development and economic growth. In a recent study Olayiwola (2021) using quarterly time series data between 2013Q1 - 2019Q4 investigates the nexus between Islamic banking products and economic development in Nigeria. The study applied, co-integration s and Error

ISSN 2807-2049(Online)| 2807-2057 (Print)

Correction Model (ECM) and found an evidence of long run relationship islamic banking products and economic development in Nigeria for the period under study. Similarly, (Saleem et al., 2021) examined the dynamic interaction of islamic financial depth, financial intermediation and sustainable economic growth of Pakistan using quarterly data from 2005 to 2019. The study employed autoregressive distributed lag (ARDL), vector error correction and Granger causality, the results revealed the presence of long run relationship flowing from islamic and conventional finance to economic growth, it also showed that islamic finance impacts economic growth in the short run. However, in a study by (Abduh & Omar, 2012) neither Schumpeter's supply-leading nor Robinson's demand-following hypothesis was supported in the empirical study of the relationship between islamic banking and economic growth in Indonesia using quarterly time series data 2003q1-2010q2.

On the contrary, in the case of Malaysia (Ali & Uddin,2016) investigated development of Islamic bank and economic growth for the period 2006–2014 based on the ARDL bounds testing approach and by including investment as channel through which the impact is examined. Their results showed no evidence of finance-growth nexus but instead showed a unidirectional causality from growth to the development of Islamic finance. The contribution of Islamic financial sector was found to be weak in stimulating economic growth. In a similar study (SEKMEN, 2021) investigated the effect of islamic banking on economic growth in Turkey by comparing it with conventional banking using quarterly data covering the period 2005Q4 to 2018Q4 and using the Autoregressive Distributed Lag Model (ARDL) The result of the study confirmed that conventional banks provide more contribution than Islamic banks to economic growth in Turkey, because of the fact that Islamic banking has very small part of the financial system in Turkey.

RESEARCH METHOD

Sources of Data

In order to investigate the impact of Islamic bank on Nigeria's economic growth, the study used quarterly time series data covering 2013q4 to 2020q4 according to the data availability and nature of financial data that is published on a quarterly basis. The data include real Gross Domestic product which serves as a proxy for economic growth and a dependent variable, while the independent variables used are murabahah, istisna, ijarah, Qard Hassan. The data on Islamic banks modes of financing were sourced from Islamic financial services Board (IFSB) while data on real GDP was obtained from National Bureau of statistics (NBS).

Methods of Analysis

The study employed Autoregressive Distributed Lag (ARDL) bound testing approach to cointegration, an econometrics techniques developed by Pesaran and Shin (1999) and later extended by Pesaran etal (2001) to examine both the long run and short run causal relationship between Islamic banks and economic growth in Nigeria for the period under investigation. ARDL bound test is suitable econometrics method in estimating relationship in small sample as it is the case in this study. Additionally, unlike other approaches to cointegration like Engle-Granger (1987), Johansen (1988), Johansen and Julius (1990) this method can be applied regardless of whether the variables are integrated of order zero I (0), order one I (1) or mixture of the two. In this method a simple linear transformation allows an estimation of dynamic error correction model within the ARDL framework

ISSN 2807-2049(Online)| 2807-2057 (Print)

which integrates the short run dynamics with long run equilibrium without losing the long run information. However, before applying the technique, it is important to check for unit root to ensure that none of the variables is integrated of order two I (2) or higher. In testing the stationarity of variables two test has been carried out which includes Augmented Dickey-Fuller (ADF) and Philip – Peron (PP).

Following (Sabiu & Abduh, 2020), (Ali & Uddin,2016) The Bound testing equation is express as:

$$LnGDP_t = \alpha_0 + \sum_{i=1}^{p} \phi_t \Delta\, LnGDP_{t-i} + \sum_{i=0}^{p} \delta_i \Delta LnMRB_{t-i} + \sum_{i=0}^{p} \gamma_{i+1}\ \Delta LnIJR_{t-i} + \sum_{i=0}^{p} \tau_{i+1}\ \Delta\ LnISN_{t-i}$$

$$+ \sum_{i=0}^{p} \theta_{i+1} \Delta\ LnGDH_{t-i} + \mu_1\, Ln\ GDP_{t-1} + \mu_2\, LnMRB_{t-1} + \mu_3\, LnIJR_{t-1} + \mu_4\, LnISN_{t-1}$$

$$+ \mu_5\, LnGDH_{t-1} + \varepsilon_t \quad \text{.....eqn (1)}$$

Where lngdp is the log of gdp which is a proxy for economic growth, lnmrb, lnijr, lnisn and lnqdh are the logs of Murabaha, ijarah, istisna, and Qardhassan the islamic modes of finance. While ϕ, γ, δ, τ θ are the parameters that captures short run dynamics. μ1 -μ5 captures the long run impacts. εt and θ are the intercept and error term of the relationship and finally Ect captures the error correction term parameter.

The hypothesis to test long run relationship are

Null hypothesis (H0): μ1 = μ2 = μ3 = μ4 = μ5 = 0. No cointegration exist

Alternative hypothesis (H1): μ1 ≠ μ2 ≠ μ3 ≠ μ4 ≠ μ5 ≠ 0. Cointegration exist

If the result obtained from the bound test reveals the presence of cointegration, then there is long run relationship among the variables. If the calculated F- statistics is higher than the appropriate upper bound of the critical values, then the null hypothesis of no cointegration is rejected and long run relation exist. However, if it is lower than the appropriate lower bound the null hypothesis cannot be rejected and absence of long run relationship is reported. And if it falls between the upper and lower bound then the result is inconclusive.

Long run and short run models implied by equation (1) are expressed in equation (2) and (3) below:

the bound test is express as:

ISSN 2807-2049(Online)| 2807-2057 (Print)

$$LnGDP_t = \mu_1 Ln\, GDP_{t-1} + \mu_2 LnMRB_{t-1} + \mu_3 LnIJR_{t-1} + \mu_4 LnISN_{t-1} + \mu_5 LnGDH_{t-1} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{eqn (2)}$$

$$\Delta LnGDP_t = \alpha_0 + \sum_{i=1}^{p} \phi_t \Delta\, LnGDP_{t-i} + \sum_{i=0}^{p} \delta_i \Delta LnMRB_{t-i} + \sum_{i=0}^{p} \gamma_{i+1}\, \Delta LnIJR_{t-i} + \sum_{i=0}^{p} \tau_{i+1}\, \Delta LnISN_{t-i} + \sum_{i=0}^{p} \theta_{i+1}\, \Delta\, LnGDH_{t-i} + ECT_{t-1} \ldots\ldots\ldots\ldots (3)$$

ECTt-1 is the error correction term that captures the short run dynamics. It is the speed of adjustment parameter; its negative sign implies convergence to long-run equilibrium whereas the positive sign implies divergence. While other parameters are as defined for equation (1).

Finally post estimation diagnostics test to check the problems of serial correlation, heteroskedasticity, Normality, functional form misspecification, as well as model stability have been conducted.

FINDINGS AND DISCUSSION

Unit Root Test

In order to avoid making a wrong inference from spurious regression and to ensure that none of the variables used in the study is integrated of order I (2) or higher so that ARDL bound test can be applied, Augmented Dickey – Fuller (ADF) as well as Philips and Peron (PP) unit root test are applied. The results of the unit root tests are presented in table (1) below

Table 1. Unit root test

Variables	ADF		PP	
	t- statistics	P- value	t- statistics	p- value
lngdp	-7.617443	0.0000***	-4.801431	0.0006***
Δlngdp	-10.51878	0.0000***	-5.897590	0.0000***
lnmrb	0.084345	0.9587	0.084345	0.9587
Δlnmrb	-4.752414	0.0008***	-4.752414	0.0008***
lnijr	-3.694208	0.0099***	-3.694208	0.0099***
Δlnijr	-3.042961	0.0440**	-3.531525	0.0148**
lnisn	-1.222494	0.6502	-1.359917	0.5871
Δlnisn	-4.651295	0.0010***	-4.697182	0.0009***
lnqdh	-1.231426	0.1947	-1.336089	0.1638
Δlnqdh	-2.145447	0.0330**	-2.365387	0.0200**

Notes: Δ Denotes first difference, ***, ** significant at 5% and 1% level, ADF and PP are determined by Schwarz information criteria.

Source: Authors' computation using E-views10

The result of the unit root test from both (ADF and PP) indicates that lngdp, lnijr, are stationary at level I (0) at 1% level of significance, while lnmrb, lnisn, and lnqdh were found to be integrated of the first order I (1). None of the variables used was found to be integrated of order two I (2) or higher.

ISSN 2807-2049(Online)| 2807-2057 (Print)

Therefore, degree of mixing order makes ARDL bound test of cointegration appropriate in estimating the relationship among the variables used in this study.

Bound Test

In order to investigate the presence or otherwise of long run relation among Islamic mode of finance and economic growth for the period under study, ARDL bound test is applied. Table 2 below presents the result of the test.

Table 2. Bound test

Bound critical value (Restricted constant and no trend)		Significance level	F- statistics	K
Upper bound I (1)	Lower bound I (0)			
4.37	3.29	1%		
3.49	2.56	5%	16.24093	4
3.09	2.2	10%		

Source: Authors' computation using E-Views 10.

From the above table, the computed F-Statistics is 16.24 which is above the upper critical bound 4.37 at 1% significance level and therefore the null hypothesis of no cointegration is rejected. Based on this result there is evidence of long run relation among Islamic modes of finance and economic growth in Nigeria for the period under investigation. This findings is in agreement with the results of (Mosab I. Tabash & Raj S. Dhankar, 2014), (Sabiu & Abduh, 2020), and (Saleem et al., 2.

ARDL regression

Confirming the long-term association among the selected variables used in the study, the long run and short run coefficients are estimated by using ARDL. the table (3) below shows the long run, short run and error correction coefficients of the relationship between Islamic modes of finance and economic growth in Nigeria.

Table 3. long run and short run coefficients

Long run coefficients	ARDL (2,2,0,0,0)			
Schwarz information Criteria, Dependent variable: lngdp				
Regressors	Coefficient	Std. Error	t-Statistic	Prob.
Lnmrb	0.048762	0.021492	2.268861	0.0358**
Lnijr	-0.003380	0.026459	-0.127746	0.8998
Lnisn	-0.011605	0.017295	-0.671013	0.5107
Lnqdh	0.026577	0.007444	3.570218	0.0022**
C	15.74863	0.285337	55.19303	0.0000
Short run coefficients. Dependent variable: Δlngdp	ARDL (2,2,0,0,0) Schwarz information Criteria			
Δlnmrb	0.187031	0.049888	3.749002	0.0120**
Δlnmrbt-1	-0.178783	0.087205	-2.050142	0.0552
ECTt-1	-1.770642	0.158680	-11.15858	0.0000***

Notes: *** and ** denotes significance at 1% and 5% respectively

Source: authors' computation using E-Views 10

ISSN 2807-2049(Online)| 2807-2057 (Print)

The table 3 above reveals the results of the long run, short run and error correction coefficients from the selected ARDL model. The result shows that the log of Murabahah have a long run positive and statistically significant impact on economic growth in Nigeria at 5% level of significance, based on this 1% increase in Murabaha financing will increase economic growth by 5 % approximately. Also, the log of Qardhassan mode of financing have a long run positive and statistically significant effect on economic growth where 1% increase in Qardhassan mode of financing leads to 3% increase in economic growth in Nigeria for the period under investigation. This result agrees with the results of (Mosab I. Tabash & Raj S. Dhankar, 2014), (Sabiu & Abduh, 2020), and (Saleem et al., 2021) who found islamic finance to have significant impact on economic growth in includes Qatar, Bahrain, and United Arab Emirates as well as in Nigeria.

However, the log of ijarah and istisna were found to be negative and statistically insignificant, this implies that the two variables do not cause economic growth in the long run. The small magnitude of impact of Islamic modes of financing on growth is a reflection the fact that Islamic banking and finance is still in its early stage of development in Nigeria, as currently there are only two licensed and fully operational Islamic banks offering Islamic banking and finance products and services.

The short run dynamics along with the associated error correction term results are presented in the lower part of table 3. It shows that Murabahah mode of financing in the current period have a positive and statistically significant impact on economic growth, whereas if murabahah mode of finance increase by 1% it will increase economic growth by 19% approximately. However, it is found to be negative and statistically insignificant in the previous period. The error correction term (ECT) reflects the speed of adjustment to equilibrium in the long run. This term indicates how quickly variables return to equilibrium; therefore, it reflects the long-run relationship among variables. The result reveals that the coefficient of the error correction term is 1.8 approximately and has expected negative sign and highly significant at 1% level. This confirms the presence of long run relationship among the variables used in this study. According to Loyaza and Ranciere (2004) as cited in Mahara (2021) the coefficient of error correction term traditionally lies between -0.01 to -1 but it can reach up to -2 and it also implies convergence to long run equilibrium.

Diagnostics test results

Various econometrics diagnostic tests were conducted for the underlying ARDL equation, these include heteroscedasticity, serial correlation, normality, Functional form misspecification as well as stability of the model. The econometric tools employed included Breusch-Pagan-Godfrey, Breusch-Godfrey Serial Correlation LM Test, Jarque-Bera, Specification tests (Ramsey RESET test) CUSUM and CUSUMSQ tests respectively. The estimated diagnostic indicators are summarized in table 4 below.

Table 4: Diagnostic test

Breusch-Godfrey Serial Correlation LM Test	
CHSQ (2) = 4.988909 (0.0825)	F (2, 16) = 1.813234 (0.1951)
Breusch-Pagan-Godfrey heteroscedasticity test	
CHSQ (8) = 6.778909 (0.5607)	F (8,18) = 0.754289(0.6455)
Ramsey RESET specification test t-statistic = 0.512422 (0.6149)	

ISSN 2807-2049(Online)| 2807-2057 (Print)

Jarque Bera Normality test = 0.588060 (0.745254)	

Source: Authors' computation using E-Views 10

The diagnostic test results in table 4 above indicates that the model passes all the tests. the null hypothesis of the normality of residuals, no first-order serial correlation, no heteroscedasticity, and no misspecification of functional form are accepted as the probabilities of LM, F and t-statistics exceeds 5% level and by implication model is free from serial correlation, heteroscedasticity, functional form misspecification, and the issue of normality.

Stability test of ARDL model

To ensure structural stability of the model, The cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residual square (CUSUMSQ) statistics are applied. A visual examination of CUSUM and CUSUMSQ graphics are presented in Figure (1) and (2). Based on the two figures The plots of each blue line did not cross the red line (5%critical value line), which directs the stability of the estimated techniques and this implies that the model is well specified to the goodness of fit and therefore it can be apply for policy and decision making in Nigeria.

Figure 1: (CUSUM) and (CUSUMSQ)

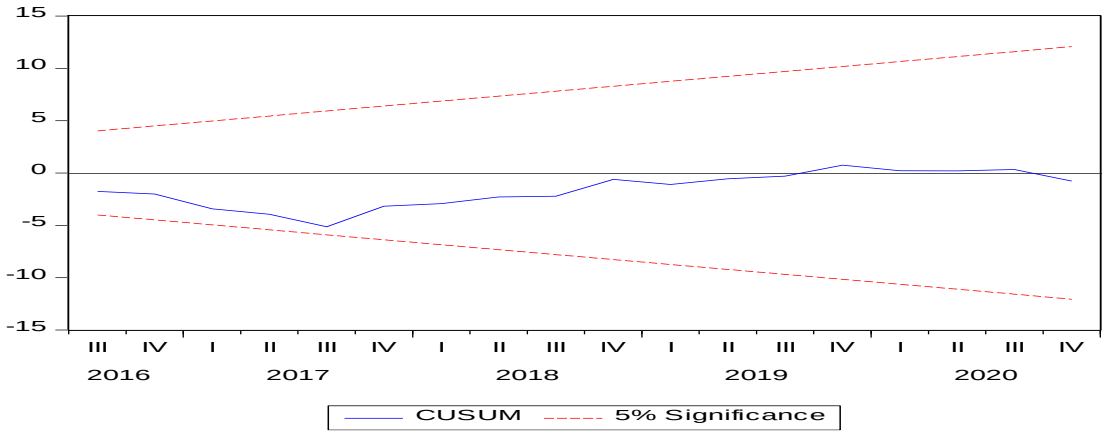
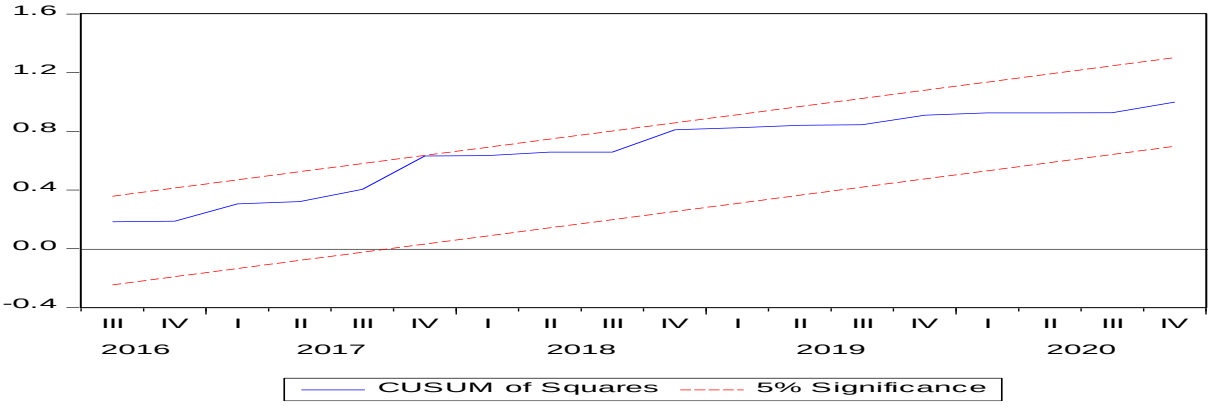


Figure2:(CUSUMSQ)



ISSN 2807-2049(Online)| 2807-2057 (Print)

Source: authors' computation using E-Views 10

CONCLUSION

The This paper makes an attempt to empirically investigates the short run and long run impacts of islamic modes of financing on economic growth with reference to Nigeria. The study used quarterly time series data from 2013Q4 to 2920Q4 on real Gross Domestic product which was sourced from national Bureau of statistics and islamic modes of finance which was obtained from Islamic Finance Service Board. Econometrics techniques of Dickey-Fuller and Philip-Peron unit root tests as well as Autoregressive Distributed lag bound approach to cointegration were applied in addition to post estimation test and stability diagnostics. E-Views 10 an econometrics software was deployed as a tool of analysis.

The unit root test results from both ADF and PP indicates that the variables used in the study is of a mixed order, some of the variables are stationary at level while some are stationary at first difference. The result of the autoregressive distributed bound test revealed that there is a long run relationship between islamic bank modes of financing and economic growth in Nigeria for the period under investigation. Based on the ARDL regression result Murabaha modes of finance has a positive and significant impact on economic growth both in the short run and long run while Qardhassan has positive and significant impact on economic growth only in the long run. However, Istisna and Ijara modes of finance were found to be negative and insignificant impact on economic growth. The diagnostic tests conducted showed that residual is normally distributed, it is free from serial correlation, the variance of the error term is homoscedastic, there is absence of misspecification error and finally the model is dynamically stable.

Based on the result it is recommended that authorities in Nigeria should formulate and implement policies that will make the environment conducive for establishment of more islamic banks and islamic finance institutions. There is need for more enlightenment of Muslim and non-Muslim communities in Nigeria by relevant stakeholders on the potentials and importance of islamic finance in propelling the wheel of Nigerian economy.

This study has a limitation of data for a longer-term analysis because islamic banking and finance was introduced in Nigeria in 2012, additionally, data on other components of islamic finance such as Sukuk and Takaful were unavailable in Nigeria. Future studies can explore the impact of shariah compliant stock index on the economy of Nigeria.

REFERENCES

Akintan, I., Dabiri, M., & Salaudeen, J. (2021). a Literature Review on Islamic Finance Modes As an Alternative Approach To Finance the Business Model of a Circular Economy. International Research Journal of Shariah, Muamalat and Islam, 3(8), 31–48. https://doi.org/10.35631/irjsmi.38003

Bakhita, H. (2017). Impact of Islamic Modes of Finance on Economic Growth through Financial Stability Business & Financial Affairs. Journal of Business & Financial Affair, 6(1), 1–7. https://doi.org/10.4172/2167-0234.1000249

Dabor, A. O. (2017). Islamic baking in Nigeria: Prospect and challenges. International Journal of Social Sciences & Educational Studies, 2017 Vol 4, No1 page 4-32. (Iraq). Islamic Baking in Nigeria: Prospect and Challenges. International Journal of Social Sciences & Educational Studies, 2017 Vol 4, No1 Page 4-32. (Iraq), 4(2), 20–31.

ISSN 2807-2049(Online)| 2807-2057 (Print)

Finance, I., & Report, D. (2021). Islamic Finance Development Report 2021 1.

Hussain, M., Shahmoradi, A., & Turk, R. (2015). IMF Working Paper; An Overview of Islamic Finance. In June.

Laldin, M. A., & Furqani, H. (2012). Maqāṣid Al-Sharī'ah and the Foundational Requirements in Developing Islamic Banking and Finance. ISRA International Journal of Islamic Finance, 4(1), 183–189. https://doi.org/10.12816/0002743

Mirjalili, S. H. (2021). The resilience of Islamic banks and conventional banks in the global financial crisis. 2(January).

Mosab I. Tabash, & Raj S. Dhankar. (2014). Flow of Islamic Finance and Economic Growth-- An Empirical Evidence of United Arab Emirates (UAE) Abstract : Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB), 3(2), 1069–1085.

Ogunbado, A. F., Islam, U., Sharif, S., & Ahmed, U. (2017). Islamic Banking and Finance in Nigeria : Exploration of its Opportunities and. International Journal of Innovative Knowledge Concepts, 5(8).

Olawoyin, O. (2019). What Islamic finance products can do to Nigeria's capital market, infrastructural growth. 1–13.

Sabiu, T. T., & Abduh, M. (2020). Islamic Financial Development and Economic Growth in Nigeria: a Bounds Testing Approach. Journal of Islamic Monetary Economics and Finance, 6(3), 597–620. https://doi.org/10.21098/jimf.v6i3.1191

Saleem, A., Sági, J., & Setiawan, B. (2021). Islamic financial depth, financial intermediation, and sustainable economic growth: ARDL approach. Economies, 9(2), 1–22. https://doi.org/10.3390/economies9020049

SEKMEN, T. (2021). Islamic Banking and Economic Growth in the Dual Banking System. Optimum Journal of Economics and Management Sciences, 8(1), 183–196. https://doi.org/10.17541/optimum.821478

Tabash, M., & Dhankar, R. (2014). Islamic Banking and Economic Growth — A cointegration Approach. Romanian Economic Journal, XVII(53), 61–90.

Zainur, Z. (2021). Islamic Finance and Economic Development: The Impact of the Islamic Finance Sector on Indonesia's Economic Development. Journal of Sharia Economics, 3(1), 52–63. https://doi.org/10.35896/jse.v3i1.170

ISSN 2807-2049(Online)| 2807-2057 (Print)

APPENDIX

(a) Unit root tests

Null Hypothesis: LNGDP has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.617443	0.0000
1% level	-3.699871	
5% level	-2.976263	
10% level	-2.627420	

Null Hypothesis: LNGDP has a unit root
Exogenous: Constant
Bandwidth: 0.58 (Andrews automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-4.801431	0.0006
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Null Hypothesis: LNMRB has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.084345	0.9587
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNMRB)
Method: Least Squares
Date: 06/23/22 Time: 17:07
Sample (adjusted): 2014Q1 2020Q4
Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNMRB(-1)	0.002845	0.033732	0.084345	0.9334
C	0.039270	0.564665	0.069546	0.9451

R-squared	0.000274	Mean dependent var	0.086867
Adjusted R-squared	-0.038177	S.D. dependent var	0.104368

ISSN 2807-2049(Online)| 2807-2057 (Print)

S.E. of regression	0.106341	Akaike info criterion	-1.575574
Sum squared resid	0.294021	Schwarz criterion	-1.480417
Log likelihood	24.05804	Hannan-Quinn criter.	-1.546484
F-statistic	0.007114	Durbin-Watson stat	1.903429
Prob(F-statistic)	0.933428		

Null Hypothesis: D(LNMRB) has a unit root

Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.752414	0.0008
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

Null Hypothesis: LNIJR has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.694208	0.0099
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Null Hypothesis: LNIJR has a unit root
Exogenous: Constant
Bandwidth: 0.764 (Andrews automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-3.694208	0.0099
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Null Hypothesis: D(LNIJR) has a unit root
Exogenous: Constant
Bandwidth: 0.441 (Andrews automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-3.531525	0.0148
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

Null Hypothesis: D(LNQDH) has a unit root
Exogenous: None
Lag Length: 0 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*

ISSN 2807-2049(Online)| 2807-2057 (Print)

Augmented Dickey-Fuller test statistic		-2.145447	0.0330
Test critical values:	1% level	-2.653401	
	5% level	-1.953858	
	10% level	-1.609571	

Null Hypothesis: D(LNISN) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.651295	0.0010
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

(b) ARDL bound test results

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LNGDP)
Selected Model: ARDL(2, 2, 0, 0, 0)
Case 2: Restricted Constant and No Trend
Date: 06/23/22 Time: 19:45
Sample: 2013Q4 2020Q4
Included observations: 27

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27.88518	2.873834	9.703131	0.0000
LNGDP(-1)*	-1.770642	0.183707	-9.638426	0.0000
LNMRB(-1)	0.086340	0.039847	2.166766	0.0439
LNIJR**	-0.005985	0.046834	-0.127788	0.8997
LNISN**	-0.020549	0.030847	-0.666156	0.5138
LNQDH**	0.047059	0.014451	3.256418	0.0044
D(LNGDP(-1))	0.803683	0.120667	6.660356	0.0000
D(LNMRB)	0.187031	0.066964	2.792989	0.0120
D(LNMRB(-1))	-0.178783	0.087205	-2.050142	0.0552

* p-value incompatible with t-Bounds distribution.
** Variable interpreted as Z = Z(-1) + D(Z).

Levels Equation
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNMRB	0.048762	0.021492	2.268861	0.0358
LNIJR	-0.003380	0.026459	-0.127746	0.8998

ISSN 2807-2049(Online)| 2807-2057 (Print)

LNISN	-0.011605	0.017295	-0.671013	0.5107
LNQDH	0.026577	0.007444	3.570218	0.0022
C	15.74863	0.285337	55.19303	0.0000

EC = LNGDP - (0.0488*LNMRB -0.0034*LNIJR -0.0116*LNISN + 0.0266 *LNQDH + 15.7486)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	16.24093	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37
			Finite Sample:	
Actual Sample Size	27		n=35	
		10%	2.46	3.46
		5%	2.947	4.088
		1%	4.093	5.532
			Finite Sample: n=30	
		10%	2.525	3.56
		5%	3.058	4.223
		1%	4.28	5.84

(c) Diagnostics test results

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.813234	Prob. F(2,16)	0.1951
Obs*R-squared	4.988909	Prob. Chi-Square(2)	0.0825

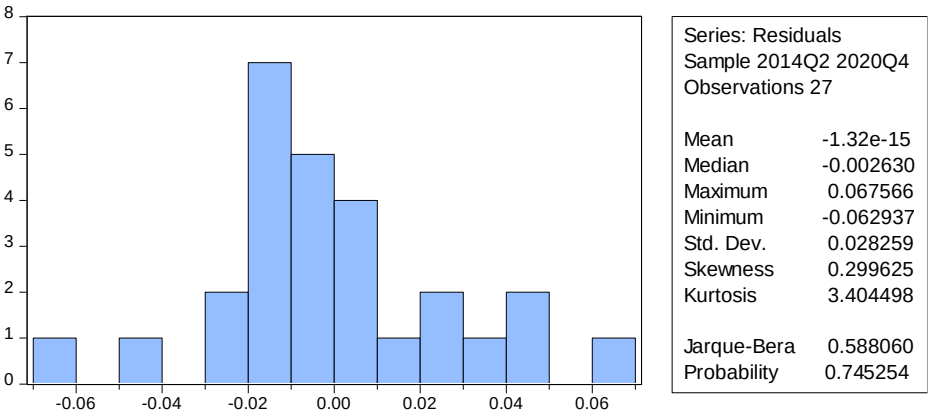
Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.754289	Prob. F(8,18)	0.6455
Obs*R-squared	6.778909	Prob. Chi-Square(8)	0.5607
Scaled explained SS	3.622195	Prob. Chi-Square(8)	0.8895

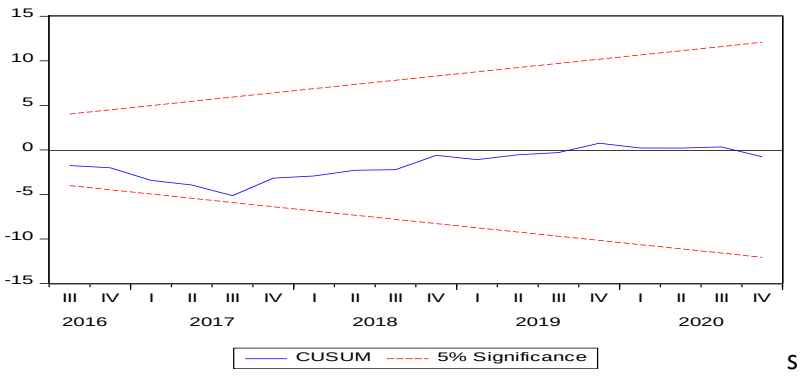
Ramsey RESET Test
Equation: UNTITLED
Specification: LNGDP LNGDP(-1) LNGDP(-2) LNIJR LNISN LNMRB LNMRB(-1) LNMRB(-2) LNQDH C
Omitted Variables: Squares of fitted values

ISSN 2807-2049(Online)| 2807-2057 (Print)

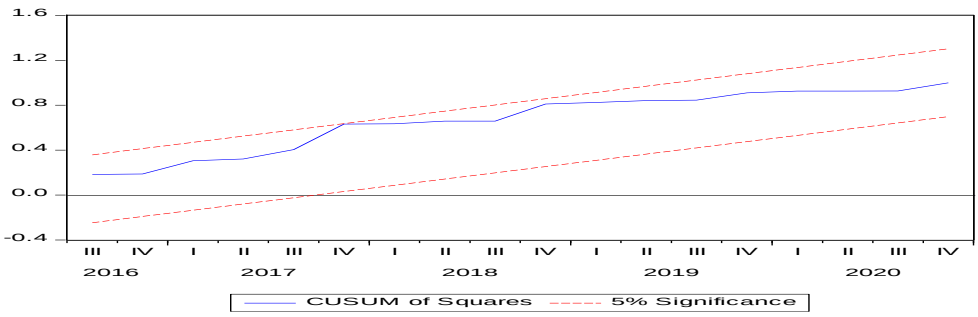
	Value	df	Probability
t-statistic	0.512422	17	0.6149
F-statistic	0.262577	(1, 17)	0.6149



(c) Stability test



s



ISSN 2807-2049(Online)| 2807-2057 (Print)