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INFLUENCE OF SAVINGS MOBILIZATION IN NIGERIA

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ABSTRACT

This study examined the influence of savings mobilization in Nigeria from 1990 to 2022. The objectives were to analyze the impact of household income, deposit interest rates, and inflation rates on savings mobilization. An ex-post facto research design was adopted using secondary data. The data were analyzed using descriptive statistics, correlation analysis, and ARDL regression. The findings indicate that the deposit interest rate has an insignificant positive effect on savings mobilization in Nigeria. Higher interest rates induce greater financial savings by making saving more rewarding. The inflation rate has an insignificant negative effect on savings mobilization. The study concludes that appropriate management of the deposit interest rate is crucial for mobilizing savings, with positive real deposit interest rates below 10% inflation being historically more favourable. Household income and the inflation rate have a limited impact on savings mobilization, unlike deposit interest rates. Overall, the findings justify prioritizing price and monetary stability to incentivize savings mobilization, given its importance for investment and growth. The study offers insights to guide policy aimed at mobilizing higher domestic savings in Nigeria.

Keywords: savings mobilization, household income, inflation rate, deposit interest rate, inflation rate

JEL: E21, G12, G51, O16

INTRODUCTION

According to economic theory, national savings is the sum of public savings and private savings within a country. Savings are one of the major determinants of a country's economic activity. They provide essential capital for investment and related economic activities, which, in turn, drive economic growth. Higher savings can help finance increased levels of investment and boost productivity over the long term. Additionally, greater national savings would help reduce persistent trade and current account deficits, enhance capital formation, and stimulate production activities that lead to job creation, all while decreasing the government's external borrowing (Ezenwa, 2022). Indeed, a steady flow of savings is crucial for sustainable economic growth and for maintaining inter-generational equity.

The economic policy of Nigeria aims to achieve inclusive and continuous development. To reach these goals, the Government (Goodluck Jonathan's regime) adopted a 12-point economic policy. The vision of the Nigerian Government for financial sector development is to establish a competitive, integrated, and efficient financial system that is appropriately regulated and supervised, enabling it to effectively mobilize savings to finance sustainable economic growth. Thus, the financial sector is expected to support this vision. Therefore, with the assistance of the World Bank and the International Monetary Fund, the Financial Sector Development Strategies

2015-2020 were developed to be a stable, efficient and inclusive financial sector.

Aside from the Financial Sector Development Strategies 2015-2020, Nigeria has financial inclusion goals that include increasing the level of financial inclusion and enhancing financial products and services for its citizens (MAP, 2018). In this context, one of the objectives of the financial inclusion roadmap is to boost regulated savings and expand the number of formal savings accounts from 2.4 million to 4.4 million accounts (MAP, 2018). A FinScope survey conducted by FMT (2019) analyzed financial services and products, financial access, drivers of financial product and service utilization, and barriers to accessing these financial offerings. The survey revealed that 17% of adults aged 18 and older have bank accounts, while the remaining individuals are unbanked. It also highlighted the limited savings practices among the populace in Nigeria. Thus, to achieve the aforementioned economic objectives, the financial sector plays a crucial role in enhancing efficient mobilization of savings and increasing access to financial products and services in Nigeria. In this regard, banks play an important role by collecting various types of deposits and providing financial services to support the business sector and the economy.

Generally, banks accept deposits in the forms of demand deposits, savings deposits, and fixed deposits. Among them, savings deposits make up the largest proportion of total deposits. Analysis of bank deposits reveals that the total amount of bank deposits in Nigeria has increased year after year. Nevertheless, there is a need to enhance bank deposits compared to other African countries. In 2015, the ratio of bank deposits to GDP in Nigeria was 29.23%, while other emerging ASEAN countries, such as Cambodia (54.33% of GDP), the Philippines (62.89% of GDP), and Thailand (116.16% of GDP) (IMF, IFS), showed higher figures. As such, strategies need to be identified to improve the deposits of domestic banks in Nigeria. Therefore, private commercial banks are crucial in the banking sector and must analyse the factors influencing their ability to attract deposit mobilization for both the economy and their sources of funds. There may be a limited number of studies related to the area of deposit mobilization in Nigeria. However, this study will specifically focus on the determinants of savings mobilization using secondary data. Thus, it may contribute to filling the research gap regarding this area in Nigeria.

The general objective of this study is to examine the impact of savings mobilization in Nigeria. The specific objectives of the study include:

1. To determine the effect of Household Income on savings mobilization in Nigeria
2. To examine the effect of deposit interest rates on savings mobilization
3. To check the impact of inflation on savings mobilization in Nigeria.

The hypotheses will be stated in a null form.

H_{01}: Household Income does not affect savings mobilization in Nigeria
H_{02}: Deposit interest rate does not significantly affect savings mobilization in Nigeria
H_{03}: The Inflation rate does not impact savings mobilization in Nigeria.

LITERATURE REVIEW

Conceptual clarification

Household income

Household income refers to the total pre-tax income received by all household members from various sources over a given period, usually a year (Cochrane, 2014). It represents the primary

source of funds available to households to meet basic consumption needs as well as facilitate savings and investment decisions. The level, stability and structure of household income have implications for determining household savings and spending patterns.

In Nigeria, household income can generally be categorized into earned and unearned income. Earned income includes wages and salaries from employment, income from self-employment ventures, as well as income from agricultural activities, which represent the primary livelihood for many rural households. Available data shows that over 60% of the total labour force in Nigeria engages in agricultural activities as their main occupation; yet, agricultural incomes remain irregular and seasonal in nature (NBS, 2020). Farm-based households experience significant year-to-year variations in income due to fluctuations in commodity prices and risks from adverse weather conditions, which undermine income predictability.

Self-employed households engaged in non-farm livelihoods such as petty trading, artisanal work, and small businesses also face unstable earnings due to challenges in accessing capital, unreliable infrastructure, and market vulnerabilities that impact business operations (Idachaba, 2004). Income instability significantly constraints savings for these households that depend on irregular earned income from agriculture and self-employment. In contrast, stable income streams more effectively support household savings and resource allocation over the long term (Modigliani & Brumberg, 1983).

Unearned income in Nigeria mainly derives from rent, interest, dividends, transfer payments and remittances. However, these sources represent only a minor share of aggregate household income in the country due to low asset ownership and underdeveloped capital markets. Data shows high income inequality with over 40% of Nigerians living below the international poverty line of $1.90 per day (World Bank, 2018). Limited access to formal insurance, pension and credit also reduces households' ability to smooth consumption over time from unearned income sources. Additionally, the informal nature of most non-farm self-employment activities means access to capital, capacity building and forward/backward production linkages are limited, impacting business growth and profit stability (Enhancing Financial Innovation & Access, 2016). Such enterprises usually lack formal accounting and are vulnerable to economic downturns. Finally, irregular remittance inflows from the Nigerian Diaspora, owing to an unstable macro economy, also contribute to aggregate household income variability in the country.

Consequently, household earnings in Nigeria exhibit low absolute levels, irregular cash flows, and a dominance of unstable income sources that limit disposable funds available for regular saving after covering consumption needs (Modigliani, 1983). These characteristics of household income present substantial obstacles to long-term savings mobilization. However, supporting diversified livelihoods, skills development, job creation, social safety nets, and financial inclusion offers opportunities to stabilize household incomes with favourable wealth accumulation outcomes for Nigerian families. Promoting stable wage employment, enhancing farming through irrigation, cooperatives, and infrastructure, and expanding microinsurance could improve disposable earnings, enabling higher regular savings mobilization on a national scale. This would accelerate capital formation, investment, and economic growth in the West African nation over the long term interest rate.

Amah (2015) opined that the interest rate is described as the rental payment for the use of credit by the borrower or the return for parting with liquidity by the lender. It may, therefore, be viewed as the price of money and, like every other price, attempts to perform a rationing function in the marketplace by facilitating the allocation of a limited supply of credit among the many competing demands for it.

Wikipedia (2017) posits that the rate of interest is essentially expressed as an annual percentage of the principal and is influenced by fiscal policy, monetary policy, money supply, the amount being borrowed, the rate of inflation, and the creditworthiness of the borrower. Essien (1996) highlighted different forms of interest rates that are particularly important in economic management. These rates tend to move together. They are:

1. Lending rate: This means the rate at which banks give credit to their borrowing customers.
2. Deposit rate: The rate at which banks pay customers for deposits or the rate at which they borrow money from their customers. The gap between these two rates reveals much about the availability of credit and market competitiveness. It is well known that a high lending rate signifies low credit supply and/or high demand. Conversely, a low lending rate indicates an abundant supply of credit and/or low demand for credit.
3. Pure Interest rate; this means the rate of time preference of present to future consumption. This means that it is limited to the reward for waiting, which is promised by riskless investment in the economy. In terms of practicality, this appears to be proxied by treasury bills rate, which is the lowest in the economy, ie , interest rate on short-term CBN debt instruments.
4. Monetary Policy Rate (MPR). The benchmark interest rate is supposed to drive the bank's interest rate.

The Monetary Policy Committee (MPC) recently maintained the Monetary Policy Rate (MPR) at 14%. Commercial banks are expected to set their lending rates based on the value of the MPR. They are supposed to follow the formula MPR + 4% spread; therefore, the banks' lending rate should be 14% + 4% = 18%. However, this is not always the case, as banks still charge as much as 26% as a lending rate (Gobna and Nurudeen, 2019). They also impose a management fee of about 2% or more on the face value of the loan. This results in high costs of funds, which are unfavourable for both large-scale enterprises and small and medium-sized enterprises (Ali, 2015).

Inflation

Inflation means increase in the average price of goods and services (Mankiw, 1999). The percentage change in the overall level of price which varies overtime and across countries is what is meant by the rate of inflation (Adelakun, 2015). Inflation rate measures the percentage change in the average level of price when the inflation rate is above zero, prices are rising. When it is below zero, prices are falling (Osuala, 2018). Wai (2019) assets that there is a good deal of controversy growth and development. Some economic focusing on the demand for long – term loan able funds have argued that investment is stimulated when inflation is accelerating because the real costs of interest and principal payment are lowered, it’s nominal interest rates are controlled real interest might even become negative. Inflation is said to cause domestic financial assets (demand as well as time deposits) to be converted to consumption goods, relatively unproductive investment goods such as housing and foreign financial assets (Hassan, 2016). If fixed as is common under what Shaw calls “shallow finance,” the domestic currency will become

overvalued if the domestic inflation rate exceeds the rise in international price. This makes export less completive and imports more attractive and led the country towards a balance of payment crisis.

Theoretical review

Loan pricing theory

The loan theory was propounded by Stiglitz and Weiss, (1981), they posit that banks cannot always set high interest rates. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz and Weiss, 1981). If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behaviour or so called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004). From the reasoning of Stiglitz and Weiss, it is usual that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

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Review of empirical literature

Karlan et al (2023) in their work on Exploring the Impact of Macro Economic Variables on GDP Growth of Pakistan, investigated the interest rate exchange rate, inflation and foreign direct investment (FDI) as macro-economic variables against GDP growth by using data covering the period 1980-2022.They utilized quantitative approach by employing regression analysis, granger causality test and correlation coefficient.

The findings established were that the inflation and interest rate have negative and significant association with GDP growth, interest rate and inflation has a unidirectional causality and exchange rate and FDI also have unidirectional causality, interest rate, exchange rate and FDI demonstrate significant impact on GDP growth.

Ismaila and Imoughele (2022) in their study on Macroeconomics Determinants of Economic Growth in Nigeria: A Co-Integration Approach adopted a quantitative method. The economic growth was measured by real gross domestic product. A time series data covering the period of 26 years (1986-2021) were obtained from CBN. Augmented Dickey Fuller (ADF) test was employed for the unit root test and with Johansen's co-integration test carried out to determine long run and short run relationships between macroeconomic determinants and economic growth. Ordinary least square statistical tool was utilized for assessment of the degree of effect the variables have on each other. The findings showed six co-integration equations establishing the existence of long run relationship among the variables. It was also established that foreign direct investment, fixed

capital formation and government expenditure are the major determinants of economic growth in a situation where inflation rate is stable.

Uwakaeme (2022) in his study on Economic Growth in Nigeria: An Empirical Investigation of Determinants and Causal Relationship (1980 – 2021) adopted a quantitative approach by employing the Johansen Co-integration and Granger Causality tests for a period spanning 1980 to 2021 for the analysis of the data obtained. The results show that a positive and significant long-run relationship exists between economic growth (GDP) and some selected economic growth-indicators which include foreign Direct investment, productivity index (industrial) and stock market capitalization which showed that they are the major determinants of growth. The impact of trade openness is positive but it was said not to be very quite impressive as reflected in the size of its regression coefficient. Others (inflation and excessive Government fiscal deficit) have a significant negative relationship with economic growth which means that they constitute a constraint to the growth of the economy. The directions of causality between economic growth and the selected determinants were found to be mixed – unidirectional, bilateral and independent.

In general the speed of the equilibrium adjustment (as indicated by well- defined negative ECM coefficient) seems to be slow and suggests that economic growth process in Nigeria tends to adjust slowly to the disequilibrium changes in those determinants suggesting policy lag effect.
Antwi et al(2020) in their study on Impact of macroeconomic factors on economic growth in Ghana- A Co-integration Analysis used physical capital, labour force, foreign direct investment and Foreign Aid as macroeconomic factors that would drive Ghana's real per capita GDP using data covering the period of 1980 to 2019.A quantitative approach was also adopted using the models –Augmented Dickey Fuller (ADF) test and Johansen approach to co-integration which is viewed as more appropriate and efficient for the determination of number of co-integrating vectors without relying on arbitrary normalization. Johansen Approach to co-integration model is essentially a multiple regression model. The findings established that there was co-integration relationship between real GDP per capita (economic growth) and its macroeconomic factors.

Tomar and Tomar (2019) in their work on Selected Macro-Economic Variables and its Impact on Chinese and Indian Exports adopted a quantitative approach. The selected Macro-economic variables used were FDI inflows, Gross Domestic Product (GDP), Exchange Rate, Per Capita Real Income and Inflation. An econometric model was designed and used to predict the impact of selected macroeconomic variables of Indian economy on the export of India. Principal component regression analysis was used to prepare economic model from the selected independent macroeconomic variables. Numbers of selected variables used were not exhaustive so as to create an opportunity for others to further explore them. The findings established were that among the five macroeconomic variables selected they found GDP per capita to be the most significant variable which has positive relationship with the exports. If the GDP per capita of both countries, increases the export of India will increase in the same vein. The same thing is applicable to China, if GDP per capita of India and China increases then Chinese exports also increases. FDI inflows into India have significantly increased Chinese exports. They need to explore the reasons behind this phenomenon perhaps FDI inflows into India are enhancing export led industrial growth of China. FDI inflows into China showed positive but insignificant growth in the Indian exports. Furthermore, FDI inflows into India showed negative and insignificant relationship with exports from India that means, FDI inflows in India have not contributed in the development of the export

led industries. Therefore, governments try to attract such FDI inflows in India which contributes in the development of exports from India.

Liu,X. et.al (2018) posit that there is a positive relationship between imports and FDI inflows and India imports are higher than exports therefore it could be the reasons of FDI inflows in India. Inflation growth rate in India has significant and negative relationship with exports from China. Inflation growth in India is statistically insignificant.

Hussain et al (2016) studied Impact of Macroeconomic Variables on GDP: Evidence from Pakistan. The macroeconomic variables employed were inflation, real exchange rate and interest rate. Thirty-two (32) year time series data were obtained for the period 1980 to 2011 from the websites of state bank of Pakistan and World Bank. These represented the secondary data. They adopted multiple regression Analysis and Descriptive statistics for their data analysis. The study established that there is a significant effect of inflation rate, interest rate and exchange rate on GDP. Inflation rate and interest rate had a negative impact on GDP while exchange rate had positive relationship to GDP. Based on the results and analysis they suggested that the Government should adopt tight monetary policy due to inflation because the results show that inflation has significant effect but negative relationship with GDP.

Ali (2015) in their work on The Impact of key Macroeconomic factors on Economic Growth of Bangladesh: A VAR Co-integration Analysis utilized a quantitative approach with the study spanning the period 1982 to 2012.The macroeconomic variables evaluated are foreign direct investment, market capitalization and real interest rate. Vector autoregressive model (VAR) was used to examine the long run and short run relationship between market capitalization, real interest rate, foreign direct investment and economic growth. The results of the VAR indicated that market capitalization, real interest rate and foreign direct investment impacted on the economic growth in the long run but showed no predictable behavior in the short run. The results of decomposition of variance were the same with VAR results. All the variables created long run effects on economic growth but it does not have in short run, and the effects increased with time.

Furthermore, there is a controversial consensus about the empirical literature regarding the relation between saving and real interest rate. Depending about macroeconomic fundamentals of individual economy, the findings may differ from one country to that of another.

Gaire (2015) studied the effect of real Interest rate and saving behavior in the case of Nepal. The findings showed that the real interest rate has strong positive relation with gross domestic saving ratio in Nepal in the study period of 1975 to 2014. According to the study of Okun (2015) in Kenya, the findings indicated the need of commercial banks to monitor the interest on deposits carefully. Sunday (2015) studied the impact of interest rates on savings and investment in the context of Nigeria using the date for a period of 1970 to 2014. The analysis revealed that interest rates have a positive and significant impact on aggregate savings in Nigeria. Mashamba, Magweva & Gumbo (2014) analyzed the relationship between banks' deposit interest rates and deposit mobilization in Zimbabwe for the period 2000- 2006. The study found it positive and significant between deposit interest rate and deposit. It was concluded that deposit interest rate is an important determinant of deposit mobilization in Zimbabwe. Hence, an increase in savings products with a higher return can positively affect deposit growth in Zimbabwe. Moyo & Roux (2018) analyzed

the impact of interest rate reforms on economic growth through savings and investments in Southern African Development Community for the period 1990-2015. The study revealed that the real deposit rate has a positive effect on savings.

Garo (2015) mentioned in the study that exchange rate of domestic country to USD increases, deposits of local country will deplete in the process of importing goods and services. Then, local deposits in banks will reduce. There is inverse relationship. A rise in exchange rates might lead to lower levels of deposit.

Ngula (2015) analyzed the determinants of deposit mobilization and its role in economic growth in Ghana during the study period of 1980-2014. The study found the negative significant influence of exchange rate between the Ghanaian cedi against the US dollar on bank deposit accumulation. The study concluded that there might have been the phenomenon of currency substitution over the period of estimation. Garo (2015) studied the determinants of deposit mobilization and related costs of commercial banks in Ethiopia for the period covering 2001/2-2012/13 through questionnaires and interviews with senior bank officers of seven banks. The analysis showed that the branch expansion, the money supply, the exchange rate of Birr to USD and general inflation are the most significant factors of deposit volume in Ethiopia. Ostadi & Sarlak (2015) studied the effective factors on the absorption of bank deposits to increase the relative share of Isfahan Sepah Bank during the period of 1379 to 1389. The results indicated that the effects of e- banking parameters such as the relative contribution of POS and ATM and production (GDP) on bank deposits are positive and significant while the effects of inflation and exchange rates on deposits are negative and significant. According to the study of Bhattarai (2018) titled on "the impact of bank specific and macroeconomic variables on investment of commercial banks in Nepal" based on secondary data for the period of 2009/10 - 2015/16, the analysis showed that non-interest income, credit to deposit ratio, GDP and exchange rate are the major factors affecting the investment of commercial banks. And, exchange rate has negative effects on investment of commercial banks in Nepal.

METHODOLOGY

This research will employ the ex-post facto design. The ex-post research design is a type of research in which the researcher does not have the ability or opportunity to vary or manipulate the independent variables. Onwumere (2019) defined an ex-post facto research design as a type of research involving events that have already taken place. This research design is suitable for the purpose of this research because it is impossible to directly control or manipulate any of the independent variables. This is because the events have already taken place and so the research is being conducted after the fact. In this study, both the independent and dependent variables exist and are being observed at the same time because the effect of the independent variables took place before this time.

The variable of this study includes savings mobilisation which is the dependant variable while the independent variable is the determinants (house hold income, deposit interest rate and inflation) of savings mobilisation. This study employed secondary data obtained from the Central Bank of Nigeria Statistical Bulletin, National bureau of statistics and the World Bank.

Method of data analysis

For the purpose of this study, the techniques that will be used to analyze the data generated are Descriptive Statistics, Regression and Correlation. This is consistent with the work of Chtourou (2001). Pearson correlation coefficient is the most commonly used coefficient. It is the method that measures both the degree (strength) of association and direction of variables. It will enable the researcher to assess the strength of relationship among the variables. This means the use of percentage, mean, median; mode, maximum, minimum and standard deviation will be employed to explain the differences between dependent and independent variables. For the purpose of this study, multiple regressions will be employed. This is because, when a given dependent variable is influenced by several independent variables, it will be more appropriate to use multiple regressions.

Model specification and estimation

The data gathered in this study would be analyzed using multiple regression analysis as the major statistical tool for the study. Osuagwu (1999) posits that regression analysis (RA) is a statistical tool that utilizes the relationship between two or more quantitative research variables so that one variable can be predicted from the other(s). Furthermore, Salvatore (1982) posits that multiple linear regression analysis is used for testing hypothesis about relationship between a dependent variable(Y) and two or more independent variables X's and for prediction. One assumption about multiple regression analysis is that there is no exact linear relationship between X's.

The predictive equation for four independent variables situation which would be used in this study is:

$$Y= \beta_0+ \beta_1X_1+ \beta_2X_{2+} \beta_3X_3 +e \quad 1$$

Where X_1, X_2, X_3, X_4 are the independent variables that would represent macroeconomic variables and β_1, β_2, β_3, β_4 are coefficients of variability generated between independent variables and corresponding dependent variables. It should be noted that these coefficients are statistics that estimate the population parameters of the regression. Multiple regression requires that both the dependent and independent variables be intervalley scaled. Also, it assumes that the underlying relationship is linear, although data transformations can overcome this problem. Finally, the sample size must be large enough to give many observations per independent variable. The more independent variables, the larger should be the sample size.

Putting the equation in mathematical form;

$$SM=F(HHI+DIR+INF) \quad 2$$

Putting the equation in econometric form;

$$SM=\beta_0+\beta_1HHI+\beta_2DIR+\beta_3INF+e \quad 3$$

Y= Dependent Variable representing Savings Mobilization
Where β_0 = the intercept.
β_1 = coefficient of variability that will depict the relationship between X_1 and Y. It may be positive or negative
HHI = independent variable representing Household Income.
β_2 = coefficient of variability which will depict the relationship between X_2 and Y. It may be positive or negative.
DIR = Independent variable representing Deposit Ratio
β_3= coefficient of variability which will depict the relationship between X_3 and Y. It may be positive or negative.
IFN= inflation rate.
e_i = random error term with mean=0.

DATA ANALYSIS, RESULTS AND DISCUSSIONS

Descriptive data analysis

Table 1: Descriptive statistics

	SM	HHI	DIR	INF
Mean	6493.477	835438.1	11.27948	18.16121
Median	1739.637	621717.0	9.886420	12.88000
Maximum	30875.76	3535631.	26.29321	72.84000
Minimum	27.48650	494.6400	2.398333	5.390000
Std. Dev.	8418.703	975249.8	5.007841	16.11785
Skewness	1.330693	1.260806	0.872751	2.181197
Kurtosis	3.887914	3.893975	4.252254	6.769263
Jarque-Bera	10.82314	9.841860	6.345509	45.70201
Probability	0.004465	0.007292	0.041888	0.000000
Sum	214284.7	27569458	372.2228	599.3200
Sum Sq. Dev.	2.27E+09	3.04E+13	802.5110	8313.123
Observations	33	33	33	33

Source: Author's compilation using Eviews 12

From table 1 above, it was observed that the mean values of Saving Mobilization (SM), Household Income (HHI), Deposit Interest Rate (DIR) and Inflation Rate (INF) were 6493.477, 835438.1, 11.27948 and 18.16121 respectively. The variability in the distributions as captured by the standard deviation, suggests that the standard deviations of SM, HHI, DIR, and INF were found to be slightly dispersed from its mean with values of 8418.703, 975249.8, 5.007841, 16.11785 below their respective average values.

Furthermore, the skewness values of SM (1.330693), HHI (1.260806), DIR (0.872751), and INF (2.181197) suggests that all the variables were positively skewed. In the same vein, the kurtosis value of SM (3.887914), HHI (3.893975), DIR (4.252254), and INF (6.769263) suggest that the distributions are all leptokurtic.

Finally, the Jarque-Bera statistics indicates that all of the variables were considered to be normally

distribution since their p-values were greater than 5% significant level.

Correlation Analysis

Table 2: Covariance Analysis: Ordinary

Sample: 2002 2022

Covariance Analysis: Ordinary
Date: 10/11/23 Time: 17:27
Sample: 1990 2022
Included observations: 33

Correlation Probability	SM	HHI	DIR	INF
SM	1.000000 -----			
HHI	0.451321 0.0084	1.000000 -----		
DIR	-0.453519 0.0080	-0.723329 0.0000	1.000000 -----	
INF	-0.201289 0.2613	-0.301193 0.0885	0.478498 0.0049	1.000000 -----

Source: Author's compilation using Eviews 10+

Correlation is a statistical tool that describes the degree of linear association between two or more variables. From table 2, a positive and significant association was observed between SM, and HHI, a negative and significant association between SM and DIR. However, we found a negative and insignificant association between SM and INF.

Diagnostic test

The following diagnostic tests were conducted to make sure that the estimated results are reliable, namely: Unit Root, Normality Test, Spurious Regression and Hausman Test.

Unit Root test

Table 3: Augmented Dickey-Fuller test summary

VARIABLES	ADF AT LEVEL	5% LEVEL OF SIGNIFICANCE	ADF AT 1ST DIFFERENCE	5% LEVEL OF SIGNIFICANCE	ORDER OF INTEGRATION
SM	4.541427	-3.557759			@ I (0)
HHI	-2.493631	-3.557759	-5.378509	-3.568379	@ I (1)
DIR	-3.585121	-3.557759			@ I (0)
INF	-2.550487	-3.557759	-9.644984	-9.644984	@ I (1)

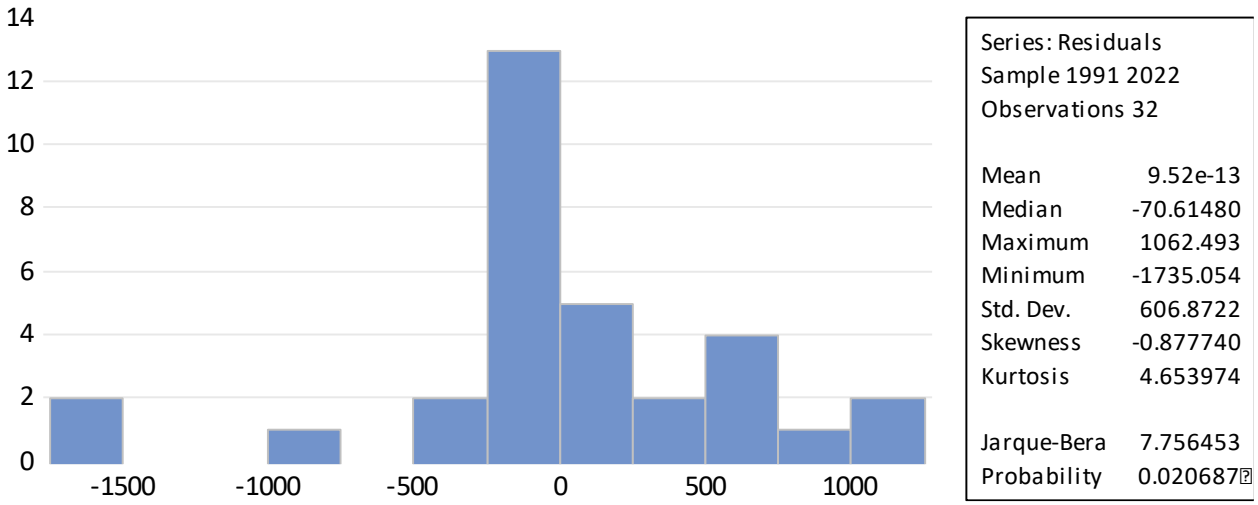
Source: Author's computation using Eviews 12

Unit Root test is usually employed to test for Stationarity of the data under study. Stationarity therefore, implies that the mean, variance and covariance are constant across different periods. Existence of unit roots can lead to serious issues such as; spurious regressions and errant behaviour variables due to econometric assumptions for analysis not being valid. This study tested all variables used by applying the Augmented Dickey-Fuller Test. According to table 4.3, all variables

were stationary at different levels i.e I(0), and I(I); this therefore suggest a mixed order of integration amongst the variables.

Normality test

Figure 1: Residual Normality Tests



Source: Author's computation using Eviews 12

The Jarque-Bera test is a statistical process used to determine if a sample or any group of data fits a standard normal distribution. The result of the Jarque-Bera normality test (7.756453) with a probability value of 0.0200687 indicates that the model residuals are normally distributed, seeing that the p-value is less than 5% significant level.

Serial correlation.

The relationship between a given variable and itself over various time intervals is termed serial correlation. Table 4 below shows that the F-Statistics at lag 1 with p-value of 0.7047 indicates the absence of serial correlation in the model since the p-values are greater than the critical value at 5% level of significance. Thus, we can conclude that there is absence of serial correlation in the model.

Table 4: Breusch-Godfrey Serial Correlation LM Test:

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 1 lag

F-statistic	0.146862	Prob. F(1,26)	0.7047
Obs*R-squared	0.179737	Prob. Chi-Square(1)	0.6716

Source: Author's computation using Eviews 12

Heteroskedasticity

Heteroskedasticity occurs when the residuals for a regression model do not have a constant variance. The table below indicates that the Breusch-Godfrey Heteroskedasticity test with F-statistics value of 2.033055 and a p-value of 0.1180 confirms the absence of Heteroskedasticity in

the model since its p-values are greater than the critical values at 5% level of significance. This was much expected in the analysis seeing the fluctuation associated with the variables under study.

Table 4: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

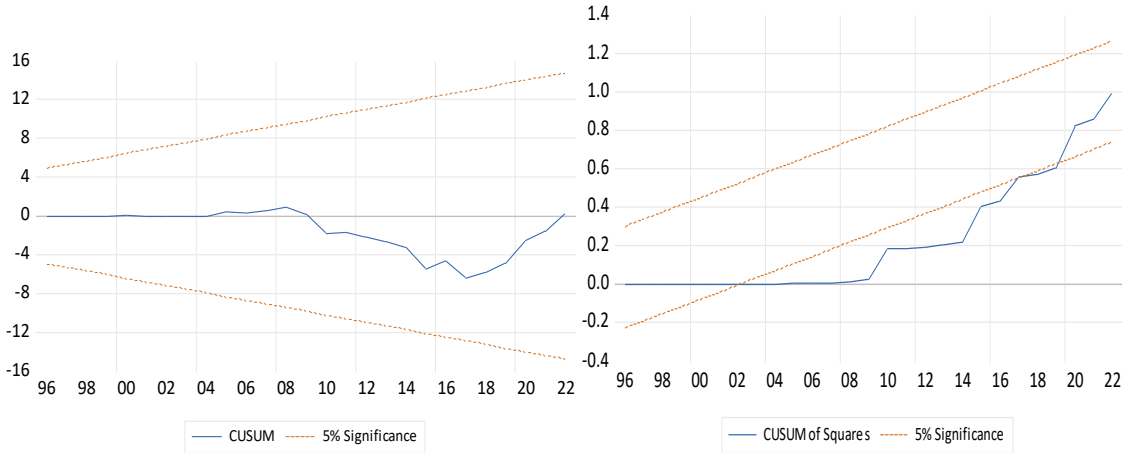
F-statistic	2.033055	Prob. F(4,27)	0.1180
Obs*R-squared	7.407189	Prob. Chi-Square(4)	0.1159
Scaled explained SS	9.634218	Prob. Chi-Square(4)	0.0471

Source: Author's computation using Eviews 12

Recursive estimates

The CUSUM and CUSUMQ of recursive residuals test as suggested by Pesaran and Pesaran (1997) was used to access the coefficient stability in the model. From figure 2, the plot of the CUSUM and CUSUMQ of recursive residual stability test indicates that all estimated coefficients of the model are stable over the study period since they are within the 5% critical bounds.

Figure 2: Plot of Cumulative Sum and Cumulative Sum of Squares of Recursive Residuals Stability Tests



Source: Author's computation using Eviews 12

ARDL regression estimate

Table: 5: Regression table

Dependent Variable: SM
Method: ARDL
Date: 10/11/24 Time: 17:12
Sample (adjusted): 1991 2022
Included observations: 33 after adjustments
Maximum dependent lags: 1 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (0 lag, automatic): HHI DIR INF
Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
SM(-1)	1.164189	0.018266	63.73517	0.0000
HHI	-8.35E-05	0.000179	-0.465415	0.6454
DIR	17.37799	42.60431	0.407893	0.6866
INF	-4.629980	8.843571	-0.523542	0.6049
C	-9.781384	556.5161	-0.017576	0.9861

R-squared	0.994868	Mean dependent var	6695.539
Adjusted R-squared	0.994108	S.D. dependent var	8471.719
S.E. of regression	650.2738	Akaike info criterion	15.93526
Sum squared resid	11417111	Schwarz criterion	16.16429
Log likelihood	-249.9642	Hannan-Quinn criter.	16.01118
F-statistic	1308.633	Durbin-Watson stat	1.761045
Prob(F-statistic)	0.000000		

ARDL regression estimate result

According to table 5, the co-efficient of determinant (R Square) of 0.9994868 suggests that about 99.95% of the variation in dependent variable; Saving Mobilization (SM) is explained by the independent variables (Household Income, Deposit Interest Rate and Inflation Rate). The 0.05% variance in Saving Mobilization (SM) is explained by other factors not captured in this research. Also, the standard error of 650.2738 indicates that on the average, 650.3% of changes in the dependent variable; Saving Mobilization (SM) will not be explained by the independent variables.

Also, the F-statistic of 1308.633 with a p-value of 0.000000 suggests that the model is significant at a 5% level. While the Durbin-Watson statistic of 1.761045 which is approximately 2 indicates the absence of autocorrelation in the model.

Test of hypotheses

In accepting or rejecting our null hypothesis the p-values of the t-statistic of the long run estimation were used. The study adopted 5% level of significance. As p-values in excess of 5% were considered not significant.

H01: Household income does not affect savings mobilization in Nigeria

According to the result of this study; Household Income has a negative and insignificant effect on Saving Mobilization with a p-value of 0.6454 which is insignificant at 5% level. Hence, we accept the null hypothesis; and, therefore, posit that there is no significant relationship between Household income and Saving Mobilization in Nigeria.

$H0_2$: Deposit interest rate does not significantly affect savings mobilization in Nigeria

According to the result of this study; Deposit Interest Rate has a positive and insignificant effect on Saving Mobilization with a p-value of 0.6866 which is not significant at 5% level of significant.

Hence, we accept the null hypothesis that Deposit Interest Rate does not significantly affect saving mobilization in Nigeria.

H_{03}: Inflation rate does not impact on savings mobilization in Nigeria
According to the result of this study; Inflation Rate has a negative and insignificant effect on Saving Mobilization with a p-value of 0.6049 which is insignificant at 5% level. Hence, we accept the null hypothesis; and therefore, posit that there is no significant relationship between Inflation Rate and Saving Mobilization in Nigeria.

Discussion of findings
The objective of this study was to examine the determinants of savings mobilization in Nigeria over the period 1990 to 2022. Based on the empirical analysis conducted, several key findings emerged:

Household income and savings mobilization
The results indicate that household income has a statistically negative impact on savings mobilization in Nigeria at 5% level (Uremadu, 2006; Obayelu, 2012). A 1% rise in household income leads to a -0.47% decrease in savings mobilization. This does not align with economic theory that higher incomes allow households to save more from their disposable income after meeting consumption needs (Browning & Lusardi, 1996).

The finding corroborates studies for Nigeria like Ojeaga et al. (2018), Agu & Chukwu (2008) which found income levels significantly determine domestic savings. Higher savings enable households to accumulate wealth, smooth consumption and enhance welfare (Karlan et al., 2014). Therefore, policies that boost disposable incomes through economic growth, employment and entrepreneurship can help raise savings levels (CBN, 2021).

Deposit interest rate and savings mobilization
An insignificant positive relationship was found between deposit interest rate and savings mobilization in Nigeria, contrary to expectations. This diverges from findings by Adeboye & Owoyemi (2012) and Gobna & Nurudeen (2019) who found deposit interest rate significantly affects savings mobilization.

The insignificance indicates marginal effects of changes in deposit ratio on savings mobilization (Uremadu, 2006). This implies other mediating factors may diminish the role of rising deposit interest rate in influencing savings behavior (Karlan et al., 2014). Overall, the result suggests deposit ratio management has limited impact in mobilizing domestic savings unlike incomes and inflation.

Inflation and savings mobilization
A statistically insignificant negative relationship was found between inflation and savings mobilization in Nigeria at 5% level. A 1% rise in inflation will leads to -0.52% decline in savings mobilization. This conforms to a priori expectations that high inflation erodes the real value of financial assets held as savings, providing disincentives for saving (Uremadu, 2006; Obayelu, 2012).

The result corroborates existing empirical evidence that high inflation dampens savings mobilization in Nigeria (Onaolapo, 2015; Ogbokor & Musilika, 2014). Unstable prices from rising inflation creates uncertainty and encourages current consumption rather than future savings (Loayza et al., 2000). Therefore, managing inflation through appropriate monetary policy is essential for an enabling environment that encourages savings as noted by CBN (2022).

The study found evidence that other unexamined factors account for about 0.05% of savings mobilization changes in Nigeria. These include financial development, interest rates, demography, urbanization and financial literacy (Loayza et al., 2000; CBN, 2021; Karlan et al., 2014). Expanding financial access through digital finance can boost savings in Nigeria (Onaolapo, 2015). Also, favorable interest rates, urban infrastructure and growing financial literacy encourage savings mobilization (Mbutor & Uba, 2013; CBN, 2022).

In conclusion, the major drivers of savings mobilization in Nigeria is deposit interest rate while household income and inflation rate has limited impact. Appropriate fiscal and monetary policies that raise disposable incomes and maintain price stability will create an enabling environment for mobilizing higher domestic savings. Expanding financial inclusion also offers significant potential for spurring savings across wider demographics in both rural and urban areas. Overall, a mix of supportive income, inflation, financial sector and literacy policies are essential to drive savings mobilization for domestic investment and growth.

CONCLUSION AND RECOMMENDATIONS

This study examined the determinants of savings mobilization in Nigeria for the period 1990-2022. The aim was to analyze the impact of household income, inflation, and deposit interest rate on savings mobilization. The findings indicate that household income has an insignificant negative effect while high inflation rates deter savings mobilization in Nigeria. However, changes in household income and inflation rate were found to have minimal impact.

The study concludes that higher disposable incomes allow greater savings mobilization by providing more resources for households to save from after meeting consumption needs. In contrast, high inflation erodes the real value of savings and discourages financial asset accumulation. Appropriate policies to accelerate income growth and maintain price stability are therefore essential to incentivize higher domestic savings. The government should pursue income-boosting policies alongside monetary policy aimed at keeping inflation low and stable to create an enabling environment for savings.

Additionally, further efforts to expand financial inclusion can help mobilize savings across wider demographics in both rural and urban areas. Financial access enables savings by providing the infrastructure and instruments for secure savings. Overall, a supportive policy mix encompassing income, inflation, and financial inclusion measures are crucial to drive savings mobilization. Increased domestic savings accumulation will in turn facilitate higher investments and capital formation for productive sectors and broader economic growth.

Recommendation

Based on the conclusions of this study, the following recommendations are made:

1. Government should implement policies aimed at accelerating income and economic growth to boost disposable incomes and savings capacity. This includes job creation, enhancing employability, and supporting entrepreneurship and MSMEs.
2. The Central Bank of Nigeria should continue to prioritize price and inflation stability through appropriate monetary policies as a crucial enabler for savings mobilization. Keeping inflation low and stable should remain a policy focus.
3. Financial inclusion initiatives should be strengthened by leveraging digital finance innovations and infrastructure expansion. Digital savings products can help drive financial access and savings.
4. Financial literacy programs should be implemented, especially focused on women, youth and rural populations, to inculcate good savings habits across wider demographics.

Ultimately, the supportive policy mix should focus on raising incomes, maintaining price stability, expanding financial access, and incentivizing savings culture to drive optimal savings mobilization for investment and growth.

REFERENCES

Agu, C. C., & Chukwu, J. O. (2008). Multivariate Causality between Financial Depth and Economic Growth in Nigeria. *African Review of Money Finance and Banking*, 7-21.

Adeboye, E. A., & Owoyemi, O. O. (2012). Human capital development and economic growth: Empirical evidence from Nigeria. *International Journal of Economics and Finance*, 4(10), 93-104.

Adelakun, H. (2015). Determinants of domestic savings in Namibia: An empirical analysis. *Journal of Economics and International Finance*, 6(10), 208-216.

Amah, G. (2015). Core determinants of financial savings in Nigeria: An empirical analysis for national monetary policy formulation (No. 2006/1). *Research Paper-University of Manchester, Centre for Growth and Business Cycle Research*.

Ali, I. (2015). Saving behaviour of rural households in Kwara State, Nigeria. *African journal of basic and applied sciences*, 4(4), 115-123.

Amassoma, D., & Odeniyi, K. (2019). The Determinants of Domestic Savings in the Economic Community of West African States. *Cogent Economics & Finance*, 7(1), 1603347.

Bhattarai, M. (2018). Financial Structure and Development**. New Haven: Yale University Press.**

Browning, M., & Lusardi, A. (1996). Household saving: Micro theories and micro facts. *Journal of Economic literature*, 34(4), 1797-1855.

Cochrane, H, J. (2014). Determinants of saving and investment in Nigeria: Policy implications and challenges. Economies, 10 (2), 51.

Chodecai, V. (2004). Role of Governance in Explaining Domestic Investment in Nigeria. South African Journal of Economics, 80(4), 473–489. doi:10.1111/j.1813-6982.2012.01320.x.

Chtourou, G. (2001). Effect of Financial Deepening on Industrial Sector Output in Nigeria. *Journal of Emerging Trends in Management Sciences and Entrepreneurship*, *3* (1), 118–130. Retrieved from http://www.jetmase.com/index.php/jetmase/article/view/13.

Central Bank of Nigeria (2021). Central Bank of Nigeria Annual Report - 2021. Abuja: CBN.

Central Bank of Nigeria (2022). Central Bank of Nigeria Communique No. 139 of the Monetary Policy Committee Meeting - May 2022. Abuja: CBN.

Ekong, M. (2015). An Empirical Analysis of Trends in Financial Intermediation and Output in Nigeria. *Global Journal of Management and Business Research Finance* 13(9):19-30.

Essien, F. H. (1996). Financial Sector Development and Economic Growth in Nigeria. *Economic and Financial Review*, 42(3), 37-73.

Ezenwa, E. (2022). What drives private saving across the world? *The Review of Economics and Statistics*, 82(2), 165-181.

Gaire, J. (2015). Potential output and total factor productivity growth in post-apartheid South Africa. IMF Working Paper, (WP/03/178).

Garo, T. (2015). A Neoclassical Investment Function of the South African economy. Economic Modelling, 21(4), 647 – 660. doi:10.1016/j.econmod.2003.09.004.

Gjonnes, N. (2020). Core determinants of financial savings in Nigeria: An empirical analysis for national monetary policy formulation. *International Review of Business Research Papers*, 2(1), 48-58.

Gobna, A. S., & Nurudeen, A. (2019). Impact of bank-specific factors on savings mobilization by commercial banks in Nigeria. *Cogent Business & Management*, 6 (1), 1655342.

Hussain, H. (2016). The Effect of Financial Development on Economic Growth in Sudan: Evidence from VECM Model. International Journal of Economics and Finance, 6 (11):72.

Hassan, F. (2016). Modelling and Forecasting Savings Mobilisation in the Nigerian banking sector. *Borsa Istanbul Review*, 22(2), 125-136.

Idachaba, A (2004). Human capital development and economic growth: Empirical evidence from Nigeria. *International Journal of Economics and Finance*, 4(10), 93-104.

Karlan, D., Ratan, A. L., & Zinman, J. (2014). Savings by and for the poor: A research review and agenda. *Review of Income and Wealth*, 60(1), 36-78.

Liu, X. (2018). Financial Intermediation and Economic Growth in Nigeria. 1988-2013: A vector Error Correction Investigation. *Mediterranean Journal of Social Sciences*,5(17):19-26.

Mankiw, F. (1999). Impact of Selected Macroeconomic Variables on National Savings in Nigeria. *International Journal of Economics and Financial Modelling*, 2(3), 32-39.

Mbutor, M. O., & Uba, I. A. (2013). The Determinants of Domestic Savings in Nigeria. *Journal of Economics and Development Studies*, 1(2), 07-22.

Modigliani O.L. & Brumberg,W. (1983).. The Determinants of Domestic Savings in Nigeria. *Journal of Economics and Development Studies*, 1(2), 07-22.

Mashamba, K. Magweva, O. & Gumbo,Y. (2014). Low-For-Long" interest rates and banks' interest margins andprofitability: Cross-country evidence. Journal of financial intermediation, 35 (PA), 1-16. DOI: 10.1016/j.jfi.2017.05.004

Moyo, A., & Roux, B., (2018). The Nigerian Banking System and the Challenges of Financial Intermediation in the Twenty First Century. *Jos Journal of Economics*, Vol.4, No.1.

Ngula M. (2015). The Performance of the Nigeria Financial Sector since 1986. In: Ben A. Aigbohkan, ed. Rekindling Investment for Economic Development in Nigeria. The Nigerian Economic Society, Ibadan, pp.127-144.

Obayelu, O. A. (2012). Saving Behaviour of Rural Households in Kwara State, Nigeria. *African journal of basic and applied sciences*, 4(4), 115-123.

Ogbokor, C. A., & Musilika, C. (2014). Determinants of domestic savings in Namibia: An empirical analysis. *Journal of Economics and International Finance*, 6(10), 208-216.

Ojeaga, P. & Adeyemo, R. (2018). Exchange rate volatility and balance of payment in Nigeria. *Journal of Economics, Management and Trade*, 20(4), 1-22.

Okun, I. (2015). Does public capital crowd out private capital? Journal of monetary Economics, 24(2), 171–188.

Onaolapo, A. R. (2015). Analysis of the determinants of domestic private savings in Nigeria. *International Journal of Business and Social Science*, 6 (11).

Onwumere, H. (2019). Financial Intermediation in the Pre-Consolidated Banking Sector in Nigeria. Policy Research Working Paper Series, 4267. World Bank.

Osuala, J. (2018). Analysis of the determinants of domestic private savings in Nigeria. *International Journal of Business and Social Science*, 6(11), 23 – 67.

Ostadi, S. & Sarlak, P. (2015). The Political Economy of Institutions, Stability and Investment: A Simultaneous Equation Approach in an Emerging Economy. The Case of South Africa. Journal of Development Studies, 44(7), 1056–1079. doi:10.1080/00220380802150854.

Osuagwu, S. (1999). Financial intermediation indicators on economic growth, The Nigerian experience (1990 - 2018). Electronic copy available at: https://ssrn.com/abstract=3619564

Stiglitz, O & Weiss, C. (1981). Volatility and Investment: Interpreting Evidence from Developing Countries. Economica, 66(262), 1157–1179. doi:10.1111/1468-0335.00163.

Sunday,R. (2015). Microeconometric Models of Investment and Employment. Handbook of econometrics, 6, 4417 - 4498.

Wai, K. (2019). Impact of deposit interest rate on savings mobilization in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* 6(3), 146-156.