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ABOUT THE JOURNAL

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HEALTH EFFECTS OF TRADE IN NIGERIA

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Abstract
In spite of different policies towards trade openness, improvements in population health in Nigeria have been relatively poor. When country open up to trade, developing economies serves as a center for unhealthy goods. Therefore, this study examines the effects of trade openness on health in Nigeria. The study employed Auto-Regressive Distributed Lag approach to estimate the effects of trade on infant mortality, adult mortality and life expectancy. The result shows that increase trade openness, real gross domestic product and real exchange rate decrease infant mortality in the short-run and the long-run while increase flow of foreign direct investment increase infant mortality. Also, increase next export reduces infant mortality. Trade openness, real gross domestic product and real exchange rate improves adult mortality rate while changes in other variables adversely affects adult mortality. In addition, trade openness and net export improve life expectancy but reduces life expectancy. It was concluded that trade openness should remain a key goal for economic purposes and for improving human health in Nigeria.

Keywords: Trade openness, life expectancy, adult mortality, infant mortality

Introduction

The high and increasing global trade in the last fifty years has generated discourse on the impact of international trade on health. Foreign trade has influenced the structure and the nature of the economy and the extent of the effects of the economy on health in developing countries, Nigeria, inclusive. The fact that trade has extensive direct and indirect effects on the health of the people, makes it a central health issue that the global health community cannot disregard (MacDonald & Horton, 2009). Trade between economies is a powerful engine for economic growth and according to the Lancet (2009), the likely adverse consequences of trade on health necessitate more attention on the connection between trade and health. Economists generally assume that economic openness is essential for good health. The foundation of this argument ranges from the classical trade theory to the new trade theory that suggest correlation between trade openness and living standards (Levine & Rothman, 2006). The connection suggests that better health is an important component of human and economic development and facilitates the means to move above the poverty line (Welander, Lyttkens & Nilsson, 2014). However, critics of globalization have argued that increased international trade may be harmful to developing countries and highlights the unfavourable distributional consequences to the developing countries like Nigeria.

Economic theory suggests that trade openness might directly affect economic growth through income, consumption, and investment levels (Frankel & Romer 1999; Harrison 1996) as well as indirectly affect levels of wealth, inequality, poverty, and health. Specifically, trade openness can impacted individual health through at least two major mechanisms. First, trade with more developed countries might yield knowledge externalities, and generate positive spillover effect on the treatment of diseases by granting access to higher-quality medical and pharmaceutical products (Coe & Helpman, 1995). This can creates an environment conductive to enhanced health outcomes through availability of new ideas and information and implementation of projects, rules, and norms (Sandholtz & Gray 2003; Rodrik et.al., 2004). Secondly, trade might increase product quality, stimulate cooperation and reduce prices (Rodrik et.al., 2004). However, literature provided conflicting evidence on the effects of trade on health. For instance, Bussmann (2009), and Bergh and Nilsson (2010) pointed to the positive effects of trade openness on health. The authors' argued that trade seem to reduce infant mortality and increase life expectancy in developing countries and serves as positive externalities for the societal well-being. But Antweiler et.al., (2001) submitted that trade can generate dangerous treatments, encourage disease diffusion and cause deterioration in environmental quality. The authors' argued that excessive industrialization due to increased trade openness in developing countries might raise pollution and uncontrolled urbanization and reduce quality of life. More so, trade can increase corruption that may negatively affect the efficiency of health systems (Gatti, 2004).

Nigeria embarked on increased trade openness as a key policy tool of structural adjustment programme (SAP) introduced in 1986. But improvements in Nigerians health has been slow and relatively poor when compared with other regions of the world with the same policy pattern (Sulaiman, Migiro & Aluko, 2014). The question remains whether external trade can improve population health or not. To this effect, this study examined the effect of trade openness on health in Nigeria. There are few empirical studies that evaluated the effect of trade on population health. For Instance, Owen & Wu (2007), in a panel data analysis of 219 countries based on a 5-year intervals for the period 1960-1995, find that increased trade openness is associated with lower infant mortality rates and higher life expectancy, especially in developing countries. Also, Stevens et.al., (2013) confirm this finding based on a 5-year data for the period 1970-2005. These empirical findings show that free trade is correlated with better health and this becomes clearer when dealing with low-income countries. However, both trade and health are dynamic phenomena that vary across countries and over time. It is therefore an open question whether these results hold when attention is centered on time-series dimension alone, and this is an area that this study attempts to examine for Nigeria. The rest of the study is organised into four sections. Section 2 entails the literature review while section three contains theoretical framework and methodology. Section 4 comprises data analysis and discussion of results and section 5 concludes.

Literature Review

Trade policy is a government commercial policy guiding countries external trade. Commercial policy covered issues affecting international transactions. Trade policy is sometimes between the extremes of free trade (no restrictions on trade) and protectionism (high restrictions to protect local producers). Trade agreement, on the other hand, is a varied taxes, tariff and trade treaty between two or more countries on terms that assist them to trade with each other. Trade agreement can be classify into regional, bilateral and preferential trade agreement. The regional trade agreement occurred for increasing regional trade which may becomes bilateral or multilateral trade deals. The more relatively local area of regional trade agreement are useful in resolving trade issues as well without causing gridlock in other trade agreements. Critics of regional trade agreement argued that they are hindrance to the negotiation of trade because they can be lopsided or unfairly beneficial to one side over the other sides, particularly if some of the participants are underdeveloped nations while bilateral trade agreement is when two countries enter into a trade agreement, giving one another special deals and favourable treatment in the arrangements. These priviledges can include lowering tariffs on each other's goods and services. The United States has signed such treaties as the North American Free Trade Agreement in 1994 as well as with Israel in the 1980s. Literature argued that these increase competition and offers larger markets for business enterprises.

Critics of bilateral agreements claim that a larger nation, such as the United States, can use these agreements to unfairly push smaller states into much harsher work loads than the World Trade Organization already requires. Lastly, preferential trade agreement are trade deals that involve nations making deals with specific countries that can aid the interests of one another as opposed to the non-discriminatory deals that are pushed by the World Trade Organization. Nations have been increasingly preferring such deals since the 1950s as they are quicker to show gains for the parties involved in the agreements. A common argument is that it allows businesses to open up markets that would otherwise be considered closed and therefore falls into the free trade idea that most countries will encourage. Countries that have similar levels of GDP and a higher scope in their economies as well as their relative position to one another and the rest of the world are more likely to have preferential trade agreements. Preferential trade agreement can also be applied to regional areas with unions such as NAFTA, AfCTA, the European Union, and ASEAN being examples of regional preferential trade agreement. Those who opposed preferential trade agreement argued that these deals have increased the importance of where a product is made so that tariffs can be applied accordingly. The certification of a product's origin also unfairly holds back smaller countries that have less resources to spend. Others argue that preferential trade agreement can hinder negotiations of trade disputes and places emphasis on which country has more power.

To link trade policy and health, there is a need to consider the types of trade policy. There are free trade and protectionism. An international trade that takes place without barriers such as tariff, quotas and foreign exchange controls is a free trade. Thus, free trade allows goods and services to flow between countries freely. In other words, free trade implies absence of governmental intervention on international exchange among countries of the world. Free trade enables countries to obtain goods at a cheaper price, thus, leads to higher production, higher consumption and higher international prosperity. Smith and Blouin (2015) argued that increased trade improves health directly and indirectly. While the direct impact of trade on health mediates through the provision of health related goods and services from international markets, the indirect impact of trade on health mediates as a consequence of competitive prices. For example, the pressure on public funds is alleviated through the purchasing of less expensive foreign goods and service which in turn can facilitate the availability of public funds for health related services. As a result of increase in free trade, human's health status also increases. However, an important question is that what forces the government to protect trade? What are the chief arguments for protection? Can protection deliver all the goods that a nation needs? This question leads to protectionism, which mean restricted trade. Free trade eliminates tariff while protective trade imposes tariff. When tariffs, duties and quotas are imposed to restrict the imports inflow then we have protected trade. Government imposes tariffs or imposes quota on the volume of goods to be imported. Sometimes, export taxes and subsidies are given to domestic goods for protection against foreign competition.

Owen and Wu, (2002) examined the relationship between a country's openness to international trade and health employing a fixed effect approach with data spanning 1960 to 1995. The results indicate a significant relationship between international trade openness and health status for both rich and poor countries with poor countries benefiting more. Thus, poor countries stand a better chance to gain more in terms of trade openness and health. Specifically, their results show a significant but negative relationship between trade openness and infant mortality. They also deduced two major channels that explain the positive relationship between openness and health outcomes. One of the reasons that trade and health are positively correlated is because "good" government provides policies that are conducive to both trade and better health outcomes. Specifically, they found evidence that domestic policy that facilitates trade is associated with better health outcomes. Even after controlling for the policy environment, they still find a positive association between volume of trade and health outcomes, suggesting a second channel with a more causal link between trade and health that works through knowledge spillovers. Similar findings were reported by Razmi (2012) on the effect of trade openness on human development. From the findings based on the fixed effect model, there exists a significant strong positive relationship between trade openness and life expectancy (as one of the index of human development). Trade openness was found to have a negative influence on infant mortality. Thus, a reduction in both tariff and non-tariff barriers to enhance imports and exports to improve human development was recommended.

Levine and Rothman, (2006) examined the trade influence on child health in a panel data analysis of 134 developed and developing countries. Using the two-stage least square regression (2SLS), life expectancy was found to be significant at 1% level. The study showed that a 20 percent increase in trade as a share of gross domestic product (GDP), results in about 2 log point increase in life expectancy (almost half year life longer). This was found to be significant at 1% confidence level. Given, the coefficient of child mortality been -0.63, it was concluded that increased trade would lead to about more than half a year reduction in infant mortality. Levine and Rothman (2006) just like Razmi (2012) support free trade but oppose trade restrictions as policies on trade restriction can negatively influence imports of both essential goods and services. Levine and Rothman (2006) noted that imposing trade restriction will adversely affects the poor nations leading to lower investment in health care. Also, Olper et.al., (2014) examined the effect of trade liberalization on health outcomes in Africa. The authors' observed that increase in child mortality rate in Africa and specifically South Africa was due to the widespread HIV/AIDS. In the analysis of the effect of trade liberalization on health outcomes, exploiting 40 reform episodes during the last half-century, the study found that the effects of trade liberalization on child health is heterogeneous, both in terms of the direction and magnitude. In the half of the investigated case, the reforms had a positive impact on the reduction of children mortality, while in the other half showed a strong deterioration of child mortality after trade liberalization. This was attributed to different countries conditions. They also showed that trade reforms that happened in well-established democracies seem to work better both in terms of the magnitude of the estimated effect and their significant level. These findings support the idea that when trade reform improves the conditions of agriculture, a sector where many poor are employed, the effect of trade reform on child mortality appears to be more positive.

Research Methodology

From the theoretical model, the nexus between the population health status and trade openness can be stated as:

$$H = f(TO) \tag{1}$$

Using infant mortality, adult mortality and life expectancy as indices of health, the above equation can be explicitly stated as:

$$IM_t = \beta_0 + \beta_1 TO_t + \beta_2 RGDP_t + \beta_3 NEXP_t + \beta_4 FDI_t + \beta_5 RER_t + \varepsilon_t \tag{2}$$

$$AM_t = \beta_0 + \beta_1 TO_t + \beta_2 RGDP_t + \beta_3 NEXP_t + \beta_4 FDI_t + \beta_5 RER_t + \varepsilon_t \tag{3}$$

$$LE_t = \beta_0 + \beta_1 TO_t + \beta_2 RGDP_t + \beta_3 NEXP_t + \beta_4 FDI_t + \beta_5 RER_t + \varepsilon_t \tag{4}$$

In equations (2), (3) and (4), $IM_{t \text{ is i}}$nfant mortality at time t, AM_t is adult mortality at time t, LE_t is average life expectancy at time t, TO is trade Openness defined as (exports+imports)/GDP, RGDP is real gross domestic product, NEXP is net export defined as (export–import). FDI is foreign direct investment inflow, RER is exchange rate. β_0 is the intercept, β_1-β_5, are estimated parameters and ε_t is the stochastic error term.

The a priori expectations are:

$$\frac{\delta IM}{\delta TO} < 0,\ \frac{\delta IM}{\delta RGDP} < 0,\ \frac{\delta IM}{\delta NEXP} < 0, \frac{\delta IM}{\delta FDI} < 0, \frac{\delta IM}{\delta EX} < 0$$

$$\frac{\delta AM}{\delta TO} < 0, \frac{\delta AM}{\delta RGDP} < 0, \frac{\delta AM}{\delta NEXP} < 0, \frac{\delta AM}{\delta FDI} < 0, \frac{\delta AM}{\delta ER} < 0$$

$$\frac{\delta LE}{\delta TO} > 0, \frac{\delta LE}{\delta RGDP} > 0, \frac{\delta LE}{\delta NEXP} > 0, \frac{\delta LE}{\delta FDI} > 0, \frac{\delta LE}{\delta ER} > 0$$

Estimation Techniques

The data employed in the analysis is a time series data that covers a period of 36 (1986-2022) years. A unit root test was employed to determine the level of stationarity of the data. The results of the unit root test was used to guide the choice of estimation method. The Augmented Dickey-Fuller (ADF) test was employed for the unit root tests. The general ADF equation for unit root is given as:

$$\Delta Y_t = \beta_1 + \beta_{2t} + \rho Y_{t-1} + \Sigma\delta\Delta Y_{t-1} + \mu_t \qquad (5)$$

Where Y_t is the level of the variable under consideration, t is the time trend, β_1 denotes the constant term and μ_t is the error term assumed to be normally distributed with zero mean and constant variance. The optimal lag length is chosen using Akaike Information Criterion (AIC). The unit root tests indicate a different order of integration of the variables, thus, the Auto-regressive Distributed Lag (ARDL) method was used for the estimation. The ARDL representation of the model is given thus:

$$\Delta IM_t = \beta_0 + \Sigma^n_{i=1} \beta_1 \Delta TO_{t-1} + \Sigma^n_{i=1} \beta_2 \Delta RGDP_{t-1} + \Sigma^n_{i=1} \beta_3 \Delta NEXP_{t-1} + + \Sigma^n_{i=1} \beta_4 \Delta FDI_{t-1} + \Sigma^n_{i=1} \beta_5 \Delta RER_{t-1} + \Sigma^n_{i=1} \beta_6 \Delta IM_{t-1} + \beta_7 \Delta TO_{t-1} + \beta_8 \Delta RGDP_{t-1} + \beta_9 \Delta NEXP_{t-1} + \beta_{10} \Delta FDI_{t-1} + \beta_{11} \Delta RER_{t-1} + \mu_t \qquad (6)$$

$$\Delta AM_t = \beta_0 + \Sigma^n_{i=1} \beta_1 \Delta TO_{t-1} + \Sigma^n_{i=1} \beta_2 \Delta RGDP_{t-1} + \Sigma^n_{i=1} \beta_3 \Delta NEXP_{t-1} + + \Sigma^n_{i=1} \beta_4 \Delta FDI_{t-1} + \Sigma^n_{i=1} \beta_5 \Delta RER_{t-1} + \Sigma^n_{i=1} \beta_6 \Delta AM_{t-1} + \beta_7 \Delta TO_{t-1} + \beta_8 \Delta RGDP_{t-1} + \beta_9 \Delta NEXP_{t-1} + \beta_{10} \Delta FDI_{t-1} + \beta_{11} \Delta RER_{t-1} + \mu_t \qquad (7)$$

$$\Delta LE_t = \beta_0 + \Sigma^n_{i=1} \beta_1 \Delta TO_{t-1} + \Sigma^n_{i=1} \beta_2 \Delta RGDP_{t-1} + \Sigma^n_{i=1} \beta_3 \Delta NEXP_{t-1} + + \Sigma^n_{i=1} \beta_4 \Delta FDI_{t-1} + \Sigma^n_{i=1} \beta_5 \Delta RER_{t-1} + \Sigma^n_{i=1} \beta_6 \Delta LE_{t-1} + \beta_7 \Delta TO_{t-1} + \beta_8 \Delta RGDP_{t-1} + \beta_9 \Delta NEXP_{t-1} + \beta_{10} \Delta FDI_{t-1} + \beta_{11} \Delta RER_{t-1} + \mu_t \qquad (8)$$

The development of error correction model (ECM) is use to address the problem of co-integration in the time series analysis. The ECM shows the speed of adjustment from the short-run equilibrium to a long-run equilibrium in a time series analysis. With the presence of co-integration in a time series dataset, the next step will be to construct an error correction model to check the dynamic relationship between the short-run and long-run. The construction of the ECM shows the speed of adjustment from the departure from long-run equilibrium. The ECM coefficient must be negative and significant for the errors to be corrected. The greater the co-efficient of the parameter, the higher the speed of a departure from long-run equilibrium. The ECM equation is written as:

$$\Delta Y_t = \alpha_0 + b_1 \Delta X_t - \text{л}\hat{u}_{t-1} + Y_t \qquad (9)$$

Finally, the Granger Causality test is used to examine the direction of influence of the variables. This test enables us to determine the direction of causality between health and trade openness. The rule states that if the probability value is between 0 and 0.05 there is a casual relationship.

Source of Data and Measurement of Variables

The data for the study was obtained from World development indicator (World Bank, 2023). The data span from 1986 to 2022. The variables are trade openness, real gross domestic product, net export, foreign direct investment, real exchange rate, life expectancy, infant mortality and adult mortality. Table I below shows the variables and their measurement:

Table 1: Measurement of Variables

Variables	Description	Measurement	Source
IM	Infant Mortality	Per 1,000 live births	WDI 2023
AM	Adult Mortality	Per 1,000 adults	WDI 2023
LE	Life Expectancy	Life Expectancy	WDI 2023
TO	Trade Openness	% of GDP	WDI 2023
RGDP	Real Gross Domestic Product	Annual %	WDI 2023
NEXP	Net Export	% of GDP	WDI 2023
FDI	Foreign Direct Investment Inflow	% of GDP	WDI 2023
RER	Real Exchange Rate	Real Exchange Rate	WDI 2023

Source: World Bank, 2023

Results and Discussion

Table 2 shows the descriptive statistics of the variables used in the study. From the results, the mean values of infant mortality(*IM*), adult mortality*(AM)*, life expectancy*(LE)*, trade openness*(TO)*, real gross domestic product *(RGDP)*, net-export *(NEXP)*, foreign direct investment inflow*(FDI)* and real exchange rate (*RER)*are 102.1, -1.4, 0.3, 35.2, 4.4, 6.6, 1.7 and 110.1. The maximum values are 124.4, 2.6, 0.6, 53.3, 15.3, 23.1, 5.8 and 272.9 while the minimum values are 74.2, -4.8, -0.1, 9.1, -2.0, -5.6, 0.2, and 49.7. The values of the standard deviation are from the sample means are 18.6, 3.0, 0.2, 10.3 3.9, 6.2, 1.3 and 55.5.

Table 2: Descriptive Statistics of the Variable Used

	IM	AM	LE	TO	RGDP	NEXP	FDI	RER
Mean	102.05	-1.37	0.26	35.23	4.38	6.61	1.69	110.05
Maximum	124.40	2.62	0.56	53.28	15.32	23.05	5.79	272.92
Minimum	74.20	-4.81	-0.06	9.14	-2.04	-5.58	0.19	49.74
Std. Dev.	18.59	3.02	0.23	10.31	3.88	6.209	1.26	55.47
Skewness	-0.07	0.20	-0.20	-0.43	0.49	0.44	1.64	1.81
Kurtosis	1.38	1.28	1.35	2.93	3.38	3.39	5.61	5.45
Jarque-Bera	3.74	4.28	3.96	1.06	1.59	1.29	24.97	26.96
Probability	0.15	0.12	0.14	0.59	0.45	0.52	0.00	0.00
Sum	3469.60	-45.23	8.59	1197.95	148.9	224.70	57.58	3741.84
Obs	36	36	36	36	36	36	36	36

Source:Authors' Computation, 2024

Unit Root Test Results

Table 3 shows the Augmented Dickey-Fuller (ADF) unit root test results for the order of integration of the variables. The unit root test results presented in Table 3 shows that *IM, AM* and *LE* are stationary at first difference, hence their I(1) variables. On the other hand, *TO, RGDP, NEXP, FDI* and *RER* are stationary at level, thus, their I(0) variables.

Table 3: Unit Root Test Result

Viables	**Level ADF Test Statistic**	**First Difference ADF Test Statistic**	**Decision**
IM	-2.33	-7.98**	1(1)
AM	-1.27	-5.51**	1(1)
LE	-3.80**	-3.98	1(0)
TO	-4.68**	-7.73	1(0)
RGDP	-3.88**	-10.16	1(0)
NEXP	-3.83**	-8.51	1(0)
FDI	-3.93**	-7.42	1(0)
RER	-3.44**	-6.09	1(0)
Variables	**Level ADF Test Statistic**	**First Difference ADF Test Statistic**	**Decision**
IM	-2.33	-7.98**	1(1)
AM	-1.27	-5.51**	1(1)
LE	-3.80**	-3.98	1(0)
TO	-4.68**	-7.73	1(0)
RGDP	-3.88**	-10.16	1(0)
NEXP	-3.83**	-8.51	1(0)
FDI	-3.93**	-7.42	1(0)
RER	-3.44**	-6.09	1(0)

Source: Author's Computation

Long Run Bound Test

The unit root test results implies that Autoregressive Distributed Lag Model is the appropriate estimation technique for the models. To determine the existence of a long-run relationship between trade, life expectancy, infant mortality and adult mortality in Nigeria, the long-run Bound Test was conducted. The results of the long-run Bound Test in Table 4 show the existence of a long-run relationship since the value of the *F-statistic* is greater than the *Pesaran critical-value* at 5% level.

Table 4:Bounds Test Estimation between Trade, Infant Mortality, Adult Mortality and Life Expectancy

Trade and Infant Mortality **Panel A**		
Test Statistic	**Values**	**K**
F-Statistic	6.689079	5
Panel B	**Pesaran *et. al.* (2001) critical values**	
Critical Value Bound	I(0)	I(1)
(at 5% Significance Level)	2.39	3.38
Trade and Adult Mortality **Panel A**		
Test Statistic	**Values**	**K**
F-Statistic	7.304153	5
Panel B	**Pesaran *et. al.* (2001) critical values**	

Critical Value Bound	I(0)	I(1)
(at 5% Significance Level)	2.39	3.38
Trade and Life Expectancy **Panel A**		
F-Statistic	2.406514	5
Panel B	**Pesaran *et al.* (2001) critical values**	
Critical Value Bound	I(0)	I(1)
(at 5% Significance Level)	2.39	3.38

Source: Author's Computation (2024)

Effects of Trade on Life Expectancy, Infant Mortality and Adult Mortality in Nigeria

The Auto Regressive Distributed Lag (ARDL) method was used to estimate the long-run and the short-run effects of trade on infant mortality, adult mortality and life expectancy. The estimation method provided for the adequate lag structure. The Akaike Information Criteria (AIC) was used to determine the optimal lag in the analysis. The selected lag was 2. The ARDL results for the long-run and the short-run periods are shown in Table 5 below. From the results, trade openness *(TO)* is inversely related to infant mortality in the short-run. It shows that a 1% increase in trade openness will lead to a 36% reduction in infant mortality rate. The real gross domestic product *(RGDP)* without lag and with a year lag has a non-significant inverse effect on infant mortality in the short-run. However, at lag 2, the coefficient is inversely and statistically significant. Hence, an increase in *RGDP* will reduce infant mortality. The net export *(NEXP)* without lag and with a year lag has negative and non-significant nexus with infant mortality. The coefficient of foreign direct investment inflow *(FDI)* is positive but non-significant in the short-run. The real exchange rate *(RER)* has a non-significant indirect nexus with infant mortality in the short-run. A 1% increase in real exchange rate causes a 0.06% decrease in infant mortality rate. Thus, the effects of trade on infant mortality is mixed, though majorly non-significant. The coefficient of determination R^2 and the adjusted R^2 are 0.55 and 0.29 respectively in the short-run model. Thus, about 55% of the variation in infant mortality rate are explained by *TO*, *RGDP*, *NEXP*, *FDI* and *RER* in the short-run. The overall regression F-Test is significant at 10% level. The *Durbin-Watson* statistic for the short-run 2.6, showing evidence of no auto-correlation. The *Breusch-Godfrey* Serial Correlation LM test show absence of serial correlation at 5% significance level. The long-run results shows that trade openness *(TO)* has a significant inverse nexus with infant mortality at 5% significance level. Thus, a 1% increase in trade openness will cause a 48% decrease in the infant mortality. The coefficient of *RGDP* with a year and 2-year lag are negatively related infant mortality. The *NEXP* and *RER* have negative non-significant nexus with infant mortality in the long-run. However, with a 2-year lag, *RER* has a significant positive link with infant mortality at a 10% significant level. The coefficient of determination R^2 and the adjusted R^2 are 0.82 and 0.69 respectively in the long-run model. Hence, about 69% of the variation in infant mortality are explained by trade openness in the long-run. The *Durbin-Watson* statistic in the long-run is 2.86 showing evidence of no auto-correlation. Also, the *Breusch-Godfrey* Serial Correlation LM result shows absence of serial correlation.

Table 5: Short-run and Long-run ARDL Estimate of the Effects of Trade on Health in Nigeria

Variables	Trade and Infant Mortality		Trade and Adult Mortality		Trade and Life Expectancy	
	Short-run Dependent Variable:D(IM)	**Long-run** Dependent Variable: IM	**Short-run** Dependent Variable: D(AM)	**Long-run** Dependent Variable: AM	**Short-run** Dependent Variable: D(LE)	**Long-run** Dependent Variable: LE
	Coefficient	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**
D(IM(-1))	-0.36 (0.22)	-0.03(0.18)	-	-	-	-
D(AM(-1))	-	-	0.02(0.168)	-	-	-
D(LE(-1))	-	-	-	-	1.02(0.17)*	-
D(LE(-2))	-	-	-	-	-0.25(0.18)	-
IM(-2)	-	0.77(0.19)*	-	-	-	-
AM(-1)	-	-	-	0.35(0.21)	-	-
AM(-2)	-	-	-	0.32(0.18)***	-	-
LE(-1)	-	-	-	-	-	1.31(0.11)*
LE(-2)	-	-	-	-	-	0.49(0.11)*
D(TO)	0.12 (0.16)	-0.48(0.17)**	0.18(1.188)	-	0.01(0.01)	-
D(TO(-1))	-	-	1.92(1.14)	-	0.01(0.01)***	-
TO	-	-	-	0.46(1.01)	-	0.01(0.03)**
TO(-1)	-	-0.23(0.14)	-	-	-	0.01(0.04)
TO(-2)	-	-0.19(0.10)**	-	-	-	-0.03(0.03)
D(RGDP)	-0.02 (0.01)	-	0.01(0.07)	-	-0.01(0.03)**	-
D(RGDP(-1))	-0.01(0.01)	-	-0.23(0.08)*	-	0.01(0.04)	-
D(RGDP(-2))	-0.02(0.01)**	-	-0.20(0.06)*	-	-0.04(0.02)	-
RGDP	-	0.01(0.01)	-	-0.02(0.07)	-	-0.01(0.02)*
RGDP(-1)	-	-0.01(0.01)	-	-0.27(0.07)*	-	0.07(0.02)*
RGDP(-2)	-	-0.02(0.01)**	-	-0.16(0.08)***	-	-
D(NEXP)	-0.01 (0.01)	-	0.01(0.04)	-	-0.01(0.02)**	-
D(NEXP(-1))	-0.04 (0.01)	-	-0.02(0.04)	-	0.01(0.03)	-
D(NEXP(-2))	0.01 (0.01)	-	0.08(0.03)**	-	-0.03(0.07)**	-
NEXP	-	-0.01(0.01)***	-	0.02(0.04)	-	0.06(0.01)*
NEXP(-1)	-	-	-	0.06(0.04)	-	0.03(0.02)***
NEXP(-2)	-	-	-	0.10(0.04)**	-	0.04(0.01)**

D(FDI)	0.01 (0.02)	-	0.26(0.17)	-	0.03(0.05)	-
D(FDI(-1))	-	-	-	-	0.09(0.02)	-
FDI	-	0.01(0.03)	-	0.46(0.23)***	-	0.08(0.07)
FDI(-1)	-	-	-	-	-	0.09(0.07)**
D(RER)	-0.07(0.10)	-	0.32(0.75)	-	0.03(0.03)	-
D(RER(-1))	-0.19 (0.12)	-	-	-	-0.01(0.04)**	-
D(RER(-2))	-	-	-	-	0.01(0.01)***	-
RER	-	-0.11(0.11)	-	-0.45(0.82)	-	0.02(0.03)
RER(-1)	-	-0.17(0.13)	-	0.60(1.05)	-	-0.92(0.03)**
RER(-2)	-	0.17(0.09)***	-	1.08(0.81)	-	0.01(0.03)*
C	0.01(0.03)	-1.10(0.61)***	-0.15(0.22)	-7.93(5.39)	-0.03(0.01)	-0.07(0.02)*
F-statistic	2.14	6.459	2.44	17.49	4.19	24.67
Prob(F-statistic)	0.07	0.000	0.04	0.00	0.00	0.00
R-squared	0.55	0.82	0.58	0.93	0.81	0.96
Adj R-squared	0.29	0.69	0.35	0.87	0.62	0.92
Durbin-Wat Stat	2.56	2.86	1.93	1.91	2.61	2.40
Breusch-Godfrey Serial Correlation LM Prob(F-statistic)	0.06 0.94	0.35 0.71	0.02 0.98	3.91 0.04	2.61 0.11	0.91 0.42

***, **, ***Significant at 1%, 5% and 10% level**
***Standard Errors are in parenthesis**
Source: Author's Computation

On the effects of trade openness *(TO)* on adult mortality, when other variables are held constant, adult mortality rate *(AM)* reduces by 0.15% in the short-run. Trade openness (TO) without lag and a -year have positive non-significant effects on adult mortality in the short-run. The real gross domestic product *(RGDP)* without lag has a positive non-significant effect on adult mortality in the short-run. However, with a-year lag and 2-year lag, *RGDP* has negative significant effects on adult mortality rate. The coefficient of net export *(NEXP)* with a 2-year *has* a significant positive effect on adult mortality. According to the results, a 1% increase in net export will cause a 0.07% increase in adult mortality rate. Foreign direct investment inflow *(FDI)* and real exchange rate *(RER)* have a non-significant positive effect on adult mortality rate in the short-run. The coefficient of determination R^2 and the adjusted R^2 are 0.58 and 0.34 respectively in the short-run model. Hence, about 34% of the variation in adult mortality rate are explained by trade openness in the short-run. The *F-Test* is significant at 5% level in the short run model. The *Durbin-Watson* statistic for the short-run and the long-run is 1.9, showing no evidence of auto-correlation.

The *Breusch-Godfrey* Serial Correlation LM test also show absence of serial correlation. In the long-run, holding other variables constant, adult mortality rate will reduce by about 7.9%. but this is not significant. Trade openness *(TO)* shows a positive non-significant effect on adult mortality in the long-run. The real gross domestic product rate *(RGDP)* without lag, with a-year and a 2-year lag has a negative effects on adult mortality rate in the long run. Therefore, an increase real gross domestic product rate will reduce adult mortality in the long-run. The coefficient of net export *(NEXP)* without lag, with a-year lag and a 2-year lag has a positive effects on adult mortality in the long-run. The foreign direct investment inflow *(FDI)* has a positive significant effect on adult mortality rate in the long-run at significance 10% level. The coefficient of real exchange rate *(RER)* has a negative non-significant effect on adult mortality rate in the long-run. However, with a-year and 2-year lags, a 1% increase in real exchange rate will increase adult mortality rate in the long-run. The coefficient of determination R^2 and the adjusted R^2 are 0.92 and 0.87 in the long-run. Thus, about 87% of the variation in adult mortality rate are explained by trade openness in the long-run. The overall regression *F-Test* is significant at 5%. The *Durbin-Watson* statistic in the long-run is 1.91, implying absence of auto-correlation in the model. The *Breusch-Godfrey* Serial Correlation LM test also show absence of serial correlation in the model.

The nexus between trade openness *(TO)* and life expectancy also shows some interesting results. From Table 5, holding other variables constant, life expectancy reduces by 0.03% in the short-run. The coefficient of trade openness (TO) without lag and a-year lag have positive effects on life expectancy in the short-run. The real gross domestic product rate *(RGDP)* without lag and with a 2-year lag has a negative effects on life expectancy rate in the short-run. However, with a year-lag, the *RGDP* impact life expectancy positively. Net export *(NEXP)* without lag has a significant negative effect on life expectancy in the short-run. However, with a year-lag, net export has a positive effect on life expectancy though not significant. Foreign direct investment inflow *(FDI)* without lag, at a-year lag has a positive effect on life expectancy in the short-run. The real exchange rate *(RER)* has a positive non-significant effect on life expectancy in the short-run. The coefficient of determination R^2 and the adjusted R^2 are 0.80 and 0.61 in the short-run. Thus about 61% of the variation in life expectancy rate are explained by trade openness in the short-run. The *F-Test* is significant at 5% level implying overall significant of the model. The *Durbin-Watson* statistic is about 2.6 indicating absence of auto-correlation and the Breusch-Godfrey Serial Correlation LM test shows absence of serial correlation in the model.

In the long-run, trade openness *(TO)* has a positive statistically significant effect on life expectancy. At a-year and 2-year lags, trade openness has positive effects on life expectancy in the long-run. The coefficient of real gross domestic product rate *(RGDP)* without lag shows that it has a negative but a statistically significant effect on life expectancy rate in the long run at 1% level of significance. The real gross domestic product without lag and with a-year lag has positive significant effects on life expectancy. The coefficient of net export *(NEXP)* without lag, with a-year and 2-year lags shows that it has positive statistically significant effects on life expectancy in the long-run. Foreign direct investment inflow *(FDI)* with a-year lag has a significant positive effect on life expectancy rate. The coefficient of real exchange rate (RER) with a-year lag shows a positive statistically non-significant effect on life expectancy in the long run and a positive significant effect on life expectancy with a 2-year lag. The coefficient of determination R^2 and the adjusted R^2 are 0.95 and 0.91 in the long-run implying that about 91% of the variations in life expectancy rate are explained by trade openness in the long-run. The overall regression *F-Test* is significant at 5% significance level in the long run model and the *Durbin-Watson* statistic is about 2.40. The *Breusch-Godfrey* Serial Correlation LM test shows no serial correlation in the model. These findings were consistent with the findings from the existing literature. For instance, Owen and Wu (2007), Ramzi (2012) and Levine and Rothman (2006) found that increased trade openness improves population health. However, Olayiwola, Adedokun and Oloruntuyi (2019) found that improves population health will increase foreign direct investment inflow.

Figures 1, 2 and 3 shows the cumulative sum of the recursive test for stability of the variables in the model. The figures show that the ARDL estimation models in Table 5 are stable implying that the results are significant.

Figure 1: Plot of Cumulative Sum of Recursive Residuals of the model

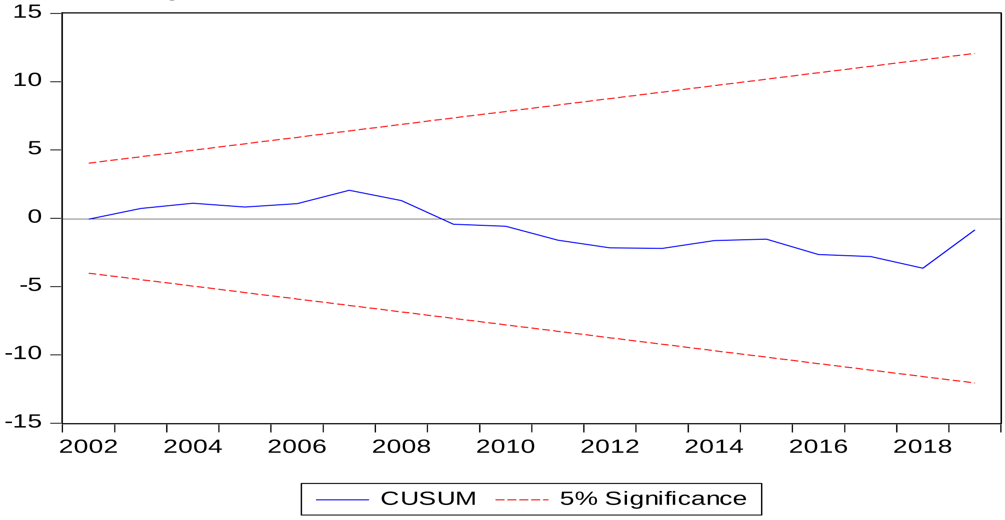


Figure 2: Plot of Cumulative Sum of Recursive Residuals of the model

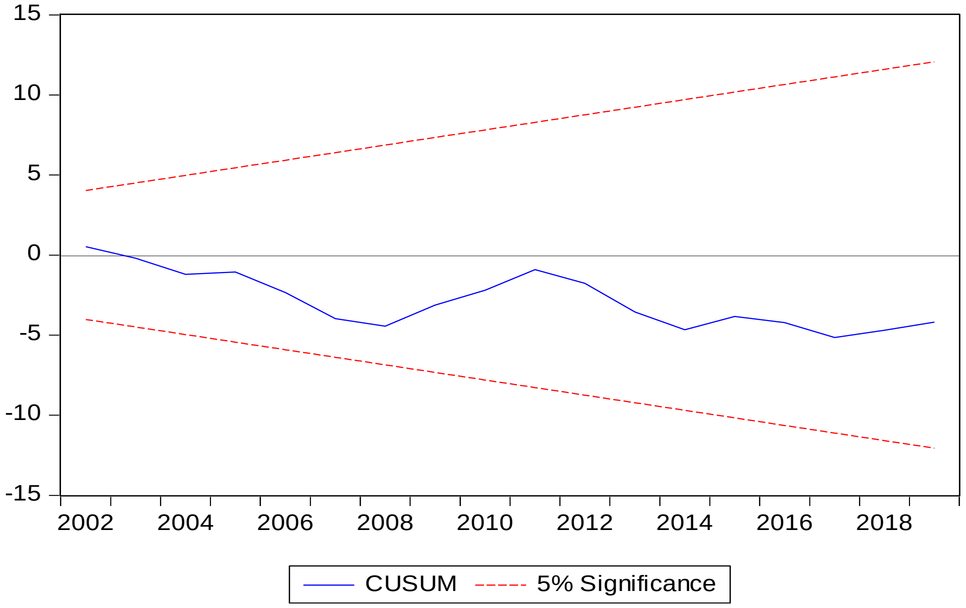


Figure 3: Plot of Cumulative Sum of Recursive Residuals of the model

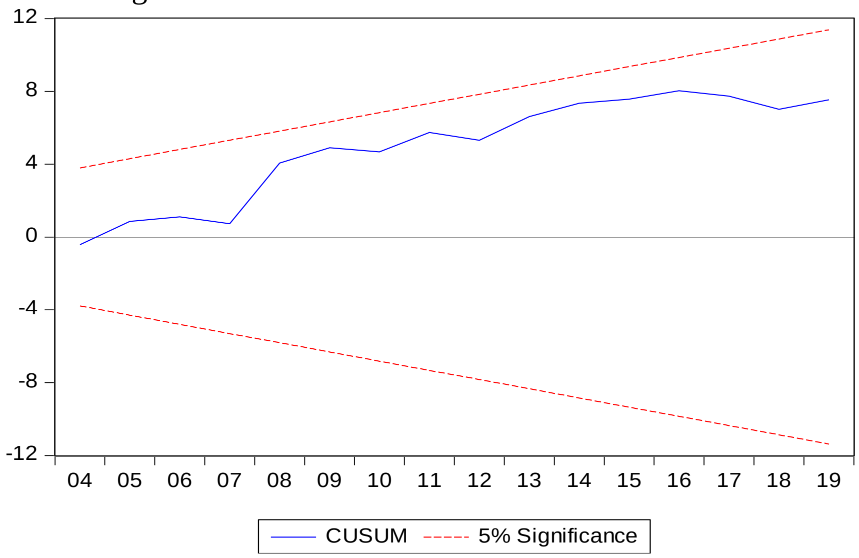


Table 6: Result of the Restricted ECM Estimate between Trade and Health in Nigeria

Variables	**Dependent Variable: IM**	**Dependent Variable: AM**	**Dependent Variable: LE**
Method: ARDL	**Coefficient**	**Coefficient**	**Coefficient**
D(RGDP, 2)	0.02 (0.05)	0.01(0.04)	-0.09 (0.00)
D(RGDP(-1), 2)	-0.02 (0.01)	0.20 (0.05)	0.04 (0.02)
D(TO, 2)	-	0.18 (0.68)	0.01 (0.03)
D(LE(-1), 2)	-	-	0.25 (0.11)
D(NEXP, 2)	-0.01 (0.02)	0.01 (0.03)	-0.05 (0.01)
D(NEXP(-1), 2)	-0.01 (0.01)	-0.07 (0.02)	0.05 (0.01)
D(RER, 2)	-0.07 (0.07)	-	0.03 (0.02)
D(RER(-1), 2)	-	-	-0.07 (0.02)
D(FDI, 2)	-	-	0.03 (0.04)
ECT(-1)*	-1.36 (0.17)	-0.98 (0.12)	-0.23 (0.05)
F-statistic	2.14	2.45	4.19
Prob(F-statistic)	0.071	0.04	0.00
R-squared	0.83	0.79	0.86
Adjusted R-squared	0.79	0.75	0.80
Durbin-Watson stat	1.56	1.93	2.61
Breusch-Godfrey Serial Correlation LM	0.06	0.02	2.61
Prob(F-statistic)	0.94	0.98	0.11

***Standard Errors are in parenthesis**

***, **, ***Significant at 1%, 5% and 10% level**

Source: Author's Computation

Table 6 shows the result of the error correction model (ECM). In other for it to be valid, the error correction term is must be negative and significant. The ECM results are negative and this implies that there is a feedback mechanism in the short-run. Thus, if short-run variables deviate from equilibrium, they will readjust themselves to equilibrium in the long-run. The coefficient of the ECT(-1) on the nexus between trade and infant mortality, trade and adult mortality, and trade and life expectancy, are -1.357, -0.988 and -0.23 respectively.

This means that the speed of adjustment is about 135.7%, 98.8% and 23%. The feedback mechanism of the nexus between trade and infant mortality and trade and adult mortality is very fast, and that it will take less than a period for the model to adjust to long-run equilibrium in a case of distortion that forces it off equilibrium. However, about 77% of any distortion can only be corrected in the subsequent years in the model of the nexus between trade and life expectancy. Thus, the speed is slow and it will take more years to achieve equilibrium if there is a deviation from equilibrium. Figures 4, 5, and 6 show that the model of ECT is stable using the cumulative sum of recursive.

Figure 4: Plot of Cumulative Sum of Recursive Residuals of the Restricted Error Correction Model

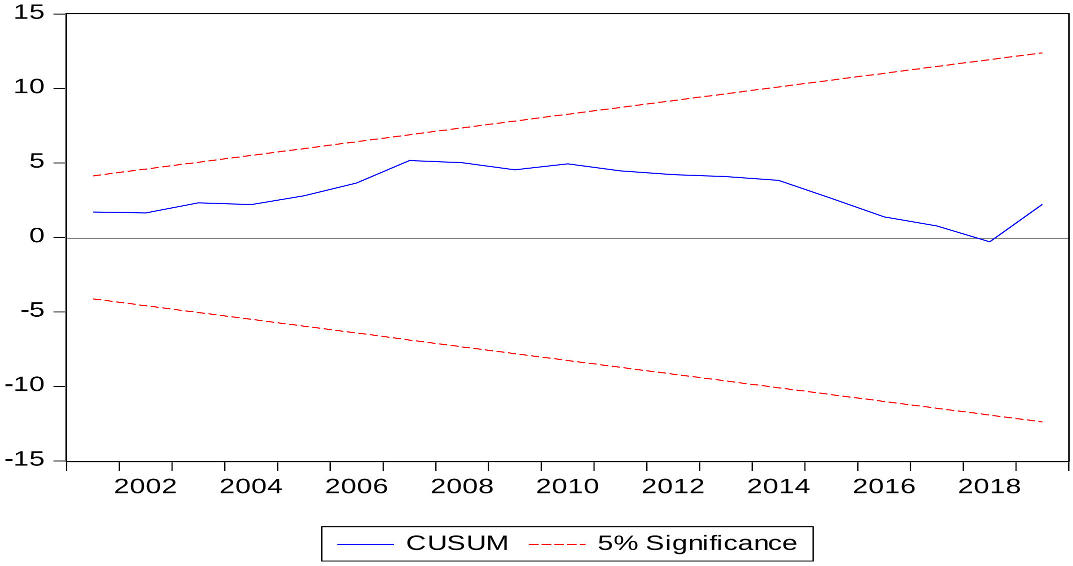


Figure 5: Plot of Cumulative Sum of Recursive Residuals of the Restricted Error Correction Model

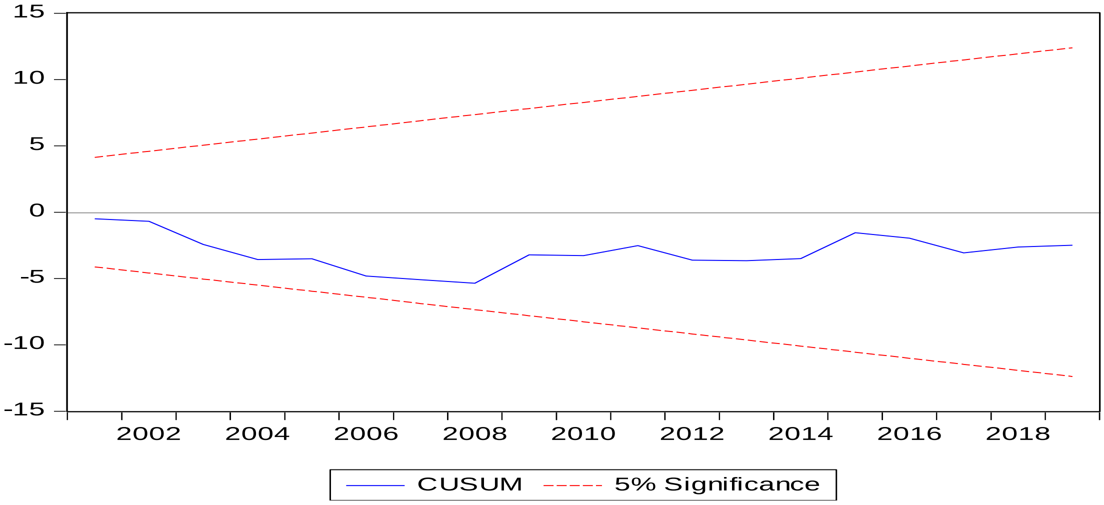
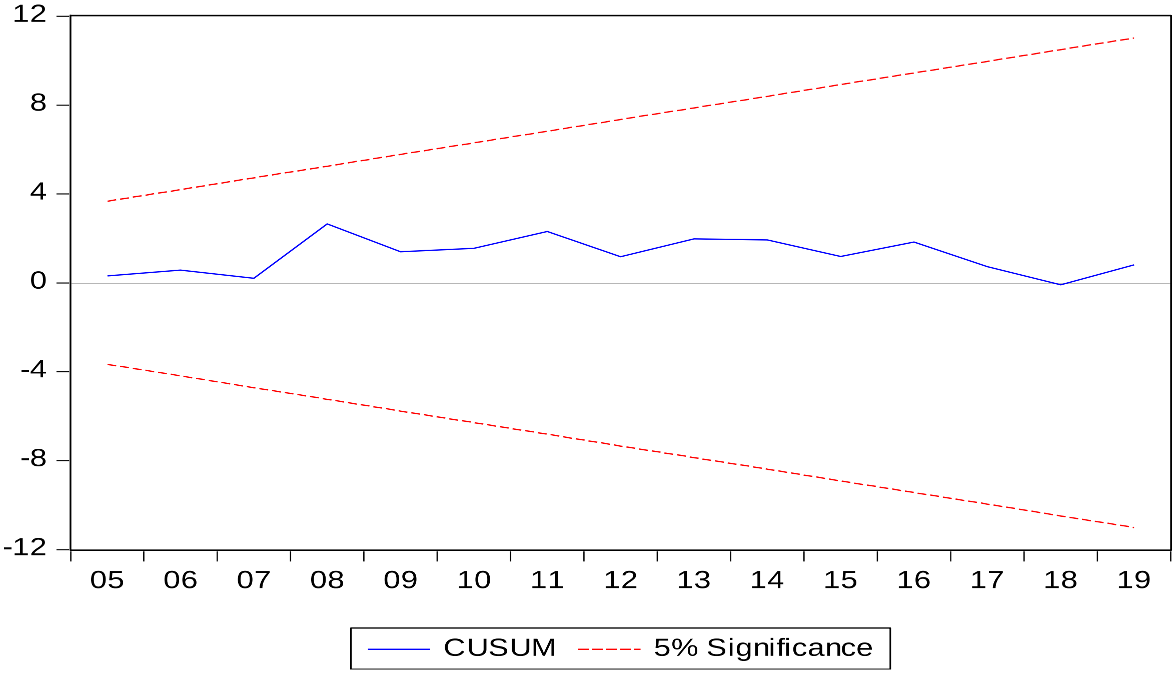


Figure 6: Plot of Cumulative Sum of Recursive Residuals of the Restricted Error Correction Model



Conclusion

This study examined the effects of trade openness on infant mortality, adult mortality, and life expectancy in Nigeria. The growth of trade openness, real gross domestic product and real exchange rate decrease infant mortality in the short-run and the long-run while increase flow of foreign direct investment increase infant mortality. A favourable change in next export also reduces infant mortality. The result confirmed the existence of a long-run relationship between trade and infant mortality in Nigeria. On the effects of trade openness on adult mortality only real gross domestic product and real exchange rate have a favourable effects on adult mortality rate both in the short-run and the long-run. Any change in other variables adversely affects adult mortality rate. In addition, trade openness, net export improve life expectancy in the short-run but reduces life expectancy in the long-run. The analyses also confirm the existence of a long-run relationship between trade and life expectancy in Nigeria. The Restricted Error Correction Model established the speed of adjustment and noted that it will take more that 2 years for the model to restore to equilibrium if any shock causes disequilibrium. Thus, increase trade openness should remain an important goal, not just for economic purposes, but also for improving human welfare and health in Nigeria.

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RETURN AND VOLATILITY PERFORMANCE COMPARISON OF ETHICAL AND NON-ETHISCAL PUBLICLY-LISTED FINANCIAL FIRMS IN NIGERIA: AN EMPIRICAL EVALUATION

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Abstract
This study uses the volatility asymmetry and long memory features to compare the return and volatility performance of ethical and non-ethical publicly listed financial enterprises. Unilever Nigeria plc and Guinness plc make up the research's sample, while all ethically listed businesses in Nigeria make up the population. The study used the stock's market price and return on investment, which were computed using a basic formula. The findings suggest that by studying the ebb and flow of their stock price returns, one may forecast the future worth of both companies. Similarly, the fundamentals of the market are reflected in the asymmetric volatility features of both stock series, making them vulnerable to negative shocks and economic downturns. The presence of volatility clustering was the underlying cause of this. The good news is that, the study found that ethical and socially responsible firms usually had better returns and less volatility than the unethical counterparts. The investing public has a more favourable impression of ethical businesses, which in turn brings in more money from a wider variety of sources. Coefficients on ARCH and GARCH effects add up to less than one, indicating a mean-reverting variance process for the ethical publicly listed financial business. In contrast, the non-ethical firms' variance processes seem to be permanent. It appears that disruptions that cause swings in volatility tend to stick around for a long time. In order to build portfolios that are connected to CSR projects, the article recommends that investors and financial and investment managers constantly use ethical investment tools.
Keywords: Ethical and Non-ethical financial firms, Returns, Volatility, Long-memory effects, Asymmetric properties

Introduction

There is a high demand from investors, especially those who genuinely support socially responsible investments, for ethical portfolios and companies that incorporate CSR policy actions and activities into their investment strategies (Diaz, 2016). Investing in companies with a strong reputation for social responsibility and a long list of good deeds is what is known as "Socially Responsible Investment" (SRI). According to Diaz (2016), these companies follow all the rules that are necessary to protect the host community and make it better. They also come up with innovative ways to make corporate governance and transparency even better.

With more and more companies facing ethical dilemmas in the last decade, SRIs have become more attractive to a wider variety of picky stakeholders. The emergence of the Great Recession or the Sub-prime Mortgage Crisis in 2007 made matters worse by pointing fingers at financial services businesses (Diaz, 2016).Companies like Goldman Sachs, American International Group (AIG), and Lehman Brothers were heavily criticized for their careless and reckless commercial dealings. According to Diaz (2016), this prompted both internal and external stakeholders in the financial services sector to demand more ethical and ecologically responsible reporting practices.

One example is the 2020 publication of the list of the 128 World Most Ethical Companies by the non-profit Ethisphere Institute, which advocates for ethical corporate practices. When it comes to corporate ethics, this group is a strong external stakeholder. Companies on this list go above and above what is required by law, are strong advocates for ethical business practices both inside and outside the company, and help shape the standards of their field by setting an example for others to follow (Ethisphere, 2020). We found thirteen financial services firms that excel in five key areas: 1) ethics and compliance; 2) corporate citizenship and responsibility; 3) culture of ethics; 4) innovation and reputation; and 5) leadership and governance. One hundred and twenty-one nations are represented in the list. The World Most Ethical Companies offers a consistent, systematic, and objective quantitative evaluation of a company's performance, based on the Ethisphere Institute's Ethics Quotient (EQ) methodology (Ethisphere, 2020). To all participating organizations, EIEQ present the Analytical Scorecard to them. In order to compare the firm's key skills to those of other well-known firms, this scorecard is used as a reference. A total of 131 groups were honoured in 2020 for their work in promoting ethical business practices and good corporate citizenship throughout the world. The list includes seven companies that have been honoured every year since 2015, and fourteen newcomers; it covers fifty different industries and twenty-one different countries (Ethisphere, 2020).

For Nigerian firms, no one was found on the list. However, this is not to say that there are no companies taking ethical initiatives and making progress in SRI and CSR in Nigeria. For example, as noted by Euromonitor International (2020), "CSR has certainly become standard practice in Nigeria and several manufacturers of "super brands," use it as a means of building a strong foundation within the country, portraying themselves as part of the community within which they operate. For example, PZ Cussons Nigeria Plc, Cadbury Nigeria Plc and Unilever Nigeria Plc are all involved in CSR programmes, promoting their actions through their annual reports and press releases. These companies have a global reach, and have practiced CSR at one time or another in their markets around the globe". (Euromonitor International, 2020)

There is paucity of empirical evidence on return and volatility performance comparison of ethical and non-ethical firms in Nigeria, as this aspect is missing in the literature. The recognition of this gap is the imperative of this study. To this end, this study seeks to empirically conduct a return and volatility performance comparison of ethical and social responsible publicly listed firms with non-ethical counterpart. Such analysis will be of immense value to fund and portfolio managers, as well as the investing public and market regulators.

The objectives of the study are to:

(i) Compare the stock series of ethical and non-ethical firms in Nigeria, in terms of their characterization.
(ii) Examine which has higher returns and steadier (or lower) stock price volatility.
(iii) Identify the presence of the leverage effects and volatility asymmetry phenomena in the time-series of ethical and non-ethical companies.

Aside this introductory Section, the rest of the paper is structured as follows: Section 2 presents a review of the pertinent literature, and Section 3 contains the methodology, model and data source. The empirical results and discussion is presented in Section 4, and Section 5 concludes the paper with some policy perspectives.

Literature Review

Concept of Ethical or Socially Responsible Investment

Due to the fact that the idea of ethical or socially responsible investing has been conceptualized in numerous ways over time, there is no one uniform meaning for the term. Many researchers are currently interested in the idea, which has many different names and definitions (Revelli, 2016: Matharu, 2019; Arefeen & Shimada, 2020), and which encompasses environmental, social, and governance considerations as well as responsible and socially responsible investment. When it comes to making investment decisions, Chelawat &Trivedi (2013) define ethical investing as taking societal and environmental considerations into account. Responsible financial management seeks to optimize monetary returns while simultaneously promoting social and environmental benefit. Incorporating ethical principles, promoting environmental protection, accelerating social conditions, and adducing good governance are the hallmarks of ethical or socially responsible investment, according to Revelli (2017), Matallin-Saez et al. (2019), and Renneboog et al. (2008).

Characteristics of Ethical Firms

Ethical firm is one that specifically assist in the development of its business environment, as well as treating the community, employees and the environment with utmost respect (Child, 2015). The following are some basic characteristics of ethical firms.

A. Strong Ethical Leadership

Ethical firm has a well-defined leadership culture, that begins from the top of its business organogram, spreads round to all facets of the business, as well as the employees. The true test of this leadership style, is in the area of daily decision-making process. That is, leadership that persistently dwell on the path of what is ethically, and absolutely correct, as opposed to one that is purely driven financially (Phillips, 2019).

B. Concern for People and Environment

It is important to note that all ethical firms do demonstrate concern for any element/ anyone, who in one way or the other has impacted meaningfully by ethical firms. That is, ethical firm does not engage in decision that could be detrimental to its stakeholders, such as employees, customers, environment, as well as the member of the public, but rather, the decision is towards its interest group (Phillips, 2019).

C. **Integrity and Fairness**

Ethical firms are morally sound in terms of strict adherence to rules, norms, laws and regulations at all levels of government-local, state and federal. Ethical firm has sophisticated technology, couple with right skills, for an excellent production of high quality products, that are different from their competitors. On the other hand, ethical firm demonstrates competitive pricing, timely payment, fairness and honesty, while dealing with its customers, employee, among others (Phillips, 2019).

Theoretical Review

Stakeholder Theory

The stakeholder theory was first developed by Edward Freeman in the year 1984, and the theory posits that, a society is made up of several stakeholders, that are capable of influencing firms' decision. The theory is also seen as '' the new story behind every business'' (Freeman, 2018; Freeman et al, 2004). The concertedness of interests, in which all corporate value creation solely depend on, can be termed as ''stakeholder theory'' (Freeman, 2009, p.65). Basically, the theory highlighted four lines of organizational management research, from which stakeholder theory was developed. They are; strategic organizational planning, corporate social responsibility, system theory, and organizational theory (Haataja, 2020). Therefore, firms are established not only for shareholders' interest, but also for the purpose of stakeholders, such as suppliers, customers, employees, government, community and future generation (Freeman, 2008; Harrison et al, 2010). Firms are meant to create values for all stakeholders, and not just mere values, but those values that create the best impacts on stakeholders (Post et al, 2002). These stakeholders' values can further be categorized into; economic value, intangible value, psychological intrinsic value, knowledge and capability value, transcendent value, and positive and negative value externality (Post et al, 2002; Antonio, 2011). Thus, ethical firms show deep concern for all its stakeholders, by creating best values for them, in terms of transparency, fairness, as well as maintaining host community in which the business is located.

Empirical Review

Using an event study methodology with market model, as well as OLS, Arefeen & Shimada, (2020) empirically investigate socially responsible investing performance, together with conventional funds in various era of shocks, evidence from Japan. The study equally employed GARCH and Fama-French multi-factor model, and it was found that, SRIs have strong resilient to shocks than their conventional funds counterparts. Risalvato et al, (2018), investigated the performance of social responsible investment in Italy, and the results revealed that, ethical firm performed better than traditional sector.

A research by Husted and Salazar (2006) showed that investment in businesses with a strong social mission increases both social and economic outputs. Kempf and Osthoff (2007) found that investing in firms with CSR activities outperforms the S &P 500 index, with abnormal returns of 8.7 percent each year. This outperformance dates back to the index's creation. But research by Bauer, Kedijk, & Otten (2006) shows that SRI funds do not do as well as non-SRI funds in terms of return. Using data from Islamic stock funds, Hayat and Kraeussl (2011) came at a similar result. In fact, there is a lack of consistency in the empirical data concerning the better performance of investments that stress ethics and social responsibility.

Different authors have reached different conclusions on how SRIs and ethical portfolios have fared in the past. When used as a stand-in for a company's whole performance, SRIs are found to have positive returns, according to research by Bercicci et al. (2001). This finding is supported by O'Rourke (2003), who also claims that ethical mutual funds far better than average. Moreover, SRI funds in North American, European, and Asia-Pacific portfolios outperform local ones, according to Reenebog et al. (2008). There is more proof that SRI funds in Japan, France, Ireland, and Sweden failed to outperform traditional market portfolios.

For instance, a study by Bauer et al. (2006) found the opposite of what was previously said; they found that SRI funds' returns underperform overall because of the high screening costs. Developed countries like the US, UK, and DE did not show significant differences in risk-adjusted returns between ethical and conventional funds, according to Bauer et al. (2006). A similar study comparing ethical and non-ethical mutual funds throughout Europe was carried out by Kreander et al. (2005). There were no differences in the funds' return performances, and they both proved that market timing was beyond their capabilities. Hong & Kacperzyk (2009) made a bold assertion in their study: they found that sin equities, like alcohol and tobacco, had greater expected returns during recessions. This is because people are more likely to indulge in vices when they are going through tough situations. Islamic equities funds underperform conventional stock benchmark funds, according to Hayat and Kraeussl (2011). According to the research, Islamic equities funds failed to keep up with the market during the last recession. It is also clear that there are discoveries in the literature that are neutral.

Higher portfolio returns were seen by asset managers with high environment, social, and governance (ESG) ratings compared to those with poor ratings, according to a study by De & Clayman (2014). The benefits of CSR investments are amplified during times of elevated volatility, according to additional studies. With the use of ARMA-APARCH models, Liu et al. (2014) investigated the correlation between volatility and returns of three major Thomson Reuters CSR indexes and three important stock market indices. There was a positive and negative correlation between the CSR indices and the stock indexes, according to the data. The study finds that both indexes are vulnerable to the same bad shocks and have weak economic foundations, as usual investment indices.

Diaz (2016) compares the volatility and return performance of ethical and non-ethical publicly listed financial organizations, using evidence from Taiwan, taking into account their long-memory and volatility asymmetry qualities. The researchers found that both types of financial organizations' daily stock price returns, which are known for their volatility, are useful for projecting future values. Additionally, the article finds proof of asymmetric volatility response characteristics that are vulnerable to recessions and negative shocks. Companies that prioritize ethics in their financial dealings tend to be more stable and profitable than those that don't.

Gap in the Literature

After looking through the relevant empirical literature, we found that there is not much data comparing the returns and volatility performance of ethically compliance and non-compliant firms in Nigeria. Therefore, this study aims to use evidence from Nigerian data to address this void in the literature.

Methodology

Population and Sample

Every company in Nigeria that has an ethical listing is part of the study's population. Some businesses, including Cadbury Nigeria Plc, Unilever Nigeria Plc, and PZ Cussons Nigeria Plc, publicize their CSR efforts in their annual reports, even if they are not the only ones doing so. Nevertheless, Unilever Nigeria Plc and Guinness Plc are selected as a sample for the inquiry because of their favourable characteristics. Euromonitor International (2020) mentioned Unilever's CSR and SRI activities in a positive light, which led to the company's selection. Upon investigation, it was found that the company's business plan in Nigeria was both long-term and consolidated. A more morally conscious agenda and focused CSR initiatives have emerged as a consequence of this. Education, healthcare, road reconstruction, and access to drinkable water are the four main focuses of the foundation's efforts. Known for its expertise in FMCG, the company is the biggest in Nigeria. Consumables made by Unilever are both reasonably priced and nourishing, and the company's soaps and detergents help raise national cleanliness standards. Unilever also offers its workers a wide range of international health and safety training options in an effort to make sure its business model does not harm the environment. This CSR stands out when compared to the business models of other fast-moving consumer goods corporations.

Model Specification

In this study, stock returns of Unilever Nigeria Plc and Guinness Nigeria Plc were computed using the general formula, holding dividend income constant;

$$R_{(s)} = \log\left(\frac{P_t}{P_{t-1}}\right) \times 100 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.1)$$

Where:

$R_{(s)}$ = The returns on a given stock,

P= Market price of the stock.

Similarly, returns of the general market performance was generated using the returns on All Shares Index (RASI), which was derived as;

$$RASI_t = \log\left(\frac{ASI_t}{ASI_{t-1}}\right) \times 100 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.2)$$

The volatility series for Unilever and Guinness stock price series were generated using the Generalized Auto-regressive Conditional Heteroscedasticity (GARCH model developed by Bollerslev (1986). The specific model used a first-order GARCH term and a first-order ARCH term (i.e. GARCH [1,1]), and was specified in this study as:

$$VOL_t = X_t\gamma + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.3)$$

$$\sigma_t^2 = \omega + \alpha\varepsilon_{t-1}^2 + \beta\sigma_{t-1}^2 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.4)$$

Equation (3.3) is the mean equation, while equation (3.4) is the variance equation. σ_{t-1}^2 is the conditional variance, because it is the one-period ahead forecast variance based on past information.

Empirical Results and Analysis

Descriptive Statistics

Table 1 shows the stock series characteristics in terms of returns and risk (volatility) of ethical and non-ethical firms. For the ethical firm(Unilever), the mean (average) returns and volatility are 15.22 and 0.13, respectively. For the non-ethical firm (Guinness), the corresponding average returns and volatility are 13.65 and 0.15, respectively. Comparably, the return/risk ratio are for the ethical and socially responsible firm, Unilever is 117.1, while that of the non-ethical firm is 91. Invariably, the Unilever had better performance given its CSR and SRI activities that made it more ethically-minded agenda.

Another evidence of a non-symmetric distribution is the substantial Jarque-Bera statistic and the positive kurtosis observed in all data samples. Ethical firms tend to have reduced stock price volatility and greater returns since the investing public views them in a good light. Consistent investment flows are provided by investors who are attracted by this notion. On the flip side, the unethical company's stock price swings and lower returns can be due to the investment community's negative view. Consistent with earlier research by Diaz (2016) and De and Clayman (2014), we find that ethical investments provide higher returns.

Table 1: **Returns Rates and Volatility in the Nigerian Stock Market**

	Mean Return	Std. Deviation	Return /Risk Ratio	Kurtosis	J-B
Unilever	15.22	0.13	117.08	1.55	15.33
Guinness	13.65	0.15	91	1.72	20.21

Source: Author’s Compilation (2024): Underlying quarterly data from NSE

Unit Root Analysis

Table 2 illustrates the time-series properties of the stock series using ARMA and GARCH filters.

Unit Root Stationary Test

Variables	**ADF**	**ARMA**	**Order of Integration**	**Remark**
Unilever Nig Plc	-17.2774**	(1,1)	I(0)	“
Guinness Nig Plc	-16.2340**	(1,1)	I(0)	Stationary

(**) denotes significance at 5% (1%) level

Source: Author’s Compilation (2024)

The Augmented Dickey-Fuller (ADF) was used to perform the stationarity test for the two companies. There are clearly no unit roots in the series, as the ADF values are significant at levels. This research used the standard filtering scheme of one-lag AR with one-lag MA, as well as the associated Akaike Information Criterion (AIC). Results from the Lagrange Multiplier (LM) test were not statistically significant, suggesting that stock returns do not correlate with one another in a sequential fashion. This study uses the ARCH-LM technique to find the ARCH effect. It appears that the sample might be analysed using GARCH models; the first test produced statistically significant findings. We also estimate the asymmetric GARCH model (T-GARCH) to test for the presence of long memory effects and leverage.

Long-Memory and Asymmetric Volatility Analyses Using ARMA-APARCH and ARFIMA-FIAPARCH Models

This section presents and analyses the findings of long-memory models, as shown in Table 3. It also discusses the asymmetric volatility qualities of the two businesses, namely the returns performance of ethical and corporate socially responsible firms, as well as non-ethical firms. Previous advancements in volatility are proven to have a more consistent impact from the outcomes.

Table 3: Long-Memory and Asymmetric Volatility Analyses, Using ARMA-APARCH and ARFIMA-FIAPARCH Models

ARMA-APARCH Models		ARFIMA-FIAPARCH Models Returns Volatility Gamma d-coefficient
UnileverNig Plc	0.9074 (0.000)	*-0.01520.3014***1.3720* (-0.723) (0.021) (0.185)
Guinness Nig Plc	0.332 (0.2506)	-0.1021*0.2016** 0.0451* (0.04) (0.000) (0.042)

Note: ***, **, and *** are significance levels at the 10, 5, and 1% levels respectively.**
Source: Author's Compilation (2024)

The positive gamma value indicates that the stocks are asymmetrically volatile; yet, the ethical company is less volatile than the unethical company. This suggests that businesses in Nigeria are vulnerable to negative shocks irrespective of their ethical standing. This proves that bad news, as opposed to good or fantastic news, increases stock volatility. The reason for this is that, market disruptions are made worse when unfavourable news causes unreasonable expectations and actions to spike. The conclusions of Chen (2011), Chen & Diaz (2012), and Diaz (2016) are in agreement with this distinctive feature, which is relevant to all investment vehicles. Previous work by Bekaert & Wu (2000) shown that the high volatility feedback mechanism causes negative shocks to significantly raise conditional variances in financial markets. Tan & Khan (2010) further support this conclusion by using data from the Malaysian stock markets during the subprime mortgage crisis.
Although, ethical financial enterprises had lower volatility and better returns, making them a more stable investment, these results imply that fund managers should not use them as a safe haven portfolio during economic downturns. This is due to the fact that they are just as vulnerable to negative shocks as any other investment. The d-coefficient is a key aspect of the long-memory parameter that determines the predictability of a certain time series. The returns 0f d-coefficient showed no long-memory features for the morally based business Unilever, as the values were small. In contrast, Guinness, an unethical business, showed signs of long-memory effects at a statistically significant level of 10%. Even still, there were positive dependency features in the volatility d-coefficient across the board. Thus, these outcomes are consistent with the goal of investigating the long-memory process in the volatility and stock return series. The findings stand in sharp contrast to Fama's (1970) weak-form EMH, which states that looking at past prices does not help in predicting future ones. Furthermore, this discovery suggests that using historical data to generate excess returns is not feasible in the long run. Nevertheless, similar empirical results on the prediction of certain investment instruments using technical analysis have also been found by Korkmaz et al. (2009) and Kang & Yoon (2007).

Conclusion and Recommendations

This study compares the return and volatility performance of publicly listed ethical and non-ethical enterprises, taking into account their long-memory and volatility asymmetry qualities. By examining the volatility of their daily stock price returns, the article shows that the future values of both groups may be forecasted. Both stock series are vulnerable to negative shocks and economic slowing, which are fundamental market factors, and they also have asymmetric volatility response characteristics. Ethical financial enterprises outperform their non-ethical competitors in terms of returns and volatility. The investing public has a positive impression of ethical businesses, which attracts prospective investors who then provide steady funding, which might explain this phenomenon.

Since the non-ethical firm's variance process is equal to the total of its ARCH and GARCH effects, it is likewise non-mean-reverting. This shows that changes in volatility caused by disruptions seem to be persistent, in contrast to the variance process of an ethically-based organization, which usually returns after some time has passed. There is volatility clustering in the market model findings, which means that both the internal and external variables can be affected by disturbances in either business. Historical stock return values and volatility can be utilized to anticipate future values, since volatility showed a positive relationship on distant observations in terms of the long-memory qualities. When building equity portfolios with the ability to produce returns with low volatility and high returns, fund and investment managers, traders, and investors may certainly benefit from assets with long-memory and asymmetric volatility characteristics.

On the basis of the foregoing findings, it is recommended that investors should properly monitor and understudy stocks over a range of period, good times and bad times in order to arrive at the optimal decision on which to invest in as ethical and socially responsible ethical firms, as well as the non-ethical counterparts, in which both are vulnerable to negative shocks. In this regard, a performance index and comparison analysis is imperative for sound investment decisions. It is also recommended that, fund managers increase ethical financing and corporate social responsibility (CSR) related investments in their equity portfolios, since they create positive public perception and corporate image that tend to attract larger pool of investors. Finally, strong institutional and regulatory structures, as well as appropriate monitoring and supervision of listing and trading of stocks are also important to keep the market stable, viable and efficient.

Further Studies

Future studies in this direction shouldexamine the effects of non-quantitative factors on the effect return and volatility properties of ethical and socially responsible compared to that of the non-ethical counterparts.

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EFFECT OF BRAND PROMOTION ON CUSTOMER'S RESISTANCE TO SWITCH AMONG THE SELECTED TELECOMMUNICATION FIRM

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Abstract
The study was conducted to examine the effect of brand promotion on customer's resistance to switch among the selected telecommunication firm. The population of the study was 5,670,548 subscribers of Abia State, Nigeria. The three GSM service providers were purposively selected. Using Taro Yamane's formula gave a minimum sample size of 400 subscribers. The sample was distributed using the Bowley's formula. Data was collected mainly through the use of questionnaires. Demographic data was analyzed using descriptive statistics like tables and percentages. Data on variables were analyzed and hypothesis tested using multiple regression. The finding of the study indicated data speed has a significant effect on customer resistance to switch, while bonus package do not have significant effect on customer resistance to switch. Based on the findings, we concluded that data speed has positive significant effect on customer resistance to switch among telecommunication firms in Abia State, Nigeria with an influence of organizational culture and we recommended that managers of telecommunication firms should ensure that their organizational culture is aligned to brand promotion that especially data speed to enhance its effectiveness in boosting customer resistance to switch and customer loyalty

Keywords: *Brand promotion, data speed, bonus package and customer resistance to switch*.

Introduction

In today's highly competitive global market, the necessity for businesses to come up with new ways to provide high-quality services that will attract clients, meet their demands, and urge them to continue patronizing a business grows by the day(Odunlami and Oludipe (2021). Any organization's success and growth are determined by its capacity to quickly and efficiently address the needs of current and future consumers by providing high-quality services that not only attract but also retain clients for repeat business (Akanbi, 2013).

Delivering excellent services is a very important prerequisite for organizations to thrive and achieve a competitive advantage in their industry/market in today's competitive business climate (Palladan and Palladan, 2018). With greater interconnectedness and the world becoming a global village, the need for telephone and telecommunication services as necessary tools gets more pertinent by the day. This has created an intensified competition among them. The trend does not seem to have an end soon as some of the operators are currently experiencing financial challenges leading to take-over as seen in the case of Etisalat (now 9mobile). Therefore, the major challenge faced by the service providers today is how to retain their subscribers, since there is a higher tendency of mobile subscribers to switch among service providers who provide attractive packages with fascinating features. For this, service providers attempt to enhance the level of loyalty of their subscribers by delivering superior services.

However, Strong brands help companies improve their market position, lower risk exposure, foster collaboration, increase firm support, and create development chances (Nwankpa and Onuoha, 2020). The act of informing or reminding individuals about the availability of a product or brand is included in the definition of promotion (Madura, 2007). To put it another way, promotion could be used to fully support a company's products and services or brand overall in the media. Promotion serves to inform, influence, persuade, and remind people or groups of customers about the organization's goals and marketing program, according to Tjiptono (2008). Therefore, this study is focused to identify the effect of brand promotion on customer's resistance to switch among the selected telecommunication firms.

Literature Review

Promotion is an essential component of every organization's campaigns and promotional efforts, and it is more effective when customers are satisfied with their previous experiences or encounters with the organization's offerings (Fransiskaa, Andhikaa, Indraa, and Rengganisa, 2012). Thus, brand marketing must be handled properly in order to ensure optimum alignment between promotion costs, customer demand, and organizational objectives. Brand promotion is an organization's endeavor to communicate its overall worth and offerings to the public. Furthermore, Tjiptono (2008) believes that brand promotion is all about informing, influencing, and reminding customers about the company's goals and marketing strategies. The author cited various reasons for brand promotion, including notifying the market about the introduction of a new product, a new way to use a new product, price changes, correcting negative perceptions, convincing, and establishing brand loyalty. Brand promotion comprises increasing brand understanding and awareness. Brand knowledge is particularly important in efforts to influence what people believe about a brand, and it consists of two main variables: "brand awareness and brand image." Cahyono, Hamid, and Kusumawati (2015) define brand awareness as the commencement and reminder of a brand's "performance" in the eyes of consumers. Erfan and Kwek, (2013) observed that brand image is related to the information in consumers' memory in regard to service performance. This suggests that the main goal of brand promotion is to create a service environment that fulfils customer expectations, captures attention, and encourages repeat business. Telecommunication companies might, for example, work to increase their data speed so that customers have a better online experience and provide bonus packages so that customers can pay less for the same services. Data speed and bonus package were the two dimensions that were utilized to measure brand marketing.

a) Data Speed

Data speed refers to how quickly and reliably a telecommunications service is delivered to customers at a certain time. Speed is one of the most significant variables to consider while evaluating the qualities and quality of a service, such as broadband or subscriptions. As a result, how speed is measured and data is understood becomes critical for business and policymakers (Bauer, Clark, & Lehr, 2010). Furthermore, Midoglu, Wimmer, Lutu, and Alay (2017) stated that as the need for mobile connection grows, network providers must promote their brands as providers of high-speed data usage. Data speed can be measured in terms of data rate, which relates to network performance. In addition, Chae, Kim, Kim, and Ryu (2002) studied the data and loading quality of telecom companies. Studies revealed that customers are increasingly utilizing their mobile phones for purposes other than sending and receiving text messages and phone calls, but the significance of internet speed for switching behavior is still unclear.

These include using apps for downloading music, sending emails, using mobile banking, using social media sites like Facebook and Twitter, and searching the internet for news articles (Soyemi, Oloruntoba and Okafor, 2015).

b) Bonus package

A bonus is financial remuneration that exceeds the customer's customary payment and expectation. In most circumstances, bonus packages could be presented to distinguished employees to raise morale and show appreciation for a job well done (Bloomenthal, 2020). Most telecommunications companies employ bonus pricing and packages to differentiate their offers and target specific areas of the market in order to win more customers (Madden, Coble-Neal, and Dalzell, 2004). Bonus packages and pricing plans typically concentrate on service usage (such as in-and-out calling, texting, and data downloads) exclusively, or they require customers to pay for both the monthly service fees and the cost of the phone device (i.e., by paying for the handset in monthly instalments along with the services charges). Accordingly, the phone company provides various bonus plans, each of which specifies an upfront set charge, a marginal use cost, and further use-of-service limitations that consumers must pay for (Jensen, 2006).

Theoretical Framework

The study was premised on the Keaveney Model of Customer Switching Behaviour. Some of the variables in the study were adapted from the model of consumer service switching behaviour by Keaveney (1995). He postulated that in a typical service-oriented organization with stiff competition, there were some antecedents of consumer switching behaviour. He further stated the antecedents as follows: price, promotion, inconvenience, core service failure, service encounter failure, involuntary, switching ethical problem, competition attraction and employee response to failure. More so, this study adopted the theoretical model because of its relevance to the service-oriented industry of which the Nigerian telecommunication industry is a major player. Also, the model of consumer service switching behaviour has been used in many service context studies hence, its adoption and replicability in the Nigerian telecommunications industry.

Methodology

Survey research design was used in this study. Survey research design was chosen because it allows us to describe the characteristics of a large population which no other research method can provide, it allows us to investigate, describe, and record information in their natural setting. It was also be used because we have individual as a unit of analysis. The study area is Umuahia, Abia State. The population for this study consist of all GSM subscribers of the selected service providers (both active voice and internet subscribers), which are MTN, Globacom and Airtel within Abia State, Nigeria. MTN has 2,954,182 subscribers, Glo 1,127,827 subscribers and Airtel has 1,588,539 (NBS, 2022). The entire population of subscribers for these service providers in Abia State is 5,670,548 subscribers as of December 2022. The Table below gives a breakdown of the subscriber spread in Abia State, Nigeria.

Table 1: Active voice and internet subscribers of the selected telecom operators

	Active Voice Subscriptions	Active Internet Subscriptions	Total
MTN	1,652,557	1,301,625	2,954,182
GLO	657,821	470,006	1,127,827
AIRTEL	935,769	652,770	1,588,539
Grand total			**5,670,548**

Source: NBS (2022)

Table 1 shows that MTN has the highest number of subscribers, followed by AIRTEL and GLOBACOM as at the end of December, 2022.
To scientifically generate a sample size, the Taro Yamane's formula (1964), was adopted.

$$n = \frac{N}{1+N(e)^2}$$

Where N = Population size
n = Sample size
e = level of significance(0.05)

$$n = \frac{5{,}670{,}548}{1+5{,}670{,}548\,(0.05)^2}$$

n = 399.971
n = 400

However, in other to determine appropriately the sample size to be allocated to the subscribers of the three major GSM service providers, Bowleys' (1964) formula in Kwahar (2016) would be used as follows:

$$nh = \frac{nNh}{N}$$

Where: n = Sample size of the entire population
nh = The Sectorial size of respondent required
Nh = Total number of subscribers in each organization
N = Total population size
Therefore, size to be allocated to the subscribers of the three major GSM service providers is given in the table 2 below

Table 2: Individual Sample Size of Subscribers in the three Major GSM Service Providers

S/No	GSM companies	Individual Determination	Sample size
1	Mtn	400X 2,954,182 /5,670,548	208
2	Globacom	400 X1,127,827/5,670,548	80
3	Airtel	400 X1,588,539/5,670,548	112
		Total	**400**

Source: Author's Computation

This research study was conducted using multi-stage sampling technique in selecting respondents who are subscribers of MTN, Glo and Airtel. The multistage sampling technique is a probability sampling method, which involves random selection procedures. This method of sampling involves a procedure whereby the selection of units into the sample is organized into stages (Eboh, 2009). Multistage sampling divides large populations into stages to make the sampling process more practical. A combination of stratified sampling or cluster sampling and simple random sampling is usually used. In this study, the study area which is Abia State, Nigeria, is divided into 17 Local Government Areas. Then 9 out of the 17 Local Government Areas were purposively selected for the study because they have the highest population. That is three local governments were selected from senatorial zone. The selected Local Government Areas were: Umuahia South, Umuahia North, Osisioma ngwa, Aba South, Aba North, Bende, Ohafia, Obingwa and Aruchukwu.

The respondents were civil/public servants, private company employees, self-employed, and students of Michael Okpara University of Agriculture Umudike, Abia State university students (Umuahia campus), students of Abia State Polytechnic and students of Abia State School of health. A total of 400 respondents was conveniently selected from the cluster and questionnaires administered to them. The table below gives the population distribution of the 9 selected Local Government Areas in Abia State, Nigeria, based on 2022 projection by the National Population Commission (NPC) and National Bureau of Statistics (NBS).

Table 3: Projected Population Distribution of 9 Local Government Areas in Abia State, Nigeria.

S/N	**Local Government Areas**	**Population**
1	Umuahia South,	202,500
2	Umuahia North	324,900
3	Osisioma ngwa	321,300
4	Aba South	622,400
5	Aba North	155,600
6	Bende	280,500
7	Ohafia	358,200
8	Obingwa	264,900
9	Aruchukwu	246,600
	Total	**2,776,900**

Source: National Population Commission (2017)

Sample distribution for each GSM companies among 9 Local Government Areas of Abia State, Nigeria is given below:

Table 4 Sample distribution for each GSM companies among 9 Local Government Areas of Abia State, Nigeria.

		MTN	GLO	AIRTEL	TOTAL
1	Umuahia South,	202,500/2,776,900 X 208=15	202,500/2,776,900 X 80= 6	202,500/2,776,900 X 112=8	29
2	Umuahia North	324,900/2,776,900 X 208=24	324,900/2,776,900 X 80=9	324,900/2,776,900 X 112=13	46
3	Osisioma ngwa	321,300/2,776,900 X 208=24	321,300/2,776,900 X 80=9	321,300/2,776,900 X 112=13	46
4	Aba South	622,400/2,776,900 X 208=47	622,400/2,776,900 X 80=18	622,400/2,776,900 X 112=25	90
5	Aba North	155,600/2,776,900 X 208=12	155,600/2,776,900 X 80=5	155,600/2,776,900 X 112=6	23
6	Bende	280,500/2,776,900 X 208=21	280,500/2,776,900 X 80=8	280,500/2,776,900 X 112=11	40
7	Ohafia	358,200/2,776,900 X 208=27	358,200/2,776,900 X 80=10	358,200/2,776,900 X 112=14	51
8	Obingwa	264,900/2,776,900 X 208=20	264,900/2,776,900 X 80=8	264,900/2,776,900 X 112=11	39
9	Aruchukwu	246,600/2,776,900 X 208=19	246,600/2,776,900 X 80=7	246,600/2,776,900 X 112= 10	36
	TOTAL				400

Source: Author's Computation

The table 4 gives a break-down of how the sample size was distributed in the 9
Local Government Areas of Abia State, Nigeria.
The source of data for this work was primary. Hence, questionnaire schedule used. Questionnaire was used to generate information.
The method of data collection was mainly through questionnaire. The questionnaire was designed to obtain data from the subscribers of the three major GSM service providers on the brand promotion variables data speed and bonus package) and how it affect customer's resistance to switch. The variables mentioned above was directed at individual subscribers and not corporate subscribers to know how they brand promotion and how it relates to their resistance to switch to a service provider. Responses to all statements was measured on a five-point likert rating scale ranging from 1(strongly disagree) to 5(strongly agree). Questionnaire was structured or unstructured (open or closed). This study adopted face, content and construct validity measures.

Face validity: Face validity is concerned with the researcher's subjective evaluation of the validity of a measuring instrument. An instrument is said to have face validity if it demonstrates prima facie validity, that is, on the face value it appears to have validity.

Content validity: When an instrument covers all the possible areas of the research problem, it is said to have content validity. The questionnaire items covered

Construct validity: Construct validity measures the extent to which the findings from the instrument agrees, disagrees or make credible construction to an existing theory (Barten, Pisters, Huisman, Takken and Veenhof, 2012). It shows the degree to which the instrument or model truly measures what it is expected to measure.
Thus, the validity test was conducted by giving the research instrument to the thesis supervisors and other experts in the Department of Marketing within the University for vetting and also to evaluate the research instrument, to find out if the content of the questionnaire cover all the intended dimensions of service delivery and attributes of customer loyalty, to find out whether the instrument or model truly measures what it is expected to measure. Based on these responses the final questionnaire items was prepared and administrated to respondents.

Reliability

Test-re-test reliability was conducted in the study. The essence of test-re-test reliability is to test stability and reliability of the instrument over time using a Cronbach Alpha coefficient of 0.7 as the threshold as recommended by Nunnally (1978). All item below 0.7 after the reliability test with the aid of the SPSS (Statistical Package for Social Science) was rejected (unreliable). Overall, the two items in the variable have a good reliability. This is because all Cronbach alpha values were in excess of minimum value of the 0.60 recommended by Cronbach (1951) and Nunnally (1978).
The questionnaire has been pilot-tested on 50 GSM subscribers who were final year undergraduate students of the Department of marketing, Abia state polytechnic Aba. The results of the pilot test proved to be satisfactory, since most of the respondents found the questionnaire items understandable. Nevertheless, some minor wording mistakes were found, which were corrected in the version that was finally distributed in the field research. Most respondents did not hesitate to answer the questions.

The responses gotten also validated the suitability of the questionnaire to elicit the needed response for analysis since they were just a few areas of ambiguity identified. These areas of ambiguity identified were corrected to ensure maximum clarity of the issues under investigation especially in the area of service quality and customer loyalty. The Cronbach alpha showed $\alpha = 0.88$ and 0.71, for the two variables respectively thus further validating the instrument as appropriate to measure what it intends to measure. The decision rule was to accept null hypothesis if the P-value is greater than 0.05, but where the P-value is less than 0.05, we reject the null hypothesis and accept the alternate hypothesis.

In this study, data collected through structured questionnaire was analyzed using descriptive statistics, simple linear regression and multiple regression analysis. Descriptive statistics was used to analyze the demographic characteristics of the respondents, multiple regression analysis was used to analyze the objectives. Jarque- Bera histogram normality test, Breusch-Godfrey serial correlation test and Breusch-Pagan-Godfrey test of heteroskedasticity were used for testing normality of the result.

Data Analysis, Results and Discussion

Test of Hypothesis

HO_1: Brand promotional strategy does not have any significant effect on customer resistance to switch. Multiple regression was used to analyze the data and the result is indicated on the table 6 below:

Table 6: Multiple regression on effect of Brand promotion on customer resistance to switch
dependent Variable: customer resistance to switch
Independent Variable: brand promotion

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Bonus Package	0.173645	0.092780	0.793761	0.4298
Data Speed	0.191305	0.068058	2.370124	0.0203
C	12.62267	0.290382	9.031792	0.0000

R-squared	0.693137	Mean dependent var	3.310000
Adjusted R-squared	0.469582	S.D. dependent var	0.475150
S.E. of regression	0.458321	Akaike info criterion	1.314283
Sum squared resid	16.17445	Schwarz criterion	1.403609
Log likelihood	-49.57132	Hannan-Quinn criter.	1.350096
F-statistic	3.954040	Durbin-Watson stat	1.921939
Prob(F-statistic)	0.023193		

Source: Field Survey, 2024

Regression Equation: $\mathbf{Y = \beta_0 + \beta_1 (DS) + \beta_2 (BP) + e}$

Where;

Y	=	Dependent variable which measures sales volume
B_0	=	Intercept
B_1	=	Coefficient of data speed
B_2	=	Coefficient of bonus package

From the regression equation, $Y = Y = \beta_0 + \beta_1 (DS) + \beta_2 (BP) + e$
Substituting the functional notations with their respective values gives the model summary as
$Y = 12.62267 + 0.173645 (BP) + 0.191305 (DS)$

Thus, the intercept of the regression is 12.62267 implying that if the various independent variables are held constant at zero, the customer resistance to switch will by 12.62267. The coefficient of determination (R^2) of 0.693137 shows that 69.31% variations in customer resistance to switch can be explained by the variations in the independent variables- factors influencing customer resistance to switch and other endogenous variables. Hence a lean 30.69% is unexplained which can be attributed to the error term. By implication, there are other factors that significantly determine customer resistance to switch other than the factors highlighted. Table 4.21, shows that data speed (B = 0.191305, P < .05) and bonus package (B = 0.173645 , P > .05), thus, data speed have a significant effect on customer resistance to switch, while bonus package do not have significant effect on customer resistance to switch. Furthermore, Durbin Weston was used to test for autocorrelation in the study. The Durbin Weston value according to the result is 1.921939. The acceptable threshold is that the value must be close to two. In this study, the value is close to two.

Discussion of findings

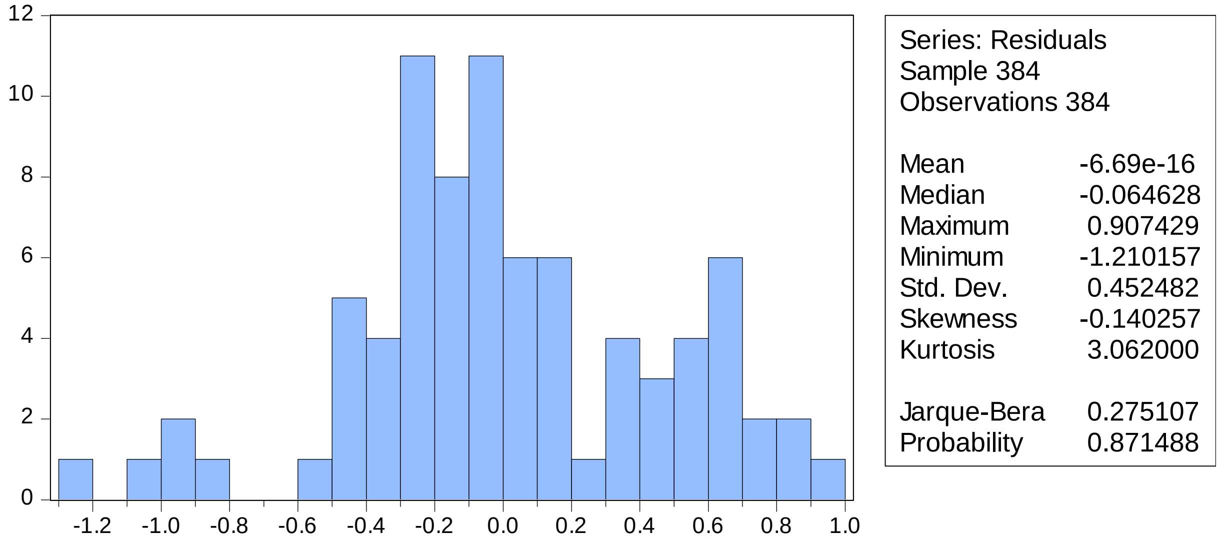
The objective was to analyze the effect of brand promotion on customer's resistance to switch. The multiple regression results found that promotional package was a very important determinant of customer switching behaviour as it had a value showing a great contribution as a predictor which revealed that promotional package had a positive and significant effect on customer switching behaviour. The implication of the findings was the interest in observing that despite the huge amounts of money spent on advertisement and promotional activities by the mobile telecommunications operators in Nigeria to drive profit vertically and remain competitive. The findings of this study is in line with the study of Rahman et al (2020) which reported that promotion significantly impacted on the Malaysian mobile user. The Nigerian mobile users differed significantly in their view on promotional offers by the mobile operators. It showed that promotional campaigns could encourage switching than retention, for example, sales promotion activities that were price sensitive could encourage customers to switch to mobile operators who offered that promotion at the time. However, promotion has an impact on consumers' perception in selecting mobile telecommunications service provider since it is used to communicate with the consumers with respect to product offerings.

Promotion possesses a significant key role in determining profitability and market success. According to the findings of Alvarez and Casielles (2015), a promotional offer of a product states at the moment of purchase as an explanatory element of the process. Promotion is a tool that can help manufacturers and/or retailers in the achievement of their objectives. Generally, a good publicizing promotion adds value, captures the attention of potential customers and encourages loyalty. It dissuades switching (Mallikarjuma, Krishina, Bulla and Das, 2016). Moreover, proficient service broadcasting is relatively connected with customers' expectation of advantages and lead their buying conduct thereby preventing switching (Sahari, Othman, Jakpur and Nichol, 2020). Gerrald and Cunningham (2004) posited that promoting the business through announcing various offers attracted more customers, and attractions such as free gifts or lucky draws publicized through adverts helped reduce switching behaviour.

According to Chinda (2019), an important assumption of regression is that the error, or residual, is normally distributed and uncorrelated with the predictors. Hence, three measures of normality test were used in this study. They are Jarque- Bera histogram normality test, Breusch-Godfrey serial correlation test and Breusch-Pagan-Godfrey test of heteroskedasticity.

Furthermore, the credibility of the regression estimate used in testing the hypothesis was hinged on the results of the three post-estimation tests which evaluated the normality of the regression residual, serial correlation and heteroskedasticity.

The first is the normality test using Jarque- Bera histogram and it is shown in fig 1



Based on the Jarque- Bera histogram normality test assumption, the histogram normality test presented above attested that the normality of the regression residual. This is based on the Jarque-Bera statistics of 0.275107 and a corresponding probability 0.871488. Since the Jarque- Bera statistics has a probability value of 0.871488 which is greater than 5%, we accept the null hypothesis which suggest that residuals of the regression are normally distributed. The second test is Breusch-Godfrey Serial autocorrelation test and the result is shown on table 8 below:

Table 8: Breusch-Godfrey Serial Correlation LM test

F-statistic	1.745985	Prob. F(2,379)	0.1815
Obs*R-squared	3.559059	Prob. Chi-Square(2)	0.1687

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Bonus Package	-0.005397	0.091944	-0.058694	0.9534
Data Speed	-0.009013	0.067607	-0.133308	0.8943
C	0.040986	0.288473	0.142077	0.8874
RESID(-1)	0.188990	0.115709	1.633328	0.1066
RESID(-2)	0.066714	0.116167	0.574289	0.5675

R-squared	0.044488	Mean dependent var	-6.69E-16
Adjusted R-squared	-0.006472	S.D. dependent var	0.452482
S.E. of regression	0.453944	Akaike info criterion	1.318775
Sum squared resid	15.45487	Schwarz criterion	1.467652
Log likelihood	-47.75099	Hannan-Quinn criter.	1.378464
F-statistic	0.872992	Durbin-Watson stat	2.024712
Prob(F-statistic)	0.484270		

Based on the assumption of Breusch-Godfrey serial correlation test, the outcome of the result indicated that Chi-Square and f-statistics have a probability value of 0.1687 and 0.1815 respectively. The result suggested that the residuals are not serially correlated because both probability outcomes are greater than 5% suggesting that the null hypothesis which proposed that the residuals of the regression are not serially correlated which state that autocorrelation do not exist among the residuals should be accepted and its alternate rejected.

The third post estimation test is the Breusch-Pagan-Godfrey test of heteroskedasticity. The result is indicated in the table 9 below:

Table 9: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.298081	Prob. F(2,381)	0.7431
Obs*R-squared	0.614631	Prob. Chi-Square(2)	0.7354
Scaled explained SS	0.587049	Prob. Chi-Square(2)	0.7456

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Sample: 384
Included observations: 384

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.257418	0.186771	1.378257	0.1721
Bonus package	0.015363	0.059675	0.257442	0.7975
Data Speed	-0.033742	0.043774	-0.770826	0.4432

R-squared	0.007683	Mean dependent var	0.202181
Adjusted R-squared	-0.018092	S.D. dependent var	0.292156
S.E. of regression	0.294787	Akaike info criterion	0.431653
Sum squared resid	6.691261	Schwarz criterion	0.520979
Log likelihood	-14.26611	Hannan-Quinn criter.	0.467466
F-statistic	0.298081	Durbin-Watson stat	2.185626
Prob(F-statistic)	0.743094		

Based on the heteroskedasticity test output according to the table above, the probability value of 0.7431 which is greater than 5%. Based on the hypothesis that has been created previously, the results of hypothesis testing indicate that the null hypothesis is accepted (p-value is greater than 0.05). Thus, it can be concluded that the residual variance is constant (homoscedasticity).
Because the residual variance is constant (homoscedasticity), the regression model has fulfilled the OLS assumption and hence the result is therefore reliable for making credible decision.

Summary, Conclusion and Recommendation

The main objective of this study was to ascertain the effect of brand promotion on customer's resistance to switch among the selected telecommunication firms in Abia State, Nigeria. Null hypothesis was projected and was tested using multiple regression model. The hypothesis was tested at 0.05 level of significance. Finding reviewed that only data speed has significant effect on customer resistance to switch.

Based on the finding we concluded that data speed has positive significant effect on customer resistance to switch among telecommunication firms in Abia State, Nigeria with an influence of organizational culture and we recommended that managers of telecommunication firms should ensure that their organizational culture is aligned to brand promotion that especially data speed to enhance its effectiveness in boosting customer resistance to switch and customer loyalty.

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AUDIT QUALITY AND ACCOUNTING CONSERVATISM OF LISTED INSURANCE COMPANIES IN NIGERIA

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Abstract
The study examined the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria, utilizing an ex-post facto research design. The study encompassed the entire population of fourteen insurance companies listed on the Nigerian Exchange (NGX) Group as of December 31, 2023, with a purposive sampling technique selecting ten insurance companies based on their performance in the Nigerian financial service sector. Secondary data were gathered from the annual reports and accounts of these companies spanning from 2013 to 2022. Employing the generalized least square (GLS) regression model in STATA 13.0 software, the findings revealed that audit firm size (AUDFMSZ) had an insignificant negative impact on accounting conservatism. However, audit tenure (AUDTEN) and audit fee (AUDFEE) exhibited significant positive effect on accounting conservatism of insurance companies in Nigeria. The study recommended that insurance companies should reconsider their audit firm selection criteria, emphasizing competence and industry expertise and should strike a balance between the benefits of longer audit tenure and potential risks to independence, ensuring appropriate allocation of audit fees to facilitate thorough and rigorous audit processes.

Keywords: audit quality, audit fee, audit tenure, audit firm size, accounting conservatism

Introduction

The failure and collapse of some of the major business organizations all around the globe led to the reduction in the confidence of stakeholders on the information contained in the financial statements, accompanied by many of the cases against audit firms which were involved in auditing the financial statements of these firms and there was no indication about lack of continuity in their reports (Sameh & Reyad, 2021). Audit quality of is an important factor since it reflects the auditor’s activities in gathering sufficient evidence, detecting fraud and errors, reducing the manipulation of financial information and also expressing the appropriate opinion on the financial reporting with all material respects (Soliman & Ragab, 2022). Simultaneously, the audit quality equally enhances the public confidence in the credibility of the audit process and financial reporting, especially on the auditor’s independence and believes that the auditor ethically behave towards their client (Hamid & Suzana, 2023). The ability of audit process to detect and report on the material misstatement of the financial statements, and the reduction of information asymmetry between management and shareholders is what is referred to as audit quality (Issa, 2018). The level of audit quality is linked to quality level of the information contained in financial statements, the reason for this is that the financial statement that have been audited by high quality auditors rarely contained substantial misstatements, which is reflected in minimization agency costs between shareholders and management. The audit quality is a set of methods and techniques that work to reduce errors and fraud, and it is supported through access to sufficient and convincing evidence in order to protect the interests of relevant parties (Abu & Hamdan, 2020). The probability of detection is a matter of competence, whereas the probability of revelation depends on the independence of the auditor, i.e. his/her willingness to face the pressure exerted by the producers of financial statements (Piot & Janin, 2017).

Accounting conservatism is one of the most important accounting principles that accountants still insist on. Generally, the concept of accounting conservatism is that companies should report at least the value of their assets and revenues, in other words, at most the value of debts and costs. Accounting conservatism is one of the basic assumptions of financial report indicating the willingness of company to quickly identify bad news than good ones (Basu, 2019). Conservatism is traditionally defined as accounting practices that anticipate no profit but anticipate all losses (Bliss, 2019). Basu (2019) sees conservatism as the asymmetric timeliness of earnings which require higher verification to recognize good news as gain than to recognize bad news as losses. Givoly and Hayn (2020) opined that conservatism is a selection criterion between accounting principles that leads to the minimization of cumulative reported earnings by slower revenue recognition, faster expense recognition, lower asset valuation and higher liability valuation. All of these definitions acknowledge that earnings reported under conservative accounting are understated rather than overstated. It limits over payment of incentive to managers (Chen *et al.,* 2017), allows early detection of negative net present value projects as it immediately recognizes expected losses (Ball *et al.,* 2019), limits managers' opportunistic behavior (Watts, 2019; and Chen *et al.,* 2017) and reduces information asymmetry between managers and outside shareholders (LaFond & Watts, 2018). Further, it improves the usefulness of financial statements (Ball & Shivakumar, 2006) and increase firm value (Watts, 2019). Thus, according to literatures, audit quality positively affects the quality of accounting information. With respect to conservatism, it is expected that accounting conservatism is greater in the financial statements of companies that use the best auditing services. The need for accounting conservatism is related to the increase of credibility in accounting information, as conservatism of declaring good results of the company increases accounting credibility and the ability to predict the future (Hellman, 2018; and Sameh & Reyad, 2021).

Prior studies argued that conservatism is affected by size of the independent auditing firm, suggesting that larger audit firms provide better audit quality, which positively affects the quality of the accounting information reported. Audit firm size affects accounting conservatism due to its affiliation with audit quality and thereby influence on accounting conservatism. Audit tenure refers to the number of consecutive years that the auditor has audited the client (Johnson *et al*., 2002). Long duration enhances auditor's competency to make them become more knowledgeable about client business environment, valuable in management plan and mitigate in contingency arise. However, Kramer *et al*. (2011) reveal that the level of conservatism in reported earnings are higher for short audit firm tenure than long audit firm tenure. Studies have also shown that audit fee can increase the quality of financial reports by increasing audit quality, since the assumption is that the fee charged by auditors affects audit accuracy and effort. On the other hand, companies with low quality financial statements may pay higher audit fees in order to influence the opinion and evaluations of auditors. Therefore, changes in audit fee are likely to result in changes in audit effort, which can either increase or decrease the likelihood of detecting financial misstatements, thereby affecting audit quality and ultimately accounting conservatism. This study sought to analyze the set of audit quality characteristics such as audit firm size, audit tenure and audit fee on accounting conservatism. Hence, this study examined the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria.

Statement of Problem

Audit quality and accounting conservatism has been a bone of contention in literatures over time and seems both can influence the capital market. Accordingly, several studies had been conducted on audit quality, auditor's ability to detect fraud, and ultimately, issuing appropriate audit opinion on the audited financial statements. Many accounting scandals and bankruptcies in financial markets have occurred in recent years; however, the most important results which have not been expected for these events was to increase warning on the importance of auditors' role and their vital role in the performance of many sections of financial markets (Hamdan, 2010). These events led to the proliferation demand for increasing audit quality and effect. Given the accounting scandals that occurred around the world, such as the downfall of Enron and WorldCom, investors have called for stronger oversight of company boards to prevent manipulation and fraud in accounting.

Conservatism reduces information asymmetry misbalance in the accounting information system between the insiders and outsiders of the firm and reduces a manager's ability to manipulate financial statements by decreasing management discretion and agency cost (LaFond & Watts, 2018). DeFond and Zhang (2014) argued that less conservative clients use misreporting to cover poor performance and do not earn a clean opinion from auditors. By including conservative statements, managers are adding on to substandard reporting and auditors are feeling confident to provide a positive opinion on such statements that are free from misstatements. Such statements create confidence in the minds of investors as well. To support this, De-Angelo (1981) states that the quality of an audit is defined as the decrease in the probability that an auditor can determine a breach in the client's accounting system. Consequently, conservative statements eliminate the information asymmetry problem and create a strong accounting system that can increase the overall quality of an audit. In auditing, fraudulent financial reporting and misappropriation of assets are considered as misstatements. Moreover, according to Watts and Zimmerman (1986), the argument is that "as agency costs increase, there is a demand for higher-quality audits and conservative statements, either voluntarily undertaken by managers as a bonding mechanism or externally imposed as a monitoring mechanism by stockholders and debt holders." Hence, conservatism reduces these misstatements performed by managers and also creates a pathway for auditors to provide reasonable assurance which states that the financial statement is free from material misstatements. Such an opinion from the auditor regarding the fairness of the financial statements leads to a decline in the audit risk. This thus demonstrates that there is an increase in the overall audit quality. Hence, the increase in audit quality would eventually enhance investor's confidence in financial markets.

The empirical studies examined regarding audit quality and accounting conservatism have become outdated, with the exception of Mamidu and Oladutire (2023), which concluded in 2022. Given the subsequent developments, there is a recognized necessity for more recent research to encompass these changes. Consequently, this study expands its research scope to the year 2023. Previous works by Agung (2021), Mamidu and Oladutire (2023), Mehrdad (2017), Mohammed (2014), and Pashaki and Kheradyar (2015) have explored various aspects of audit quality and accounting conservatism, but none have specifically investigated the impact of audit firm size, audit tenure, and audit fees on accounting conservatism. Additionally, existing studies on the relationship between audit quality and accounting conservatism have primarily focused on countries such as Indonesia, Iran, Egypt, and Jordan, with no prior research conducted in Nigeria. This study aims to address these identified gaps and contribute to the literature by exploring the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria, spanning a duration of eleven (11) years from 2013 to 2023.

The main objective of this study is to examine the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria while the specific objectives are to:

i. assess the effect of audit firm size on accounting conservatism of listed insurance companies in Nigeria.
ii. determine the effect of audit tenure on accounting conservatism of listed insurance companies in Nigeria.

iii. evaluate the effect of audit fee on accounting conservatism of listed insurance companies in Nigeria.

Base on the specific objectives of the study, the following hypotheses are formulated in null form to guide the study:

Ho1: Audit firm size has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

Ho2: Audit tenure has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

Ho3: Audit fee has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

REVIEW OF RELATED LITERATURE

Concept of Audit Quality

Audit quality is a comprehensive concept that encompasses various aspects of an audit engagement to ensure its effectiveness and reliability. The primary objective is to provide assurance on the financial statements and enhance confidence in the financial reporting process. It encompasses factors such as the competence, independence, objectivity, and ethical behavior of auditors, as well as the robustness of audit procedures and the overall value of the audit process (IAASB, 2013). According to the International Auditing and Assurance Standards Board (IAASB, 2013), audit quality is defined as "the objective of an audit to provide a reasonable basis for an opinion regarding the financial statements, taken as a whole, to be free from material misstatement, whether due to fraud or error." This definition highlights the main purpose of an audit, which is to deliver reliable and unbiased information to users of financial statements. The Center for Audit Quality (CAQ, 2014) defines audit quality as "the degree to which the auditor fulfills its responsibilities to provide reasonable assurance to investors and other stakeholders that the financial statements are free of material misstatements and are prepared in accordance with applicable accounting standards." This definition emphasizes the auditor's responsibility to provide accurate and dependable financial information. In addition, the Financial Stability Board (FSB, 2018) defines audit quality as "the degree to which audits are performed in accordance with applicable professional standards and legal and regulatory requirements, consistently and effectively, and how well the results of those audits achieve the intended outcomes." This definition expands the scope of audit quality to include compliance with standards and regulations, consistency in audit performance, and the ultimate impact of audits on the quality of financial reporting.

Audit Firm Size

Audit firm size is an important factor that influences audit quality and the perception of financial statement users. Larger audit firms often have greater resources, expertise, and reputation, which are believed to contribute to higher audit quality (Francis, 2011). Chen *et al*. (2020) defined audit firm size as the number of partners and employees in an audit firm. They examined the relationship between audit firm size and audit quality, finding that larger audit firms tend to exhibit higher audit quality due to their greater resources and expertise. Choi *et al*. (2020) define audit firm size as the market share of an audit firm in terms of its client base. They investigate the relationship between audit firm size and audit fees, suggesting that larger audit firms can command higher fees due to their market dominance and perceived higher quality. DeAngelo (1981) defines audit firm size based on the market capitalization of audit clients. According to DeAngelo, larger audit firms tend to attract larger and more complex clients, indicating a positive association between audit firm size and the scale of the clients served. Gul *et al*. (2020) defined audit firm size as the number of clients served by an audit firm. They examine the impact of audit firm size on audit quality and financial reporting quality, suggesting that larger audit firms can devote more resources to each client, leading to higher-quality audits and financial reporting. Research has shown a positive relationship between audit firm size and audit quality. Studies have found that larger audit firms tend to have stricter quality control systems, more experienced personnel, and better access to training and professional development opportunities (Simunic, 2017; Carcello *et al*., 2002).

Audit Tenure

Audit tenure refers to the length of time an audit firm has been engaged to audit a particular client. It is an important aspect of the auditor-client relationship and can influence audit quality, independence, and the effectiveness of financial reporting oversight. Audit tenure represents the duration of the relationship between the auditor and the client organization (Raghunandan & Rama, 2013). Lennox *et al*. (2014) defined audit tenure as the number of consecutive years an auditor has been in charge of a client's audit engagement. Audit tenure refers to the period of time an auditor has been serving a particular client (Simunic, 2017). Auditor tenure is viewed as the length of time between auditor-client relationships (Okolie, 2014). A lengthy link between the auditor and his client may threaten unconventionality given developed familiarity. This may lead to less caution and compromise on the part of the auditor. Besides, a lengthy engagement may bring about less effort to signal the failings of internal control and risk sources (Okolie, 2014). Knapp (1991) established a linkage between audit tenure and competence.

Audit Fee

An audit fee refers to the compensation received by auditors for carrying out their duties on behalf of a company or client. This remuneration plays a crucial role in determining the quality of service provided by auditors during the course of their work (Smii, 2016). It serves as an incentive for auditors to perform their duties diligently and thoroughly. Audit fees can be defined as the monetary amount received by an audit firm for undertaking an audit assignment (Enofe *et al*., 2021). These fees are influenced by various objective factors, including the size of the firm, the complexity of the audit issues pertaining to the company's financial statements, and changes in the institutional and accounting framework since the last audit was conducted. The amount of audit fee is also dependent on several factors such as the risk associated with the assignment, the complexity of the services provided, the expertise required, and other professional considerations (Yuniarti, 2011). Higher audit fees are often associated with a higher quality of audit services, as they allow auditors to allocate more resources and time to perform comprehensive audit procedures.

Concept of Accounting Conservatism

Accounting conservatism is a principle in financial reporting that promotes prudence and caution in the recognition and measurement of assets, liabilities, revenues, and expenses. It involves a bias towards recognizing losses and liabilities earlier than gains and assets. This approach serves as a valuable means of reducing the agency problem, which arises due to the separation of ownership and control in corporations. By restraining opportunistic behavior and reducing information asymmetry between management and external stakeholders, accounting conservatism enhances the reliability of financial statements and protects the interests of shareholders and creditors. Watts (2019) argues that accounting conservatism plays a crucial role in curbing managerial opportunism. It reduces the ability of management to overstate the firm's net assets and earnings, thereby discouraging manipulative practices that could mislead investors and creditors. By recognizing losses earlier, accounting conservatism ensures that negative events and risks are promptly reflected in financial statements, providing a more accurate portrayal of the firm's financial position. One way in which accounting conservatism deters management from engaging in opportunistic behavior is by influencing investment decisions. Ball and Shivakumar (2006) suggest that accounting conservatism discourages managers from investing in projects with negative net present value. Since conservatism limits the ability to defer loss recognition to the future, managers are compelled to carefully evaluate the economic viability of potential investments. This prevents the pursuit of projects that may artificially boost short-term performance but have adverse long-term implications for the firm's financial health. Watts (2019) emphasizes the importance of differential verifiability in accounting conservatism.

Theoretical Review

Agency Theory

The agency problem, which was postulated by Jensen and Meckling in 1976, arises due to the separation of ownership and control in corporations. It refers to the conflicts of interest and divergence of goals between principals (shareholders/owners) and agents (managers) who are responsible for managing the company. The agency problem is grounded in several key assumptions. Firstly, principals seek to maximize their wealth, while agents may have different objectives such as maximizing their own utility or job security (Eisenhardt, 1989). This goal divergence can lead to conflicts, as agents may prioritize their own interests over those of the principals. Secondly, information asymmetry exists between principals and agents, with agents typically possessing superior knowledge about the company's operations and financial performance (Fama, 1980). This information advantage can enable agents to exploit their position for personal gain, potentially harming the principals. Additionally, agents are assumed to act in their self-interest, pursuing actions that may not align with the best interests of the principals (Eisenhardt, 1989). They may engage in risk-taking behaviors or shirk their responsibilities, knowing that the consequences would primarily be borne by the principals. These assumptions collectively highlight the inherent challenges and conflicts that arise due to the agency problem. The agency problem concept offers several strengths. It underscores the importance of aligning the interests of principals and agents to ensure effective management of the firm (Jensen & Meckling, 1976). By recognizing and addressing the conflicts of interest, the agency problem has stimulated the development of various governance mechanisms such as monitoring systems, incentive structures, and external audits (Fama & Jensen, 1983). These mechanisms aim to mitigate agency conflicts and promote accountability, transparency, and better corporate governance practices. Moreover, the agency problem provides a theoretical framework that enables the analysis and understanding of the challenges associated with corporate governance. It has shaped academic research and discussions on topics related to principal-agent relationships and the design of governance mechanisms (Eisenhardt, 1989). However, the agency problem is not without criticisms. Some argue that it oversimplifies the complexities of human behavior by assuming that all agents are solely driven by self-interest, neglecting other factors that may motivate managers (Donaldson, 1990). Additionally, treating agents as a homogeneous group overlooks the heterogeneity of goals and interests that may exist among managers within a company. Furthermore, the direct empirical evidence linking the agency problem to firm performance or financial outcomes is limited, raising questions about the causality and magnitude of its impact (Daily & Dalton, 1992). Moreover, critics contend that the agency problem primarily focuses on conflicts between principals and agents, neglecting the interests and perspectives of other stakeholders such as employees, customers, and society as a whole (Donaldson & Preston, 1995). This criticism highlights the need for a broader consideration of stakeholder interests in the corporate governance discourse.

Stakeholder Theory

Stakeholder theory, developed by R. Edward Freeman in the 1980s, examines the relationship between a firm and its various stakeholders, emphasizing that businesses should consider the interests and concerns of all individuals or groups affected by their operations. The theory argues that a firm's responsibilities extend beyond maximizing shareholder wealth and should encompass the well-being of stakeholders such as employees, customers, suppliers, local communities, and the environment (Freeman, 1984). Stakeholder theory posits that firms are embedded in a network of relationships with different stakeholders, and the success of a firm depends on managing and balancing the interests of these stakeholders. The theory challenges the traditional shareholder-centric view of the firm and promotes a broader perspective that recognizes the interdependence between the firm and its stakeholders (Donaldson & Preston, 1995). One of the key ideas in stakeholder theory is that stakeholders have legitimate claims or rights to the firm's resources, decisions, and outcomes. Firms are expected to consider and address these claims, recognizing that the interests of stakeholders are essential for long-term sustainability and value creation. Stakeholder theory also highlights the dynamic nature of stakeholder relationships, acknowledging that stakeholder salience and priorities can change over time. Stakeholder theory offers several strengths. It provides a framework for understanding and managing the complex web of relationships between a firm and its stakeholders, encouraging firms to adopt a more inclusive and responsible approach to business (Freeman, 1984). By considering the interests of multiple stakeholders, firms can build trust, enhance reputation, and foster mutually beneficial relationships. The theory has also influenced corporate governance practices, sustainability initiatives, and ethical considerations in business decision-making. However, stakeholder theory is not without criticisms. One criticism is that it lacks clear guidance on how to prioritize conflicting stakeholder interests or resolve trade-offs between stakeholders (Donaldson & Preston, 1995). Additionally, some argue that a firm's primary focus should be on creating shareholder value, with stakeholder considerations serving as a means to achieve that objective.

However, this study is underpinned by stakeholder theory, which offers a theoretical framework for comprehending how organizations should incorporate the interests and concerns of various stakeholders, extending beyond shareholders, in their decision-making processes. Stakeholder theory suggested that organizations should account for the interests of different stakeholders when making decisions. The stakeholders in this study may include shareholders, employees, customers, regulators, and the community. By considering stakeholder needs and expectations, and involving them in decision-making processes, the study can explore how audit quality influences accounting conservatism. Audit quality plays a vital role in ensuring reliable financial information, thereby providing transparency and accountability to stakeholders. Accounting conservatism, on the other hand, promotes cautious reporting practices and reduces information gaps. Applying stakeholder theory allows the study to examine how audit quality affects accounting conservatism in alignment with stakeholder concerns. It acknowledges the significance of stakeholders, engages them in decision-making, and aims to create value for all parties involved. This approach facilitates a comprehensive understanding of how audit quality and accounting conservatism can address stakeholder needs and expectations.

Empirical Review

Mamidu and Oladutire (2023) examined the effects of audit quality characteristics in areas of audit independence, audit firm size and audit tenure on accounting conservatism among listed firms in Nigeria. The study used longitudinal and correlation research designs. The population of the study consists 151 firms listed on the Nigerian Exchange (NGX) Group as at 31st December, 2022. Statistics was analyzed using descriptive in addition to inferential statistics and panel data regression analysis. The study revealed that audit independence had significant positive effect on accounting conservatism, audit firm size had significant negative effect, while audit tenure had a positive but insignificant effect. The study recommended that firms in Nigeria should be conscious of the quality of the mechanism imputed into audit engagement in order to ensure audit quality as it has implication on quality of output and should also not compromise audit independence in order to present globally accepted financial reports.

Miebi and Akpoveta (2023) examined the drivers of audit quality in Nigeria, with a special focus on 10 deposit money institutions from 2012 to 2021. The study employed the panel data approach. The model was put through a number of diagnostic tests before executing the main regression. As a result, both the Lagrange Multiplier-LM Tests and the Hausman test (HAT) demonstrated that the Random effect model (REM) is viable for the research. The study found that audit committee meetings have a positive statistically insignificant influence on audit quality, but audit fee and independence have a statistically significant and positive effect. The study also indicated that a firm's auditor payment has a significant effect on audit quality and that audit tenure has a statistically significant detrimental influence on audit quality. The study recommended that the Nigerian bank regulators should not over-emphasis the number of days, the committee meets each month because it is not a significant driver of audit quality audit quality. Also, auditing firms' operations should be closely m onitored, particularly in the area of auditor compensation, since it helps preserve audit quality.

Yola *et al*. (2022) determined the effect of audit committee, firm size, leverage, and accounting conservatism on tax avoidance. The study uses a sample of the mining sector that is included in the 2017-2019 BEI list. The study uses the multiple linear analysis. The study's samples size was 47 out of 58 population while purposive sampling method was used in sampling. The study showed simultaneously that the audit committee, firm size, leverage, accounting conservatism do not simultaneously affect tax avoidance. The study recommended that the next researcher should be more identical towards the development of the next research and must be able to evaluate the theoretical or practical research objectives to be carried out so that they can produce different research and produce new theories that are also able to evaluate performance.

Agung (2021) analyzed the effect of audit quality on accounting conservatism, the effect of audit quality on earnings management, the effect of accounting conservatism on earnings management and the effect of audit quality on earnings management through accounting conservatism. The study used the population of all banking corporations listed on the Indonesia Stock Exchange (IDX) totaling 45 corporations taken from 2013 to 2017. The analysis technique uses path analysis. The results of the analysis show that audit quality has no effect on accounting conservatism, audit quality has an effect on earnings management, accounting conservatism has a significant effect on earnings management and audit quality has no effect on earnings management through accounting conservatism. The study recommended that future researchers should measure more variables.

Khan *et al.* (2019) examined the effect of internal audit committee and external auditor quality on accrual-based measures of accounting conservatism, and the benefits of accounting conservatism on firms' market performance. Moreover, this study also investigates whether the accrual-based conservatism mediate the relationship between audit committee and external auditor quality factors with market-based firms' performance. A total of 543 sample firms are selected from the Bursa Malaysia for the period from 2004 to 2013. For data analysis, panel data methodology is employed and structural equation modeling (SEM) technique is used to test the developed hypotheses of this study. The study showed that audit committee effectiveness and external auditor quality are significant with two-year-lagged effect on accrual-based measure of conservatism. Furthermore, accrual-based measure of conservatism mediated the relationship between (a) audit committee effectiveness and market-based firms' performance, and (b) external auditor quality and market-based firms' performance. The study recommended future studies to consider other aspects of audit committee and auditor quality using methods like surveys and interviews with experts can help confirm that these professionals contribute to improving the quality of information.

Mohammed *et al*. (2019) evaluated the impact of audit quality on accounting conservatism in Turkey. The study was based on a sample of Turkish firms listed on BIST from 2011 to 2015. Static panel data was employed in which the same firms serve on the panel over a five-year period. The study found that audit quality, in terms of brand name auditor and industry specialist auditor, is positively related to conservatism. The study recommended that future studies should include other attributes of corporate governance, particularly ownership structure or even the quality of accounting information, such as value relevance, earnings management and the relationship between the studies constructs before and after the regulatory changes in 2012. In addition, other methods of data collection, such as questionnaire and interviews with analysts, auditors and professionals involved with the audit work could be used to verify that these professionals contribute to better quality of information.

Nasr and Ntim (2018) investigated the effect of corporate governance mechanisms (board size, board independence, separation of chairman and CEO roles, and external auditor type) on accounting conservatism in Egypt. Archival data relating to corporate governance and accounting conservatism are collected and analysed using multivariate regression techniques. The study indicated that board independence is positively associated with accounting conservatism. By contrast, board size and auditor type are negatively associated with accounting conservatism, while separating the chairperson and CEO roles has no significant relationship with accounting conservatism. The study recommended that that future researchers should measure more variables of corporate governance mechanisms on accounting conservatism.

Gap in Literature

While numerous studies have explored the correlation between audit quality and accounting conservatism, there exists a limited emphasis on specific variables within these constructs. Previous research has predominantly focused on factors such as audit committee effectiveness, auditor tenure, auditor specialization, and auditor size in relation to accounting conservatism across diverse sectors. However, there is a research gap concerning the impact of audit quality variables, including audit firm size, audit tenure, and audit fee, on accounting conservatism within ten (10) listed insurance companies in Nigeria over an ten-year span from 2014 to 2023. Existing empirical studies on audit quality and accounting conservatism also have constraints, often encompassing data only until 2017, potentially overlooking recent developments in the insurance industry. Consequently, there is a critical need for more contemporary research to address this gap and comprehensively understand the relationship between audit quality and accounting conservatism in Nigerian insurance companies. To fill this void, this study endeavors to investigate the influence of audit quality variables, specifically audit firm size, audit tenure, and audit fee, on accounting conservatism in listed insurance companies in Nigeria from 2014 to 2023. The research will employ panel regression techniques to analyze the collected data, enabling an examination of the relationship between audit quality and accounting conservatism while considering the potential impacts of other relevant factors. By extending the research scope to 2023, this study aims to provide more recent insights and contribute to the existing literature on the nexus between audit quality and accounting conservatism in the unique context of Nigerian listed insurance companies. Through this investigation, the study seeks to bridge the existing gaps in the literature and offer valuable insights into the dynamic relationship between audit quality and accounting conservatism within the insurance sector.

METHODOLOGY

This study adopted an *ex-post facto* research design as it measures the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria. The population of this study consists of all the fourteen (14) insurance companies listed on the Nigerian Exchange (NGX) Group as at 31st Dec. 2023. However, ten of these insurance companies were selected for this study. Purposive sampling technique was employed in determining the sample size to be used which is due to the availability of data and their performance in the Nigerian financial service sector in the Nigerian Exchange (NGX) Group. This study used secondary sources of data collection. The data were obtained from the annual reports and accounts of ten (10) insurance companies listed on the Nigerian Exchange (NGX) Group for the period 2014 to 2023. This secondary source of data was used because of the nature variables under study.

For data analysis, a combination of inferential and descriptive statistics was utilized. Descriptive statistics was conducted to provide a summary of the data, including measures such as mean, standard deviation, minimum, and maximum. Additionally, a Pearson correlation matrix was generated to examine the relationships between the corporate social responsibility variables and profitability. To assess multicollinearity, the Variance Inflation Factor (VIF) was computed. Other tests included the Shapiro-Wilk normality test, Variance Inflation Factor (VIF), Heteroscedasticity test and Hausman specification test. Finally, the Generalized Least Squares (GLS) regression technique was conducted to test the hypotheses.

Model Specification

The regression model is presented as follows;

$ACCSVT_{it} = \beta_0 + \beta_1 AUDFMSZ_{it} + \beta_2 AUDTEN_{it} + \beta_3 AUDFEE_{it} + \varepsilon_{it}$

Where**:**

ACCSVT = Accounting Conservatism

AUDFMSZ= Audit Firm Size

AUDTEN= Audit Tenure

AUDFEE = Audit Fee

ε = Error term

β_0 = intercept

i = period

t = time

β_1, β_2, and β_3 = the various slope coefficients of the explanatory variables.

Variables Measurement and Justification

The measurement of the variables are presented in Table 1

Table 1: Measurement of the Variables

Variable Name	Type	Variable Measurement and Justification
Accounting conservatism (ACCSVT)	Dependent	Measured as the market-to-book ratio (Agung, 2021; Yola *et al*., 2022; Zadeh *et al*., 2022)
Audit firm size (AUDFMSZ)	Independent	Measured by Dummy variable (One (1) if the firm is audited by a Big four audit firms and Zero (0) if otherwise (Agung, 2021; Miebi & Akpoveta, 2023; Mohammed *et al*., 2019).
Audit tenure (AUDTEN)	Independent	Measured is the natural log of the number of years the company has been audited by the same firm. (Miebi & Akpoveta, 2023; Mohammed *et al*., 2019)
Audit fee (AUDFEE)	Independent	It is measured by natural logarithm of audit fees (Miebi & Akpoveta, 2023; Mohammed *et al*., 2019)

Source: Researcher's Compilation (2024)

DATA PRESENTATION AND ANALYSIS

Descriptive Statistics

Table 2: Summary of the Descriptive Statistics of the Entire Data Set.

Variables	Obs	Mean	Std. Dev.	Min	Max
ACCSVT	98	1.567105	1.67523	-1.3881	6.715
AUDFMSZ	100	.81	.3942772	0	1
AUDTEN	91	1.141464	.5004837	.301	1.7482
AUDFEE	100	3.345695	1.541519	.8451	5.8096

Source: Researcher's Computation using STATA 13 software

Table 2 shows that the accounting conservatism (ACCSVT) has a minimum value of -1.3881, a maximum value of 6.715 and a mean value of 1.567105 that is within the minimum and maximum values indicating a good spread within the period studied. The table also reveals that ACCSVT has a standard deviation of 1.67523 that is more than the mean, which implies that it had strong growth for the period under review. Table 2 also shows that audit firm size (AUDFMSZ) has a minimum value of 0, a maximum value of 1 and a mean value of .81 that is within the minimum and maximum indicating a good spread within the period studied. The table also reveals that AUDFMSZ has a standard deviation of .3942772 that is less than the mean, which implies that it had slow growth during the period under review.

Table 2 equally shows that the audit tenure (AUDTEN) has a minimum value of .301, a maximum value of 1.7482 and a mean value of 1.141464 that is within the minimum and maximum values indicating a good spread within the period studied. The table also reveals that AUDTEN has a standard deviation of .5004837 that is less than the mean, which implies that it had slow growth for the period under review. Table 2 further shows that audit fee (AUDFEE) has a minimum value of .8451, a maximum value of 5.8096 and a mean value of 3.345695 that is within the minimum and maximum indicating a good spread within the period studied. The table also reveals that AUDFEE has a standard deviation of 1.541519 that is less than the mean, which implies that it had a slow growth during the period under review.

Shapiro Wilk Normality Test

Table 3: Results of the Normality Test Conducted with the Use of Shapiro Wilk Test

Variables	Obs	W	V	Z	Prob>z
Residual	91	0.96763	2.471	1.997	0.02294

Source: Researcher's Computation using STATA 13 software

Figure 4.1: Normal Distribution Curve

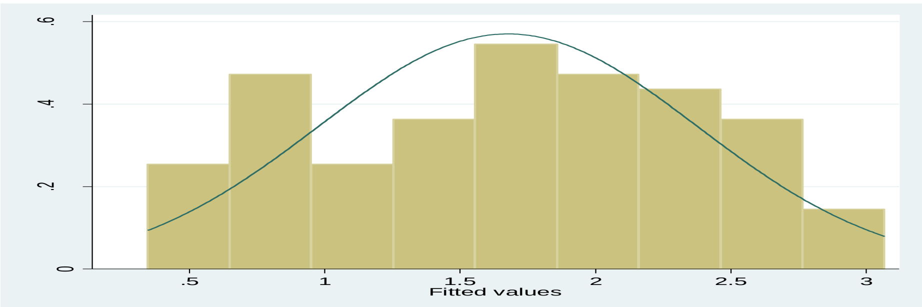

Table 3 above shows the residual and the z value of 1.997 and the corresponding probability of value of 0.02294 that is less than 0.05 which signifies that the residual is not normally distributed around the mean. This result is further collaborated by the normal distribution curve presented in figure 4.1 above. This implies that one of the basic assumptions of regression technique which allows only normally distributed residual has been violated which necessitated the use of robust regression technique.

Pearson Correlation

Table 4: Pearson Correlation Matrix for the Data Set.

	ACCSVT	AUDFMSZ	AUDTEN	AUDFEE
ACCSVT	1.0000			
AUDFMSZ	-0.1555	1.0000		
AUDTEN	0.3526	-0.1808	1.0000	
AUDFEE	0.2338	0.0758	0.1161	1.0000

Source: Researcher's Computation using STATA 13 software

The correlation matrix determines the degree of relationships between the proxies of an independent variable and the dependent variable. It is also used to show whether there is an association among the proxies of independent variable themselves, to detect if a multicollinearity problem exists in the model. The result from table 4 shows that there exist 16% negative and weak relationship between audit firm size (AUDFMSZ) and accounting conservatism (ACCSVT) of insurance companies in Nigeria from the correlation coefficient of -0.1555. The table also shows that there is a 35% positive and moderate relationship between audit tenure (AUDTEN) and accounting conservatism (ACCSVT) of insurance companies in Nigeria from the correlation coefficient of 0.3526. Furthermore, the table shows 23% positive and weak relationship between audit fees (AUDFEE) and accounting conservatism (ACCSVT) of insurance companies in Nigeria from the correlation coefficient of 0.2338. Finally, the relationship between proxies of independent variable themselves suggest being mild as all coefficients are below the threshold of 0.80 as suggested by (Gujarati, 2003) which indicates the absence of multicolinearity problem.

Variance Inflator Factor (VIF) Results

Table 5: Variance Inflator Factor (VIF)

Variable	VIF	I/VIF
AUDTEN	1.06	0.947547
AUDFMSZ	1.05	0.954985
AUDFEE	1.04	0.976642
Mean VIF	1.04	

Source: Researcher's Computation using STATA 13 software

To further confirm the absence of multicolinearity problem among the exogenous variables, colinearity diagnostics test was equally observed as the Variance Inflation Factors (VIF) and the Inverse Variance Inflation Factors (I/VIF) values portray no multicolinearity problem in the data as their values are less than 10 and 1 respectively (Gujarati, 2003) as presented in table 5. This point to the fact that the variables are well selected and fitted in the same regression model because the multicolinearity problem is absent in the model, which is one of the requirements for regression analysis.

Heteroscedasticity test

Table 6: Heteroscedasticity test

Type of test	Chi2	P-Value
Heteroscedasticity Test	0.71	0.3979

Source: Researcher's Computation Using STATA 13 software

To establish that the data for this study was robust for the model, a Heteroscedasticity test was carried out. However, the study revealed that data is homoskedastic. This is confirmed from the heteroskedasticity result in table 6 which revealed the chi2 value of 0.71 with a p-value of 0.3979. This satisfies the classical linear regression assumption of homoskedasticity (constant-error variance) which doesn't necessitated the use of robust effect regression model.

Hausman Specification Test

Table 7: Result of Hausman Specification Test Conducted

Chi2	1.89
Prob. Chi2	0.5949

Source: Researcher's Computation using STATA 13 software

The data for this study is panel and panel data can lead to an error that is clustered and possibly correlated over time. This is because each insurance companies may have its entity-specific characteristic that can determine its characteristics (i.e. unobserved heterogeneity). And this may bias the outcome variable or even the explanatory variables. As such, there is a need to control that. The Hausman test was conducted and shows that the random effect model is more appropriate. This can be confirmed from the Chi2 value of 1.89 with a p-value of 0.5949 in table 7 which is not significant at all levels of significance.

The Results of Robust Random Effect Regression Model

Table 8: Robust Random Effect Regression Model Conducted

Variable	**Coefficients**	**z-value**	**Prob.**
AUDFMSZ	-.5069308	-1.12	0.264
AUDTEN	1.033138	3.03	0.003
AUDFEE	.2321389	2.07	0.041
_Cons.	.1231321	0.18	0.856
R-sq overall	0.1557		
Wald chi2	8.18		
Prob. >chi2	0.0424		

Source: Researcher's Computation using STATA 13 software

Table 8 above shows that 16% variation of accounting conservatism (ACCSVT) is predicted by the combined effect of audit firm size (AUDFMSZ), audit tenure (AUDTEN) and audit fee (AUDFEE) with (Overall R-sq of 0.1557). This indicates that the model of the study is fit and the independent variables are properly combined and used. The Wald chi2 value of 8.18 with a P-value of 0.0424 signified that the model is fit for the study.

Test of Hypotheses

To examine the effect of audit quality on accounting conservatism of listed insurance companies in Nigeria, the formulated hypotheses were tested using a robust random effect regression model.

Ho_1: Audit firm size has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

The results in Table 8 above shows that the z-value of -1.12 and the corresponding p-value of 0.264 shows that audit firm size has an insignificant negative impact on accounting conservatism of insurance companies in Nigeria for the period under review. Based on this, the null hypothesis which says that audit firm size has no significant effect on accounting conservatism of listed insurance companies in Nigeria is accepted.

Ho_2: Audit tenure has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

Table 8 equally indicate that the z-value of 3.03 and the corresponding p-value of 0.003 shows that audit tenure has a significant positive effect on accounting conservatism of insurance companies in Nigeria for the period under review. Based on this, the null hypothesis which says that audit tenure has no significant effect on accounting conservatism of listed insurance companies in Nigeria is rejected.

Ho_3: Audit fee has no significant effect on accounting conservatism of listed insurance companies in Nigeria.

Table 8 finally reveals that the z-value of 2.07 and the corresponding p-value of 0.041 shows that audit fee has a significant positive effect on accounting conservatism of insurance companies in Nigeria for the period under review. Based on this, the null hypothesis which says that audit fee has no significant effect on accounting conservatism of listed insurance companies in Nigeria is rejected.

Discussion of Findings

Audit Firm Size and Accounting Conservatism

This study reveals that audit firm size (AUDFMSZ) has an insignificant negative effect on accounting conservatism of insurance companies in Nigeria. This shows that an increase in audit firm size will decrease the accounting conservatism of insurance companies in Nigeria, by -.5069308. However, the finding is not in agreement with the findings of Mamidu and Oladutire (2023) and contradicts expectations from stakeholder theory, which suggests a positive relationship.

Audit Tenure and Accounting Conservatism

This study also reveals that audit tenure (AUDTEN) has a significant positive effect on accounting conservatism of insurance companies in Nigeria. This shows that an increase in audit tenure will increase the accounting conservatism of insurance companies in Nigeria, by 1.033138. This finding is in consonance with the finding of Ayorinde and Babajide (2015), Miebi and Akpoveta (2023), and Mohammed (2014) and not in agreement with the findings of Mamidu and Oladutire (2023). The findings align with the stakeholder theory, indicating that an extended audit tenure enhances accounting conservatism, meeting reliability expectations.

Audit Fee and Accounting Conservatism

This study finally reveals that audit fee (AUDFEE) has a significant positive effect on accounting conservatism of insurance companies in Nigeria. This shows that an increase in audit fee will increase the accounting conservatism of insurance companies in Nigeria, by .2321389. This finding is also in line with the findings of Miebi and Akpoveta (2023). The result supports stakeholder theory, as higher audit fees can enhance financial reporting reliability, meeting stakeholder expectations for cautious reporting practices.

CONCLUSION AND RECOMMENDATIONS

The unexpected negative relationship suggests that as audit firm size increases, accounting conservatism tends to decrease. This finding challenges conventional wisdom and signals that larger audit firms may need to reevaluate their approaches to fostering prudence in financial reporting. The implication extends to regulatory bodies and policymakers, emphasizing the need for nuanced considerations in evaluating the impact of audit firm size on financial conservatism. On the positive side, the significant positive effect of audit tenure on accounting conservatism indicates that extended audit tenure is associated with increased accounting conservatism, implying that longer-lasting audit engagements contribute to more cautious financial reporting practices. This finding reinforces the importance of stability and continuity in auditing relationships. Companies and auditors may find it beneficial to cultivate long-term partnerships, promoting a better understanding of the business and enhancing the reliability of financial information. Regarding audit fee, the significant positive effect on accounting conservatism indicates that higher audit fees are linked to increased financial prudence.

This finding underscores the crucial role of adequate financial resources in ensuring rigorous audit processes, ultimately contributing to the reliability and cautiousness of financial reporting.

In view of the foregoing, this study recommends as follows:

1. Insurance companies should reassess their criteria for selecting audit firms, considering factors beyond size. While larger audit firms may offer certain advantages, the focus should be on competence, industry expertise, and a track record of promoting accounting conservatism.
2. Insurance companies should be mindful of maintaining a balance between the benefits of longer audit tenure and the potential risks to independence. Periodic rotation of audit firms or partners can be considered to mitigate any independence concerns while still benefiting from the stability and understanding that longer tenures can provide.
3. Insurance companies should ensure that audit fees are appropriately allocated to the audit function to facilitate thorough and rigorous audit processes.

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ISSUES IN UTILITARIANIST CONCEPT OF ETHICS AMONG MANAGERS IN THE MODERN-DAY WORKPLACE

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Abstract
In a dynamic business environment, ethical challenges and dilemmas may arise due to technological advancements, globalization, and shifting in societal norms. For managers, their commitment to ethical principles enables the organization to adapt and respond effectively to workplace activities. However, with the preponderance of social vices among neo-liberals with relativist interest, many organizations are divided about the ideal nature of morality. For most managers ethical issues should be based on utilitarian perspective, at least on the basis its concern for greater number. While this may be true, this study however claims that the concept of greater number is not entirely an act of virtue. Situations are in organizational practice where this doctrine may not apply. The researcher therefore by content analysis of secondary repositories intends to point out the inherent issues in this approach. The study concludes that certain ethical questions transcend the realm of utilitarian doctrine for greater number.

Key words: Utilitarianism, ethics, manager, workplace

Introduction

The utilitarian theory by Jeremy Bentham is of the view that ethical decisions are those made to generate the greatest benefits for the largest number of people. It is sometimes referred to as consequential principle because it focuses on the consequences of actions not on how such consequences are achieved. It is in line with business decisions, which depends on cost and benefits that can be calculated. Its weakness lies in the fact that it can allow a few people to be terribly affected negatively as far as majority is positively affected by the decisions. The personal liberty framework is of the view that everyone has a right and as such decisions should be made in such a way that it ensures the greatest possible freedom of choice and liberty for individuals. The liberties include fair trial, freedom of speech, freedom of movement, physical security, torture, due process, and the right to privacy.

The problem however with this framework is that a person's right may conflict with that of another. The distributive justice framework holds that ethical decisions are those that promote equity, fairness and impartiality with respect to the distribution of rewards and administrative rules which are the basis for social cooperation. The problem with this framework on the other hand is that society does not seem to agree on what activities provide the greatest benefit to the least well-off (McShane and Von Glinow, 2003). The individual ethics of top managers then and organizational leaders can influence the organization's code of ethics. It is worthy of remarks that effective ethical leaders often influence their employees to be part of the corporate mission that is socially responsible. On the other hand,unethical behaviour of organization leaders will also influence their employees to behave unethically because organization's ethics begins at the top.It then follows that utilitarian approach to ethical issues in the organizational workplace must be re-examined as the world is fast shifting towards relative interest.

Statement of problem

While the utilitarian doctrine is useful for its greater number principle, it however has been widely misconstrued and applied in the organizational workplace. Particularly among relativists and neo-liberals, there is the natural inclination to distort truth for what it is or in some cases corrupt public moral. The use of utilitarian law for its ethical application in the organizational work place, this study avows, must be checked as it has with it the tendency to be used by a number of perverts in the organization to strip the few that are right thinking or holding onto their conviction.

objectives.

The following objectives tend to define the study

1. examine the relevance of utilitarian law of ethics in the organizational workplace
2. point out the misconstrued application of the principle in the modern-day workplace

Conceptual issues in ethical meaning

McShane and Von Glinow (2003) capture ethics as "the study of moral principles or values that determine whether actions are right or wrong and outcomes are good or bad". Most dictionaries define ethics as the discipline that deals with what is good and bad, and with moral duty and obligation. In a wider scale, ethics is known as the code of conduct or behavior governing an individual or a group (e.g. members of a profession) with respect to what is right or wrong. Sokol (2018) defined ethics as the study of how one's decisions affect others. It has to do with rights and duties, moral rules applied in decision making. In many ways, standards as to what is right or wrong in behavior and decision making are based on ethical values that make up organization's culture. Values are stable, long lasting beliefs about what is important in a variety of situations. In McShane and Von Glinow (2003) they include respect for individuals, integrity, and fairness, teamwork, provision of quality, customer service, employee development and innovation etc.

Ethical standards,one must point out, are often applied in issues that are not covered by law. Some moral judgments are put into law while others are not. There is an overlap between legal requirement and ethical standards, for example what is ethically wrong (e.g. stealing) may also be legally wrong. Every individual has personal rules by which he or she lives which are referred to are personal ethics. Groups have ethics, which governs them, and this is referred to as professional ethics. Business also has ethics that governs its different aspects. Managerial ethics refers to the principles that govern managers in their behaviour and decision making regards the various organization's stake holders which include the government, shareholders, customers, employees, public, host communities and suppliers (Ryan and Ployhart,2014).

Ethics in the modern workplace

Managers are generally expected to make decisions that are morally and socially responsible. Ethical values are needed by managers to make the required decisions. Ethics has to do with right or wrong actions in all relationships. It provides the glue that holds relationships and even society together. Among managers it is at the heart of the management as values such as excellence, which propels managers to greater performance, are ethical concepts (Now,2000; Guest 2017; Casio2018).

Every manager faces ethical dilemma when they encounter situations where a decision can favour a particular stakeholder and hurt the other. For what it is, ethics enables managers make decisions based on individual manager's belief that can also lead to the extinction of the organization. While, a healthy ethical stance may be expensive at the short run,it is highly beneficial at the long run. For example, a manager that orders the withdrawal of defective products from the market based on his ethical standard, may make his organization loose some money at the short run but will gain the

reputation of having customer's interest at heart. This could lead to his organization being the industry leader in the long run (Cole,2002; Cheatle,2001; Jackson and Ho,2014)
Thus then, managers could interpret their responsibilities to customers and their organizations in different ways, for as pointed out earlier ethics in management is about how managers view their responsibilities to individuals and groups that are affected by their actions (Ulrich and Brockbank,2005;Carayon,1994). Hence, ethics tends to affect managers' decision on issues affecting stakeholders, which are the major stay of the organizations. Ethical behaviour safeguards organization resources for the benefit of all stakeholders. Ethical behaviour ensures that resources are shared among stakeholders in such a way that the organization can continue. It brings good reputation for the individual and organization. The survival of the organization depends on its reputation, how it carries on business on a daily, weekly or monthly basis.

In many ways, every stakeholder or manager has reputation to protect. Unethical behaviour attracts negative consequences ranging from firing of the individual for employees, loss of business, general hostility and loss of investment as the shares of such companies will be low. All stakeholders need to stand against unethical behaviour because of its far reaching consequences while inclusively maintaining ethical standards as rules in organizations and countries that can help increase value and wealth of such organizations and countries (Caswell, Hayes and Long,2009).

Sources of Ethical Values in the workplace.

The sources of ethical standards in organizations include individuals, organization, profession and external stakeholders. For individual Personal Ethics this refers to an individual's beliefs and values, moral development and ethical framework (Calquitt,Lepine and Wesson,2015) . Family, peers, upbringing, and membership of societal institutions such as schools and religion influence individual's ethical standard. Individuals come to the workplace with their personal beliefs and values, which to a great extent influence their behaviour, and the ethical values of the organizations. While people develop a set of ethical principles that govern their decisions, in terms of such moral development, there are three stages to it, thus the early stage where as children's decisions are made because of rewards one will get or punishment one will avoid. On the other hand, adults making decisions to conform to expectations of peers and the society which characterizes the intermediate stage. Adults making decisions based on internal set of standards, which may conform or not conform to external expectations, characterize the highest level.

Organization's culture and systems also influence ethical values of organizations. Some organizations have a set of values and principles which have been introduced by its leaders and top managers that is deeply ingrained in them that enables its managers to make ethical decisions over the years. In terms of its system, the formal organizational system influences the managerial ethics. The ethical values may be incorporated in the policies and rules or code of ethics which is made available to every member. The organization's reward may also be based on ethical considerations i.e promotions, praise and attention. Selection and training of employees may also be based on ethical considerations. These efforts could go a long way in reinforcing the ethical values of the organization.
Professional ethics- This refers to the values and standards that groups of professionals (e.g. lawyers, managers and workers) use to decide how to behave appropriately. For example, the Nigerian Institute of Management codes of conducts for professional managers' guides the behaviour of managers in organizations in Nigeria. The Institute of Personnel Development has a code for its members setting standards of conduct in accuracy, confidentiality, counseling, developing others, equal opportunities, fair dealing and self-development.

External stakeholders- These also influence the ethical values of organizations. External stakeholders influence managerial ethics and social responsibility. The organization as part of a larger community is affected by activities of the external stakeholders which include the government, customers, suppliers and special interest groups such as host communities.

Thus, then the values and standards which are contained in a society's law, customs, practices, norms and values influence how people interact with each other even in the organizations. What may be acceptable in one society may not be acceptable in another society. For example, bribery and corruption which is a problem in America. Customer's desire for safe and quality products and services may make organization to consider such as an ethical standard. Special interest groups clamouring for safe environment may make organizations to have maintenance of safe environment as one of their values as they operate. The desire for suppliers to have their money as at when due, may make an organization to determine when to pay suppliers, and stick to it, as one of its values.

Issues in utilitarian view for ethical decision making

McShane and Von Glinow (2003) suggest that ethical issues be put to test by the use of the principles of utilitarianism, individual rights (i.e. the personal liberty framework) and the distributive justice. Carroll and Buchholtz (3024) on the other hand describes ethical decision as "one that is reasonable or typical stakeholders will find acceptable because it aids stakeholders, the organization or the society". They also describe unethical decision as "one that a manager will prefer to disguise or hide from other people because it enables a company or a particular individual to gain at the expense of society or other stakeholders".

As pointed our earlier, ethical behavior is about knowing what is right and wrong and behaving accordingly. Behaving ethically is beyond abiding by the law. Managers can make decisions based on their beliefs, outcomes and their moral judgment. Brown and Trevino (2006) suggests that the following questions should be asked by individuals and managers as the honest answers to them will enable them make ethical decisions. The questions include:

-Is it legal? Am I violating any law?
-Is it balanced? Am I acting fairly?
-How will it make me feel about myself? Will I feel proud if my family, and others hear about it?

These questions tend to clamp down on the utilitarian snare for greater number idealogy as proponents of these questions are of the view that ethical decisions can only be taken when the answers positive. The golden rule is also a very good guideline for ethical behaviour. It says, "do to others as you would have them do unto you". It is based on the scriptures and also found in Islam and Confucian teaching. It is referred to as the theistic base of ethical standard rather than the principle of greater number. Boselie, Dietz and Boon (2005) suggest the use of the following guideline to help managers make decisions.

- Define the issue clearly
- Identify the relevant values in the situation
- Weigh the conflicting values and choose an option that balances them.
- Implement decision.

Conclusion

Ethical rules therefore must be based on eternal reality. The Bentham postulation of happiness of the greater number doesn't often justify its ethical worth. It is important, however to note that in an organization with diversity of cultures, individuals tend to have their values, beliefs and social orientation. Individual right must be respected so long it's not a threat to the law or to the organizational goal objectives further hinged on eternal truth.The study therefore conclude that the relative interpretation of Bentham utilitarian doctrine can pose a threat to humanist and moral conscience of the organization.

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GREEN KNOWLEDGE APPLICATION AND ECONOMIC SUSTAINABILITY OF GENERAL HOSPITALS IN RIVERS STATE

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Abstract
This study investigated the relationship between green knowledge application and economic sustainability of general hospitals in Rivers State. The study adopted a correlational design. The study population comprised the 33 general hospitals spread across the 23 LGAs of Rivers State as enlisted in the Rivers State Health Facility Listing. The study adopts the population to represent the sample since is manageable. Instruments for data collection were a researchers' developed questionnaire designed on a five point Likert scale. The validated instruments have coefficients of 0.961, 0.932, 0.877 and 0.836 respectively. With the help of Statistical Packages for the Social Sciences (SPSS) version 23.0, Pearson's Product Moment Correlation (PPMC) was employed to test the hypotheses and figure out the relationship between green knowledge application and economic sustainability. The finding revealed among others that there is a significant relationship between green knowledge application and cost minimization in general hospitals in Rivers State. Based on the findings it was recommended that general hospitals in Rivers State should prioritize the adoption of green practices to achieve cost savings and enhance operational efficiency. And hospital management Board should invest in training programs to equip staff with the knowledge and skills required to implement green practices effectively.

Key Words: Green Knowledge Application, Economic Sustainability, Cost Minimization, Value Creation, Corporate Reputation.

Introduction

The world is currently grappling with numerous environmental challenges, including global warming, climate change, biodiversity loss, pollution (air, water, and soil), deforestation and habitat degradation, water scarcity and declining quality, and resource depletion (energy, minerals), among others. These issues arise from a complex interplay of natural processes and human activities, threatening ecosystems, biodiversity, and human well-being (Dabbous & Tarhini, 2019). Addressing these challenges requires concerted efforts from governments, businesses, civil society, and individuals to achieve sustainable development goals and protect the planet for future generations. According to Song et al. (2020), the urgency to remediate the environment has led scientists, practitioners, and academics to champion the "green concept." Gómez-Marín et al. (2022) observed that these environmental challenges have driven businesses to adopt eco-friendly practices to meet organizational goals and ensure sustainability. Consequently, the notion of becoming 'green' has gained prominence across various industries (Albort-Morant et al., 2016). Historically, the color green has symbolized reassurance, respect, and peace, reflecting the purity of the earth and the vitality of its plants and trees (Alam et al., 2023). The drive to "go green" is motivated by several factors. First, organizations are increasingly motivated by a sense of responsibility to address environmental degradation and improve environmental conditions. Second, adopting a green label helps organizations raise ecological awareness, meet the growing consumer demand for eco-friendly products, and build a positive public image. This effort to enhance corporate reputation fuels the adoption of green practices. As Mohamad, Ramayah, and Lo (2020) assert, improving intangible corporate reputation and environmental performance are crucial for supporting organizational sustainability goals.

Third, the green phenomenon is seen as a significant commitment to sustainable corporate practices, driven by both local and international regulations (Attar, Kang & Sohaib, 2019). According to Rajiani and Normuslim (2023), the green concept has garnered considerable attention from scholars and practitioners, leading to the emergence of related management practices. Azam, Khan, and Ali (2022) identify green knowledge management as a key component of the green concept (Yadiati et al., 2019). Green knowledge management, a concept that has emerged in the healthcare sector (Alam et al., 2023), involves a systematic approach to acquiring environmental knowledge. According to Wang et al. (2020), this practice has become crucial due to the adverse effects of environmental problems and the worsening of resource shortages. While knowledge assets are vital for organizations, their effective application is the key to organizational success or failure. As Huang and Li (2017) note, the capacity of organizations to acquire and wisely utilize knowledge is a critical determinant of their performance (Benevene et al., 2021). Organizations leverage green knowledge to manage relationships with people, the environment, and economic objectives (Yadiati et al., 2019). The application of green knowledge is recognized as a significant contemporary management technique essential for driving change and achieving competitive advantages.

In healthcare facilities, applying green knowledge involves adopting practices such as energy efficiency, waste management, water conservation, and utilizing renewable resources (WHO, 2020). Several general hospitals in Rivers State have implemented green initiatives to boost economic sustainability. For example, the University of Port Harcourt Teaching Hospital has installed solar panels for energy production, which has significantly decreased their dependence on grid electricity and led to cost savings (Personal communication, 2023). Adopting green practices in hospitals can yield considerable economic advantages. Energy-efficient technologies, for instance, lower operational costs by reducing utility bills (WHO, 2020). Additionally, waste reduction and recycling efforts not only cut disposal costs but can also generate income from the sale of recycled materials (UNEP, 2019).

Recent studies (Alam et al., 2023; Gómez-Marín et al., 2022) have demonstrated that applying green knowledge is a key strategy for achieving economic sustainability in organizations. For example, Al-Nouri and Muhannad (2015) highlighted that green knowledge is a crucial asset that provides competitive advantage and supports economic sustainability. Despite this, research indicates that the application of green knowledge in the healthcare sector in Rivers State remains limited (Yadiati et al., 2019). There are concerns about the heavy reliance on grid electricity among general hospitals in Rivers State, which leads to frequent power outages (Personal communication, 2023). Additionally, inefficiencies in healthcare technologies pose a threat to the economic sustainability of these hospitals (WHO, 2020). This gap may be attributed to many organizations' failure to adopt and effectively implement green knowledge. The lack of management interest in understanding the factors affecting economic sustainability within the sector suggests that most general hospitals in Rivers State are not utilizing green knowledge, negatively impacting their economic sustainability. The absence of sufficient research on how green knowledge application can enhance economic sustainability further exacerbates this issue.

Although few studies have been carried out on the relationship between green knowledge management and corporate performance, little or none of those studies demistified on how green knowledge application can lead to economic sustainability among general hospitals in Rivers State. Widyanti, Rajiani and Basuki (2024) examined green knowledge management to achieve corporate sustainable development in South Kalimantan, Indonesia; Abu-Rumman and Hiasat (2023) aimed to identify the impact of knowledge management success factors on green performance in private hospitals in Amman- Jordan; Sahoo, Kumar and Upadhyay (2022) investigated the critical roles of green knowledge acquisition in enhancing green knowledge management and green technology innovation activities in improving corporate environmental performance of Indian manufacturers; Yadiati, Paulus and Meiryani (2019) investigated the role of green intellectual capital and organizational reputation in influencing environmental performance in IIndonesia manufacturing ventures. None of these studies focused on the significance of green knowledge application on economic sustainability within general hospitals in Rivers State. Motivated to fill the identified gap, this paper sought to explain the nexus between green knowledge application and economic sustainability of general hospitals in Rivers State, Nigeria.

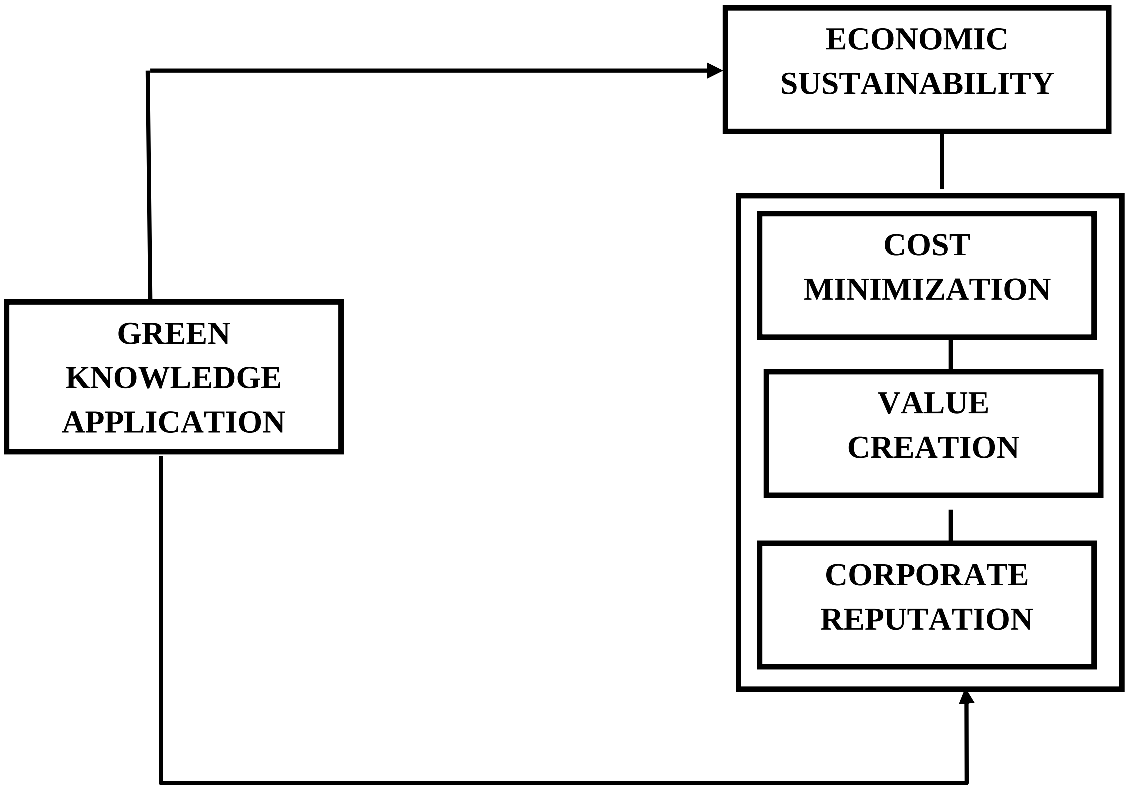

Figure 1: Conceptual framework of the relationship between green knowledge application and economic sustainability of general hospitals in Rivers State, Nigeria.
Source: Conceptualization model from Literature Review, 2024.

Literature Review

Resource-Based View (Rbv)

The Resource-Based View (RBV) was introduced by Barney in 1991 (Pawar, 2023). The Resource-Based View (RBV) theory states that the performance results of organisations are contingent upon the resources and skills they possess. These resources are systematically categorised into tangible and immaterial forms. Tangible resources are resources that possess a material existence. These comprise, among other things, a company's technology, property, assets, plant, equipment, and cash. On the other hand, immaterial resources lack physical presence. These include the expertise and abilities of employees, the reputation of a company, and the culture of a company. These qualities are essential components of intangible resources, together with information in the form of labelling and organisational processes (Khan et al., 2018). Gómez-Marín et al. (2022) observed that intangible resources are widely acknowledged for conferring competitive advantages and enhancing organisational effectiveness. Therefore, by applying the Resource-Based View (RBV) to the current study context, it can be observed that the RBV emphasises the strategic significance of identifying, developing, and efficiently utilising environmentally-friendly resources and capabilities. This approach can assist hospitals in not only reducing expenses and adhering to regulations, but also in gaining a competitive edge and improving long-term economic viability.

Concept of Green Knowledge Application

Knowledge is an intangible concept that encompasses familiarity, consciousness, or comprehension of a person or object, including facts, information, descriptions, or abilities. It is obtained by personal experience or formal education by perceiving, uncovering, or acquiring. Green knowledge application, as defined by Benevene et al. (2021), encompasses the utilisation of knowledge, methods, and practices to advance environmental sustainability, minimise ecological impact, and enhance resource efficiency across sectors including industry, agriculture, and urban planning. The application of green knowledge empowers individuals and organisations to implement their knowledge (Yadiati et al., 2019). Organisations can gain a competitive edge in the marketplace by adopting ecologically innovative concepts, procedures, and technology (Gómez-Marín et al., 2022). As stated by Ikujiro Nonaka, as referenced in Huang and Li (2017), the act of sharing and applying information inside organisations promotes the creation of new knowledge and the enhancement of core competencies. Applying green knowledge involves developing innovative green technology, renewable energy solutions, and eco-friendly production processes specifically for healthcare services.

Economic Sustainability

Sustainability refers to the principle that present economic actions should not unduly impose a heavy cost on future generations (Adam, 2016). Societies cannot achieve long-term sustainability if they exceed the boundaries of natural resources and rely on outdated development drivers. Economic sustainability seeks to preserve the natural capital without depletion. Economic sustainability is the condition of an economy in which the utilisation of resources and the pace of change in institutional, behavioural, and technological practices are balanced and contribute to both present and future capacity to fulfil human wants and desires. Economic sustainability pertains to the preservation of resources and encompasses the assessment and elucidation of the present and potential value of these resources. Scientists have attempted to quantify economic sustainability using several metrics. Szekely and Knirsch (2005) assessed economic sustainability by considering factors such as economic growth, shareholder value, prestige, cost reduction, corporate reputation, customer relationships, product and service excellence and quality, ethical business practices, job creation, resilience, value creation for all stakeholders, product stewardship, and addressing the needs of underserved populations. Iwari et al. (2011) assessed economic sustainability by quantifying growth, competitive capability, cost reduction, product quality, resilience, and value generation. Therefore, this study utilises cost minimisation value creation and business reputation as indicators of economic sustainability.

Cost Minimization

Cost minimization means reduction of expenditure during purchasing or operations. Cost minimization as stated by Yadiati *et al.* (2019), aims to identify the area(s) in which a business can effectively reduce costs that will have the most beneficial effect on maximizing profits. Cost reduction refers to the process of permanently reducing the expenses involved in manufacturing products or rendering services. It comes about without unduly impairing the end use or quality of the product or service.

Value Creation

Value creation offers a powerful tool to characterize, achieve, and develop sustainability (Lautermann, 2013; Nadube & Didia, 2018). Traditionally, value creation is treated as something that a firm creates and that is usually linked to tangible goods. Nwulu and Hamilton-Ibama (2022) define value as a special benefit, experience, contextual and full reward a stakeholder receives.

Corporate Reputation

Scholars and practitioners are unanimous in the assertion that good company reputation has strategic importance for companies that possess them (bu-Rumman & Hiasat (2023). Corporate reputation refers to the overall estimation in which an organization is held by its internal and external stakeholders based onits past actions and probability of its future behavior. Although reputation is an intangible concept, research universally shows that a good reputation demonstrably increases corporate worth and provides sustainability (Yadiati *et al.*, 2019). An organization can achieve its objectives more easily if it has a good reputation among its stakeholders. For instance, customers will prefer to patronize goods and services of a reputable company even when other companies' products are available at comparable quality and price.

Empirical Review

The empirical literature acknowledges the significance of applying green knowledge in promoting economic sustainability. Widyanti, Rajiani, and Basuki (2024) conducted a study on green knowledge management with the aim of attaining sustainable growth in corporations. The study sample consisted of 300 employees from two of the most prominent mining companies in South Kalimantan, Indonesia. The calculation was conducted by Structural Equation Modelling (SEM). The study's findings indicate that four out of five components of knowledge management, namely green information acquisition, green knowledge storage, green knowledge application, and green knowledge development, directly influence the sustainability of enterprises. However, the study also discovered that the impact of collectivist cultural norms hinders the direct influence of sharing knowledge about environmental sustainability on the progress of companies towards sustainable growth. The discovery implies that companies functioning in collectivist cultures may have to implement extra strategies to promote knowledge sharing, such as incentivising employees for sharing their expertise on environmentally-friendly initiatives, fostering a supportive organisational culture, establishing clear expectations, and providing opportunities for social interaction.

Abu-Rumman and Hiasat (2023) sought to determine the influence of knowledge management success elements, specifically the acquisition, storage, and organisation of green knowledge, on the green performance of private hospitals in Amman, Jordan. The researcher utilised a descriptive analytical approach to elucidate the concepts pertaining to the subject of the study, scrutinise it, and examine the findings. The study sample comprised 250 personnel employed in private hospitals in Amman. In order to accomplish the goals of the study, a questionnaire was created to gather primary data from the participants of the study. The primary findings indicate a statistically significant impact of the two aspects of storing and organising green knowledge on green performance in private hospitals in Amman. In their study, Abbas and Khan (2022) examined the relationship between green knowledge management, organisational green culture, organisational green innovation, and green performance. The authors conducted a study that specifically targeted the managerial and non-managerial workforce of manufacturing and services organisations. They collected data using the non-probability convenience sampling technique. The gathered data were analysed using structural equation modelling. The study discovered that GKM (knowledge management) is a substantial and positive factor that predicts and enhances organisational green innovation and green performance. Nevertheless, green innovation acts as a partial mediator between GKM and corporate green performance.

Additionally, it has been shown that the adoption of a green culture enhances the connection between GKM (Green Knowledge Management) and the development of environmentally-friendly innovations within an organisation.

In their study, Sahoo, Kumar, and Upadhyay (2022) examined the crucial functions of acquiring green information in strengthening both green knowledge management and green technology innovation activities, with the aim of improving corporate environmental performance. They also considered resource commitment as a moderator in this context. The research model was evaluated through the use of structural equation modelling, utilising survey data collected from 283 Indian manufacturers. The findings of the study indicate that the acquisition of green knowledge has a substantial influence on both the management of green knowledge and the invention of green technology. The statistical data indicate that green technology innovation plays a crucial role in facilitating the implementation of green knowledge management, leading to enhanced corporate environmental performance. The findings indicate that the level of resource commitment influences the relationship between green knowledge acquisition, green knowledge management, and green technology innovation. This provides valuable insights for managers to prioritise and allocate resources towards implementing effective green practices, which can ultimately enhance corporate environmental performance. In their study, Mohamad, Ramayah, and Lo (2020) investigated the relationship between sustainable knowledge management and firm innovativeness, with a specific focus on the contingent role of innovative culture.A survey was conducted with the participation of 202 MSC Malaysia organisations in order to address the study topics. In order to evaluate the model that was created, WarpPLS (version 7.0) was utilised using path modelling and bootstrapping techniques. The findings indicated a positive and substantial relationship between three out of the four aspects of knowledge management (knowledge acquisition, knowledge application, and knowledge protection) and company innovativeness. Conversely, an inventive culture was discovered to influence the connections between information acquisition and firm innovativeness, as well as knowledge application and firm innovativeness.

In their study, Yadiati, Paulus, and Meiryani (2019) examined how green intellectual capital and organisational reputation impact environmental performance in manufacturing enterprises in Indonesia. The study recruited 21 multinational corporations by distributing the survey to various multinational branches across all fourteen states of Indonesia. In order to enhance the collection of information, the study translated its instruments into English and disseminated them to certain outlets of international companies. Afterwards, a total of 372 research instruments were distributed using both the electronic and printed versions of the online survey. The information gathering process lasted for a total of 3 months and yielded 313 review responses, resulting in a reaction rate of 84.13%. The study utilised SmartPLS Version 3.2.8 (Ringle et al., 2015) and Statistical Package for Social Sciences (V-23) for data analysis. The findings from PLS-SEM analysis validate that both organisational reputation and green intellectual capital exert a positive and statistically significant impact on environmental performance. The findings from the partial least squares structural equation modelling provide evidence that a one-unit increase in green intellectual capital leads to a 0.449 units increase in the environmental performance of multinational enterprises in Indonesia.

This paper states the following hypotheses.

Ho_1: There is no significant relationship between green knowledge application and cost minimization of general hospitals in Rivers State.

Ho_2: There is no significant relationship between green knowledge application and value creation of general hospitals in Rivers State.

Ho_3: There is no significant relationship between green knowledge application and corporate reputation of general hospitals in Rivers State.

Methodology

This study adopts an explanatory research design with a correlational investigation type. The study population comprises the 33 general hospitals spread across the 23 LGAs of Rivers State as listed in the Rivers State Health Facility Listing. The study adopts the population to represent the sample since is manageable. Instruments for data collection was a researchers' developed questionnaire designed on a five-point modified Likert scale. The questionnaire was effectively designed to obtain information relevant for providing answers to the research questions and hypotheses stated. It has the advantage of providing more accurate data that can easily be quantified. The questionnaire was structured and into different sections. Section one was structured to provide demographic information about the respondents, while section two was to elicits data on the study variables. The five (5) point Likert scale was used to measure responses from respondents ranging from "1" meaning 'strongly disagree' to "5". The questionnaire was administered to 264 respondents (head of departments; Administration, Finance and Account, Medical Services, Nursing Services, Pharmaceutical services, PRS, public health Services and Emergency and Ambulance service).

Table 1: Reliability Test - Cronbach's Alpha Analysis

S/N	Variables	Number of Items	Cronbach's Alpha Coefficients
1	Green Knowledge Application	4	0.961
2	Cost Minimization	4	0.932
3	Value Creation	4	0.877
4	Corporate Reputation	4	0.836

Source: SPSS Output from Field Data

From results of the Cronbach alpha analysis in Table 1, it is revealed that all the variables in the study produced high Cronbach's Alpha coefficients indicating that, there is inter-item consistency among the variables in the study. This means that, if this study is conducted again in a similar condition the results will be similar to the results of our study.

Results

Table 2: Descriptive Statistics of Green Knowledge Application

	N	Sum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Our hospital adopts environmental rules in its activities	264	1263	4.27	1.243	-1.754	.142	1.788	.282
Our hospital implements environmentally innovative ideas	264	1247	4.21	1.207	-1.639	.142	1.590	.282
We learn from our mistakes and experiences to enhance our environmental performance	264	1253	4.23	1.157	-1.721	.142	2.045	.282
2. We apply the obtained information to create eco-friendly company strategies and renewable energy solutions.	264	1238	4.18	1.170	-1.611	.142	1.609	.282

We innovate green technologies and eco-friendly production processes for healthcare services	264	1199	4.05	1.205	-1.561	.142	1.495
Valid N (listwise)	264						

Source: Field Survey, 2024.

The responses in Table 2 suggest that the hospital is actively adopting and implementing green practices, with high means (above 4 on a scale likely from 1 to 5) and significant negative skewness, indicating that most respondents rated these items highly. The positive kurtosis values indicate that the responses are more peaked and have heavier tails than a normal distribution, suggesting a high level of consensus among respondents.

Bivariate Analysis

The secondary data analysis is carried out through the use of Pearson's Product Moment Correlation (PPMC) tool at a 95% confidence level.

Ho1: There is no significant relationship between green knowledge application and cost minimization of general hospitals in Rivers State.

Table 3: Correlation Analysis for Green Knowledge Application and Cost Minimization

	Green Knowledge Application	Cost Minimization
Green Knowledge Application	Pearson Correlation	1
	Sig. (2-tailed)	
	N	264
Cost Minimization	Pearson Correlation	.349
	Sig. (2-tailed)	.000
	N	264

The correlation result in Table 6 shows a Pearson correlation coefficient of 0.349 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that there is a significant relationship between Green Knowledge Application and Cost Minimization in general hospitals in Rivers State. Also, the analysis reveals a moderate and statistically significant positive relationship between Green Knowledge Application and Cost Minimization. This implies that as general hospitals in Rivers State increasingly apply green knowledge, they tend to achieve better cost minimization outcomes.

Ho2: There is no significant relationship between green knowledge application and value creation of general hospitals in Rivers State.

Table 4: Correlation Analysis for Green Knowledge Application and Cost Minimization

	Green Knowledge Application	Value Creation
Green Knowledge Application	Pearson Correlation	1
	Sig. (2-tailed)	
	N	264
Value Creation	Pearson Correlation	.316
	Sig. (2-tailed)	.000
	N	264

The correlation result in Table 7 shows a Pearson correlation coefficient of 0.316 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that there is a significant relationship between Green Knowledge Application and Value Creation in general hospitals in Rivers State. Also, the analysis reveals a moderate and statistically significant positive relationship between Green Knowledge Application and Value Creation. This implies that as general hospitals in Rivers State increasingly apply green knowledge, they tend to enhance their value creation efforts.

Ho$_3$: There is no significant relationship between green knowledge application and corporate reputation of general hospitals in Rivers State.

	Green Knowledge Application	**Corporate Reputation**
Green Knowledge Application	Pearson Correlation	1
	Sig. (2-tailed)	
	N	264
Corporate Reputation	Pearson Correlation	.397
	Sig. (2-tailed)	.000
	N	264

The correlation result in table 4 shows a Pearson correlation coefficient of 0.397 with a p-value of 0.000. Since the p-value is less than 0.05, we reject the null hypothesis. Therefore, we conclude that there is a significant relationship between Green Knowledge Application and Corporate Reputation in general hospitals in Rivers State. Also, the result reveals a moderate and statistically significant positive relationship between Green Knowledge Application and Corporate Reputation. This implies that as general hospitals in Rivers State increasingly apply green knowledge, they tend to enhance their corporate reputation.

Discussion of Findings

The probability values (0.000) for all correlations are less than the critical value (0.05), confirming the significance of these relationships. Therefore, we reject the null hypotheses that there are no significant relationships between Green Knowledge Application and the components of economic sustainability in general hospitals in Rivers State. We accept the alternate hypotheses, which state that there are significant positive relationships between Green Knowledge Application and the components of economic sustainability. These findings are validated by various studies in related fields: Widyanti, Rajiani, and Basuki (2024): Their examination of green knowledge management for corporate sustainable development in South Kalimantan, Indonesia, suggests that green knowledge management dimensions lead to corporate sustainable development. Abu-Rumman and Hiasat (2023): Their study on the impact of knowledge management success factors on green performance in private hospitals in Amman, Jordan, found a significant effect of storing and applying green knowledge on green performance. Abbas and Khan (2022): Their research supports our investigation by showing that Green Knowledge Management (GKM) is a significant positive predictor of organizational green innovation and green performance. Mohamad, Ramayah, and Lo (2020): Their study on sustainable knowledge management and firm innovativeness found that knowledge acquisition, application, and protection are positively and significantly related to firm innovativeness.

Conclusion

The study concludes that Green Knowledge Application significantly influences Cost Minimization, Value Creation, and Corporate Reputation in general hospitals in Rivers State. The positive and significant relationships suggest that hospitals that incorporate green knowledge practices can achieve substantial benefits, including cost reductions, enhanced value creation, and improved corporate reputation. These findings underscore the importance of integrating sustainable practices into hospital operations to achieve both environmental and economic benefits.

Recommendations

Based on the conclusion drawn from findings of the study, the researchers put forward the following recommendations:

i. General hospitals in Rivers State should prioritize the adoption of green practices to achieve cost savings and enhance operational efficiency. This can include measures such as energy-efficient lighting, recycling programs, and the use of eco-friendly materials.

ii. Hospital management Board should invest in training programs to equip staff with the knowledge and skills required to implement green practices effectively. This will ensure that all employees are aligned with the hospital’s sustainability goals.

iii. Secondary hospitals should actively promote their green initiatives to patients, staff, and the wider community. This can enhance the hospital's reputation and attract environmentally conscious patients and partners

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COMMERCIAL BANK LOANS AND POVERTY REDUCTION IN NIGERIA

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Abstract
The study examines commercial bank loans and poverty reduction in Nigeria using the time series research design. The dependent variable is Per capita income (PCI) used as the proxy for poverty reduction and the measures for commercial bank loans are; CSME/TC= Ratio of credit to SME to total credit, TL= total loans to private individuals, CPS/GDP= Ratio of credit to private sector to GDP. Secondary data retrieved from the Central Bank of Nigeria Statistical Bulletin was used for the study covering the period 1981-2019. To test for the stationary of the variables, both individual and group unit root test procedures are conducted using the Augmented Dickey Fuller (ADF) unit root test, Phillip-Perron test and the Hadri-Z test. The Autoregressive distributed lag (ARDL) bounds test was applied to model the co-integrating long run and the short run relationship among the variables. The Autoregressive distributed lag (ARDL) estimation was employed for the data analysis. The long run results show the impact of commercial bank loans on poverty reduction in Nigeria and as observed, log (CSME/TC) has a negative impact on PCI Specifically, the result indicates that a 1% increase in ratio of credit to SME to total credit in a decline in PCI by about 0.24% though the result is not significant at 5%. In the case of CPS/GDP, the result shows a negative effect on PCI and specifically, a 1% rise in CPS/GDP reduces PCI by 29.3% though the result is not significant at 5%. In addition, the effect of TL on PCI is positive and significant at 5% and specifically, a 1% increase in TL results in an increase in PCI by 57.49%. The study recommends that at least in relation to total loans, commercial banks may need to increase access by private individuals. In Nigeria, there are huge constraints to accessing loans which makes it difficult to get one especially because of the collateral requirements. The mission to achieve financial inclusion as a means to reducing poverty can be hugely affected by constraints to credit access and hence there is the need for commercial banks to make access to credit easier for SMEs and those in average and low income groups.

Keywords: *Commercial bank loans, Poverty Reduction, Augmented Dickey Fuller (ADF) unit root test, Nigeria.*

Introduction
The first of the Millennium Development Goals (MDGs) set by the United Nations is to eradicate extreme poverty (UN, 2013). To do this, the financial sector plays an important role, as financial development has been proven to reduce poverty (Jalilian & Kirkpatrick, 2002). Many researchers have postulated that the provision of financial services is a powerful means of providing low income households with the chance to escape from poverty and to transform their lives. The strong demand for financial services by low income households, together with the evidence that access to credit reduces household poverty, provides clear incentives for policy makers to develop a framework for providing financial services to low-income households. (Mahember, 2011; Dupas & Robinson, 2013). In the case of micro, small and medium enterprises (MSMEs), lack of access to finance is often the main obstacle to growth (Ahiawodze & Adade, 2012 & Beck et al., 2011). OECD (2010) contends that providing access to credit and financial services will stimulate the independence and self-development of poor households and microentrepreneurs.

Gaining access to credit and financial services is therefore a critical step in connecting the poor to a broader economic life and in building the confidence for them to play a role in the larger community (Dzisi, & Obeng 2013). It is assumed that credit will be used for productive purposes and would generate additional income for borrowers. Consequently, financial instruments are playing an important role in the alleviation impoverishment, which has also been the focus of political and academic circles. Especially since 2003, when the United Nations first proposed the concept of financial inclusion, finance and poverty alleviation have been more closely linked. At the G20 summit in 2010, over 90 countries in the developing world signed the Maya Declaration, which aimed to reduce poverty through financial inclusion.

Nigeria is at a critical juncture especially with the sharp fall in oil prices as a result of COVID-19, the economy is projected to contract by over 4% in 2021, plunging the country into its deepest recession since the 1980s. Government revenues could fall by more than 15 billion dollars this year, and the crisis will push an additional 5 million Nigerians into poverty in 2020. (World Bank, 2020). Although the provision of credit came to be perceived as an important mechanism for reducing poverty (Stewart et. al. 2012), but there is still uncertainty in the literature whether availability of credit and financial services reduces poverty. This is because it is difficult to isolate the impact of credit and financial services out of the many factors in a microfinance intervention that can potentially affect poverty (Duvendack et. al., 2011).

In addition, several factors may limit the impact of banking credit/lending to reduce poverty especially in developing countries like Nigeria. First, since banks are liable for the liquidity they lend, borrowers must have initial endowments or wealth that banks can hold as collateral and liquidate to cover deposits if needed. Banks in low-income countries face constraints in extending loans because borrowers generally do not possess the required collateral. Also, the amount of liquidity available for bank lending depends on a critical mass of a diversified depositor base, with reliable and independent cash flows moving in and out of the banking system. These independent cash flows allow banks to minimize the liquidity risk that would otherwise require long term deposit funds. Without these two elements, banks would have to keep high levels of liquidity idle thus constraining their own lending capacity. Therefore, there is the need to empirically examine what the implications of bank loans are for poverty reduction in Nigeria.

Empirical Literature

Olayinka (2009) examined commercial bank loans to agricultural sector and poverty reduction in Nigeria. The analysis is based on secondary data from basically the Central Bank of Nigeria (CBN)'s Statistical Bulletin. The paper, used a linear regression analysis, evaluates the impact of commercial banks' loans on the agricultural sector and in the alleviation of poverty. By calibration technique, it also examines the amount of loans commercial banks should give (out) to facilitate the growth of the agricultural sector that would be able to alleviate poverty in the country. And from its funding, the paper reveals that the amount of loans commercial banks granted to the agricultural sector over the years is not enough to reduce the poverty level in the country.

Ficawoy and Kevin (2016) consider to what extent banks and microfinance institutions MFIs reduce poverty. We apply the instrumental variables approach, namely the fixed-effects two-stage least squares, to a panel of 71 developing countries over the period 2002–2011. Using credit to GDP as the main financial development indicator, the results indicate that banks reduce poverty when poverty is measured by the headcount ratio and poverty gap. As for the squared poverty gap, there is no significant effect of banks. On the other hand, MFIs do not appear to have any impact on poverty regardless of the measure of poverty employed. These results imply that while banks have some ability to reduce poverty, MFIs do not, at least at the aggregate level.

Xu *et al.* (2016) discussed the impact of private borrowing and lending (zero interest loans between relatives and friends) on the poverty of rural households under the health impact from the aspects of poverty prevalence and vulnerability to poverty and finds that, although private lending and borrowing behaviors alleviate the financial pressure on farm households to cope with health risks and help reduce the poverty prevalence to some extent, it will increase the poverty and vulnerability-to-poverty of farmers in the future. Due to the lack of formal financial risk response mechanisms, informal risk-sharing has become an important means for vulnerable farm households to cope with risks

Ampah, Ambrose, Omagwa and Frimpong (2017) determine the effect of access to credit and financial services on poverty reduction in Central Region of Ghana from the perspectives of Micro, Small and Medium Enterprises (MSME's). Micro, Small and Medium Enterprises contribute significantly to the economic growth and poverty reduction strategies of most countries. Using cluster sampling techniques, this cross-sectional study sampled 370 entrepreneurs of Micro Small and Medium Enterprises. Questionnaire was used as the data collection instrument in an exercise that took place in November and December 2016. SPSS was used to perform cross tabulations and multiple regression analysis. The study found that access to credit and financial services had a fairly weak positive effect on growth in income.

Gidigbi (2021) investigates the implication of specialized bank's credit provision in Nigeria on poverty reduction. Time-series data on the specialized bank were extracted from the Central Bank of Nigeria Statistical Bulletin and regressed on poverty incidence using Autoregressive Distributed Lagged Model (ARDL) as preliminary tests suggest. Per Capita Income and Other (uncategorized loans) reduce poverty by 0.16 and 0.000086 per cent respectively at a 5 per cent significance level. In the short-run, per capita income, manufacturing and food processing, transport and commerce, and microcredit lending to other sectors that are unclassified reduce poverty by approximately 0.30, 0.0008, 0.0002 and 0.0006 per cent respectively and all are statistically significant at 1 per cent except for transport and commerce, which is significant at 10 per cent.

Anas (2021) examined bank credit and poverty reduction in Bangladesh. A three-stage least squares regression assesses the relationship between microfinance credit, banking credit, the poverty gap and GDP growth. Here, microfinance has a positive impact on GDP growth but no impact on poverty, possibly because of high-interest rates in practice or a saturated micro-business market. Conversely, the banking sector reduces poverty whilst not impacting economic growth suggesting the poor have been supported through other channels for financial development, including increased access to bank branches. Results show the poverty gap Granger-causes both banking credit and microfinance credit, suggesting poverty leads individuals to take loans. But this is only expected for microfinance, not the wider banking sector, which raises concerns over whether MFIs are reaching the right individuals.
Hong, Xiaohong and Wenjing (2021) examined the nexus between Credit Channels and Farm Household Vulnerability to Poverty in Rural China. This study measures vulnerability to poverty of Chinese farm households by three-stage feasible generalized least squares (FGLS) and tests for the impact of two credit channels on farm household's vulnerability to poverty based on China Household Finance Survey data. Farm household vulnerability to poverty with folk loans is 0.2% higher than that of farm households without private credit; however, this is not significant. Farm household vulnerability to poverty with bank credit is 0.4% lower than households without bank credit, which is significant. For farm households who have a higher level of vulnerability to poverty, the effect of bank credit on reducing vulnerability to poverty is greater.

Theoretical Framework- Theory of financial Intermediation

The theory regarding financial intermediation was developed starting with the 60's, the starting point being the work of Gurley and Shaw (1960). The financial intermediation theory is based on the theory of informational asymmetry and the agency theory. In principle, the existence of financial intermediaries is explained by the existence of the following attributable factors: high cost of transaction, inadequate information in useful time; and the method of regulation. The unique factor in the studies regarding financial intermediation is constituted by the argument regarding informational asymmetry. This asymmetry can be of type: exante generating the so called problem of adverse selection; concomitant generating the moral hazard (principal and agent relationship); or ex post leading to the need of applying some costly verification and auditing procedures or even the forced execution of the debtor. The informational asymmetry generates imperfections of the market, deviations from the theory of perfect markets in an Arrow -Debreu sense.

Methodology

The study adopts a longitudinal research design. The study examines commercial bank loans and poverty reduction in Nigeria. Secondary data retrieved from the Central Bank of Nigeria Statistical Bulletin was used for the study covering the period 1981-2019. To test for the stationary of the variables, both individual and group unit root test procedures are conducted using the Augmented Dickey Fuller (ADF) unit root test, Phillip-Perron test and the Hadri-Z test. The ARDL bounds test will be applied to model the co-integrating long run and the short run relationship among the variables. The Autoregressive distributed lag (ARDL) estimation was employed for the data analysis. In its general form, the ARDL model is specified by presenting an unrestricted error-correction model (UECM) regression from where all the tests and estimations are carried out. Given a dependent variable, *y* and a vector of independent variables, *x*, the ARDL model to be estimated is shown as:

$$\Delta y_t = \alpha_0 + \phi y_{t-1} + \delta_1 x_{1,t-1} + \cdots + \delta_k x_{k,t-1} + \sum_{i=1}^{p-1} \psi_i \Delta y_{t-i} + \sum_{i=1}^{q_1-1} \varphi_1 \Delta x_{1,t-i} + \ldots$$
$$+ \sum_{i=1}^{q_k-1} \varphi_i \Delta x_{k,t-i} + \xi_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (i)$$

In the model, ϕ and the δ's represent the long-run multipliers which show the long run effects of the independent variables on *y*; ψ and the σ’s represent the short-run dynamic coefficients (which help to estimate the error correction mechanism); p, q represent the order of the underlying ARDL-model (p refers to *y*, q refers to *x*); t is a deterministic time trend; k is the number of explanatory variables; and ξ is the disturbance term that is uncorrelated with the *x*’s.

A principal feature of cointegrated variables is their responsiveness to any deviation from long-run equilibrium. This feature implies an error correction model in which the short-run dynamics of the variables in the system are influenced by the deviation from equilibrium. Thus it is common to reparameterize (1) into the error correction equation

$$\Delta y_{it} = \phi_i (y_{i,t-1} - \theta_i' X_{it}) + \sum_{j=1}^{p-1} \lambda_{ij}^* \Delta y_{i,t-1} + \sum_{j=0}^{q-1} \delta_{ij}'^* \Delta X_{i,t-j} + \mu_i + \epsilon_{it} \qquad (2)$$

where $\phi_i = -(1 - \sum_{j=1}^{p} \lambda_{ij})$, $\theta_i = \sum_{j=0}^{q} \delta_{ij} / (1 - \sum_k \lambda_{ik})$, $\lambda_{ij}^* = -\sum_{m=j+1}^{p} \lambda_{im} \quad j = 1, 2, \ldots, p-1$, and $\delta_{ij}^* = -\sum_{m=j+1}^{q} \delta_{im} \quad j = 1, 2, \ldots, q-1$.

The parameter Θ_i is the error-correcting speed of adjustment term. If $\Theta_i = 0$, then there would be no evidence for a long-run relationship. This parameter is expected to be significantly negative under the prior assumption that the variables show a return to a long-run equilibrium of particular importance is the vector θ_i' which contains the long-run relationships between the variables. Δ denotes first difference operator, In relation to the current study, the expanded ARDL models that explain the long run relationship between commercial bank loans and poverty reduction is specified as:

$$\Delta PCI = \alpha_0 + \phi PCI_{t-1} + \delta_1 CSME/TC_{t-1} + \delta_2 TPL_{t-1} + \delta_3 CPS/GDP_{t-1} + \sum_{i=1}^{p-1} \psi_i \Delta PCI_{t-i} + \sum_{i=1}^{q_1-1} \varphi_1 \Delta CSME/TC_{t-i} + \sum_{i=1}^{q_1-1} \varphi_2 \Delta TPL_{t-i} + \sum_{i=1}^{q_1-1} \varphi_3 \Delta CPS/GDP_{t-i} + \xi_t. ---(3)$$

The conditional long-run model can then be produced from the reduced form equation when the first-differenced variables jointly equal zero. The long-run coefficients and error correction model are estimated by the ARDL approach to co-integration where the conditional ECM is estimated and then the Schwarz-Bayesian criteria are used to select the optimal lag structure for the ARDL specification of the short-run dynamics. Where interest PCI= Per capita income used as the proxy for poverty reduction, CSME/TC= Ratio of credit to SME to total credit, TPL= total loans to private individuals, CPS/GDP= Ratio of credit to private sector to GDP.

Analysis and Discussion of Results

Table 1: Descriptive Statistics

	SMECR	CPSGDP	TL	PCI
Mean	5.947500	12.77857	4753.462	225890.9
Median	1.765000	9.750000	1840.395	118623.7
Maximum	27.04000	20.77000	14585.06	692819.4
Minimum	0.070000	6.220000	38.83000	5542.180
Std. Dev.	7.301282	5.639816	5170.074	235824.4
Skewness	1.135388	0.273847	0.717384	0.727196
Kurtosis	3.533460	1.261488	2.013224	1.950073
Jarque-Bera	6.347834	3.876126	3.537667	3.753873
Probability	0.041839	0.143983	0.170532	0.153058
Observations	28	28	28	28

Source: Researchers compilation (2024).

The descriptive statistics for the variables as seen in table 1 shows that CSME/TC stood at 5.948% which indicates that credit to SME's as a ratio of total credit is still quite minimal with maximum and minimum values of 27.04 and 0.070 respectively and with a standard deviation stood at 7.3012. CPS/GDP stood at a mean of 12.78% which is still quite low and indicates that there is need for banks to increase private sector lending. The maximum and minimum values stood at 20.77% and 6.22% respectively. The mean for TL stood at 4753.462bn with maximum and minimum of 14585.06bn and 38.83000bn with a standard deviation of 5170.074. The mean PCI is 225890.9 with maximum and minimum values of 692819.4 and 5542.180 respectively.

Table 2. Individual Unit root test Results

Unit root test at levels: Intercept and Trend			
	Augmented Dickey-Fuller (ADF)	Philp-Perron-Test (PP)	Remark
PCI	2.0291(0.3712)	1.8911(0.6820)	Non-stationary
CPS/GDP	3.6612(0.291)	1.7806(0.5662)	Non-stationary
TL	2.9573(0.092)	0.3154(0.9872)	Non-stationary
CSME/TC	1.9403(0.628)	1.3006(0.390)	Non-stationary
Unit root test at 1st difference: Intercept and Trend			
PCI	8.2611(0.000)*	11.762(0.000)*	Stationary
CPS/GDP	9.3561(0.000)*	13.052(0.000)*	
TL	14.019(0.000)*	9.897(0.000)*	‘’
CSME/TC	11.6376(0.000)*	7.8392(0.000)*	‘’

Source: Researchers compilation (2024).

The unit root test is conducted and for robustness, the study employs both the Dicky-fuller, Augmented dickey fuller and the Philip-perron Tests. Table 2 presents unit root test for the individual series while table 3 presents the unit root test for the variables examined as a group. In addition, for the group test, the Hadri-Z-test is presented alongside the ADF and Philip-Perron tests. The results are all unanimous and indicate the presence of individual unit root at 1st difference for all the variables and this indicates that the variables attain stationarity at 1st difference and not at levels.

Table 3. Group Unit root test Results

Unit root test at levels: Intercept and Trend				
	Hadri Z-test	Augmented Dickey-Fuller (ADF)	Philp-Perron-Test (PP)	Remark
	4.9307			Stationary
χ^2_{fisher}		2.249	2.17028	Non-stationary
Prob	0.000	0.9940	0.9949	Non-stationary
Unit root test at 1st difference: Intercept and Trend				
	2.62232			Stationary
χ^2_{fisher}		22.4009	165.885	Stationary
Prob	0.0000	0.0132	0.000	Stationary

Source: Researchers compilation (2024).

The group unit root results also confirm and support the results for the individual unit root test. As observed, the Hadri-Z test, the ADF and PP test all show that taken as a group, the variables have common unit root

Table 4. Bounds Test for Co-integration

Test Statistic	Value	Significance	1(0)	1(1)
F-statistic	51.079		Asymptotic n=1000	7
K	4		I0 Bound	I1 Bound

		5%	2.56	3.49
		1%	3.29	4.37

Source: Researcher's Compilation from E-views 10 (2024).

Table 4 showed the result of the Bounds test of long run co-integration between commercial bank loans and poverty reduction in Nigeria. The evaluation of the results was based on the critical F-statistic values for the lower and upper bounds as also reported in the results. According to the empirical output of the F-values, it could be seen that the null hypothesis of no long-run relationship is rejected at the 5% level of significance as the f-value of 51.079 exceeds critical values for 1(0) and I(1) respectively.

Table 5: Granger Causality/Block Exogeneity Wald Tests Granger Causality Tests

Dependent variable: SMECR			
Excluded	Chi-sq	df	Prob.
CPS/GDP	1.233673	2	0.5396
TL	0.008485	2	0.9958
PCI	0.404808	2	0.8168
Dependent variable: CPSGDP			
Excluded	Chi-sq	df	Prob.
SMECR	6.675094	2	0.0355**
TL	0.960466	2	0.6186
PCI	1.376292	2	0.5025
Dependent variable: TLONA			
Excluded	Chi-sq	df	Prob.
SMECR	3.996250	2	0.1356
CPSGDP	2.020281	2	0.3642
PCI	14.93310	2	0.0006*
Dependent variable: PCI			
Excluded	Chi-sq	df	Prob.
SMECR	0.692074	2	0.7075
CPSGDP	10.05547	2	0.0066*
TL	4.248896	2	0.1195

Source: Researcher's Compilation from E-views 10 (2024). * sig @ 1%, ** sig @5% and *** sig @ 10%

The granger causality and block exogeneity test Results is presented in table 4.5 and as can be observed, the study shows evidence of causality from PCI to TL which is significant at 5% (p=0.0006) and suggest the possibility that poverty levels can actually drive demand for loans from deposit money banks. However also, causality is observed to also exist from CPS/GDP to PCI (p=0.0066) and hence ratio of private sector credit to GDP affects PCI levels. Furthermore, the results do not point to the presence of significant causality from CSME/CR to PCI (p=0.7075) or from TL to PI=CI (p=0.115). Also, the results do not point to the presence of significant causality from PCI to CSME/TC (p=0.8168) at 5% or the other way round from PCI to TL (p=0.3642) at 5%.

Table 6. Long run ARDL Result: ARDL (4, 4, 4, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.158315	3.560101	2.291596	0.0837
LOG(CSME/TC)	-0.235676	0.290379	-0.811614	0.4625
LOG(CPS/GDP)	-0.293015	1.130240	-0.259250	0.8082
LOG(TL)	0.574855	0.097090	5.920825	0.0041

Source: Researcher's Compilation from E-views 10 (2024). * @ 1% ** sig @ 5% *** sig @10%

The long run results show the impact of commercial bank loans on poverty reduction in Nigeria and as observed, log (CSME/TC) has a negative impact on PCI Specifically, the result indicates that a 1% increase in ratio of credit to SME to total credit in a decline in PCI by about 0.24% though the result is not significant at 5%. In the case of CPS/GDP, the result shows a negative effect on PCI and specifically, a 1% rise in CPS/GDP reduces PCI by 29.3% though the result is not significant at 5%. In addition, the effect of TL on PCI is positive and significant at 5% and specifically, a 1% increase in TL results in an increase in PCI by 57.49%. Hence the null hypothesis that commercial bank loans have no significant impact in reducing poverty in Nigeria is rejected. Our results suggest that banking development can help combat extreme poverty. The finding is in tandem with Ampah, Ambrose, Omagwa and Frimpong (2017) which found that access to credit and financial services had a fairly weak positive effect on growth in income. Gidigbi (2021) Anas (2021), Hong, Xiaohong and Wenjing (2021) but in contrast with Olayinka (2009).

Table 7: Short-run ARDL Result ARDL (4, 4, 4, 4,)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.374465	2.291276	3.654935	0.0217**
DLOG(PCI(-1))	0.288330	0.156499	1.842380	0.1392
DLOG(PCI(-2))	0.050867	0.104398	0.487237	0.6516
DLOG(PCI(-3))	0.261395	0.089027	2.936144	0.0426**
DLOG(CSME/TC)	-0.031507	0.041611	-0.757187	0.4911
DLOG(CSME/TC(-1))	0.108151	0.062010	1.744102	0.1561
DLOG(CSME/TC(-2))	-0.047673	0.070329	-0.677860	0.5350
DLOG(CSME/TC(-3))	0.233571	0.082741	2.822913	0.0477**
DLOG(CPS/GDP)	-0.804326	0.183971	-4.372013	0.0119**
DLOG(CPS/GDP(-1))	-0.405656	0.263459	-1.539730	0.1985
DLOG(CPS/GDP(-2))	-0.370440	0.183001	-2.024245	0.1130
DLOG(CPS/GDP(-3))	0.231975	0.194597	1.192076	0.2991
DLOG(TL)	0.512351	0.144611	3.542967	0.0239**
DLOG(TL(-1))	-0.125166	0.151658	-0.825315	0.4556
DLOG(TL(-2))	-0.214127	0.113370	-1.888747	0.1319
DLOG(TL(-3))	0.228088	0.106171	2.148313	0.0982***
ecm(-1)*	-1.026494	0.278648	-3.683833	0.0211**

Source: Researcher’s Compilation from E-views 10 (2024). * @ 1% ** sig @ 5% *** sig @10%

The short run results shows that DLOG (CSME/TC (-3)) is positive and significant at 5% with coefficient and p-value of 0.233571 and p= 0.0477. In addition, DLOG (CPS/GDP) is negative and significant at 5% (-0.8043, p=0.0119) and DLOG (TLONA) is positive and significant at 5% (0.512, p=0.0239). The error correction coefficient has the expected negative sign and indicates complete adjustments within one year. Even in the short run only the coefficient for total loans (TL) is positive and On the overall, the study provides evidence that non-oil The finding is in tandem with Adeusi, Uniamikogbo, Erah and Aggreh (2020), Adegbie, Nwaobia and Osinowo, (2020), Ogba, Park and Nuka (2018) and Akwe (2014) though at variance with Ogunbiyi and Abina (2019).

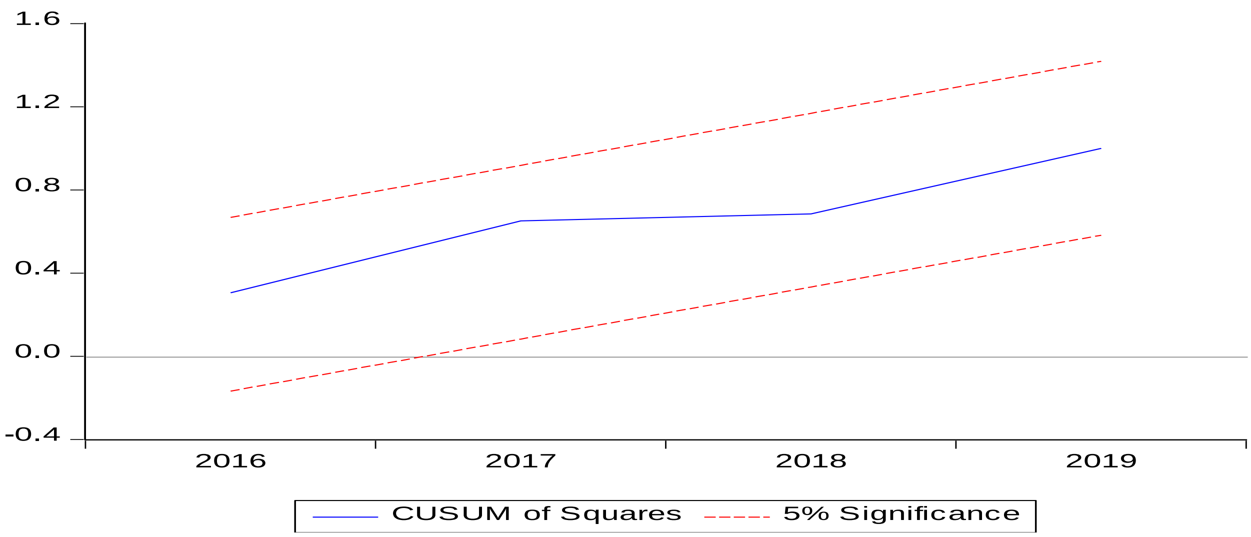
Table 8: Model Properties and Diagnostics Test

R^2	0.966
Adjusted R^2 χ^2_{Hetero}	0.888 0.34186(0.9516)
$\chi^2_{Serial/Corr}$ χ^2_{Norm} χ^2_{Ramsey}	1.06947 (0.3771) 1.6979 (0.4278) 1.3269 (0.328)

Source: Researcher's Compilation from E-views 10 (2024).

The model summary and diagnostics reveal that R^2 and Adj R^2 stood at 97% and 95% respectively which indicates a good fit for the model and hence implies commercial bank lending and poverty reduction in Nigeria. The diagnostics reveals that the χ^2_{Hetero} p-value (0.9516) implies the homoscedastic behaviour of the errors and the $\chi^2_{Serial/Corr}$ p-value (0.3771) also reveals the absence of serial correlation. In addition, χ^2_{Norm} p-value (0.4278) reveals that the series follow a normal distribution and the χ^2_{Ramsey} p-value (0.328) indicates that the mode is correctly specified.

Figure 1: ARDL Cusum of Squares



The ARDL cusum of squares is within the 5 per cent critical lines; this implies that the parameters in both models are stable. Also, the stability of the cusum of the square residuals implies error variance stability, thereby, parameters are stable as well. Both models are reliable and feasible for a policy decision. The cusum of squares indicates that the model estimation is stable and that the parameters are also stable.

Conclusion and Recommendations

This study examined the impact of commercial bank loans on poverty reduction in Nigeria. The increased level of poverty and hardship affecting the common man in Nigeria has been a major source of concern to the government and the general public. Access to financial services is not easy hence the level of unemployment is on the increase. Nigerians who want to own their own business are not able to get funds from the commercial banks to start their business and even when they get the fund the interest rate is very high. Against the backdrop this study examined whether commercial bank loans translate to reduce the level of poverty in Nigeria.

Recommendations

Flowing from the findings in this study, the following recommendations are put forward:
In relation to total loans, commercial banks may need to increase access by private individuals. In Nigeria, there are huge constraints to accessing loans which makes it difficult to get one especially because of the collateral requirements. The mission to achieve financial inclusion as a means to reducing poverty can be hugely affected by constraints to credit access and hence there is the need for commercial banks to make access to credit easier for SMEs and those average and low-income individuals.

Central Bank of Nigeria should encourage the accessibility to financial services in commercial banks by reducing the interest rates as this would enable people to access financial services from commercial banks to promote investment, increase income generation thereby reducing poverty level and enhance the standard of living of the citizenry.
The government should encourage the establishment of rural bank branches of commercial banks and by ensuring there is adequate security. Also, the government should further encourage the activities of commercial banks by creating an enabling environment so that they can further support low income earners.

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HIGH INVOLVEMENT MANAGEMENT AND EMPLOYEE WORK PASSION OF PRIVATE SECURITY FIRMS IN RIVERS STATE

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Abstract
This study aims at empirically investigating the relationship between high involvement management and employee work passion of private security firms in Rivers State. To reach the target population for this study, the researcher employed a cross-sectional research strategy. This is because the study subjects are people, and because people are prone to change, it is impossible to control their behaviour. Twenty-one (21) private security firms in Rivers State, Nigeria are the study's population, according to finelib.com. In Rivers State, 160 security guards were chosen at random from among the 21 private security firms. Responses to the survey ranged from strongly agree to strongly disagree on a five-point Likert scale. 160 questionnaires were distributed to the managers of the non-alcoholic beverage enterprises in the southern region of Nigeria; 152 copies of the questionnaires were gathered. The spearman correlation coefficient was used to evaluate the hypotheses and descriptive statistics were employed to analyze the data. For the correlation study, SPSS version 23.0 was utilized. From the results generated by all the hypotheses, it demonstrated that there exist a significant and positive connection between the variables under research since their correlations from the SPSS table were *0.921, *0.874, *0.872, *0.886. From the outcome, it was obvious that all the elements of high involvement management had good link with employee work passion of private security firms in Rivers State. Given the findings of the study and its conclusions, we recommend that establishing a work environment that promotes employee participation in decision-making is crucial for private security management as it enhances employees' sense of acceptance and flexibility inside the organization.
Keywords: Incentives, Employee Participation, Harmonious Passion, Obsessive Passion

Introduction
Since employee attitudes affect a variety of work-related behaviours and other desirable work-related outcomes, researchers and enterprise managers are becoming increasingly interested in how employees feel about their loyalty to the employing organization, their job satisfaction, and their involvement in the work. This is especially true because how a person feels about their job, the company, and the people that work there, and the circumstances around them all affects how they react to it. As a result of singular experiences, when an individual form a positive attitude towards one facet of their work, they are likely to respond positively to other related areas of their work as well. Employee engagement increases the likelihood that they would be content with their work and, thus, become committed to their organization.

Employees' work passion, or EWP, is characterized as a person's emotionally stable, meaningful, and long-lasting state of well-being that arises from regular, ongoing cognitive and affective assessments of different work and organizational contexts and leads to consistent, positive work intentions and behaviours (Zigarmi, et al., 2011). According to Pati (2012), a person's work passion manifests their purpose and how it connects to the firm's goal, stemming from an implicit relationship with self-consciousness. Many advantages flow to the business when employees demonstrate their love for their work, including but not limited to: commitment, good citizenship, job satisfaction, increased profit and growth, and a lower labour turnover rate. Employees with a strong sense of passion are motivated, engaged, and focused on giving everything they do their all. According to Valler et al., (2010), a person's work passion is a strong emotional response to a task they enjoy and invest a substantial amount of time and energy in. Employees' innate curiosity in a job and their own love for it foster a passion for it at work. Employee camaraderie and engagement are its main drivers.

Additionally, high involvement management (HIM) promotes teamwork and helps workers understand the organization's objectives and community, according to Ahmead, Shahzad, Waheed, and Khan (2014). A strong correlation between high involvement management (HIM) and positive employee work experiences and high-quality performance has been demonstrated by extensive study (Combs, Liu, Hall & Ketchen, 2006). "High involvement management" is a term used to characterize an employee-based approach. Over the years, many academics have established various facets of high-involvement management. Recruitment, gathering, significant capacity building, collaboration, and performance evaluation are some of these aspects (Takeuchi and Lepak 2007). Despite the numerous researches on employee work passion, there is still lack of research on high involvement management and employee work passion of private security firms in Rivers State.

Statement of the Problem

If employees lack passion in their work and make friendships that support staff in creating an environment of love, sympathy, and awareness to be their brothers' keepers while carrying out assigned obligations, the organization's ability to achieve its intended goals may be in jeopardy. At work, rumors, resentment, and petitions are reduced when employees show friendship with one another. It is evident that the majority of businesses, including security corporations, that disregard the benefits of a shared vision or employee involvement are more likely to become unstable due to unresolved conflicts of interest, the distortion of corporate goals, partiality, and low productivity all of which are bad for both the success of the business and the motivation of its employees to work hard. It is also crucial to note that the lack of collaboration at work in the private security sector is a contributing factor to the employees' insufficient work ethic in the organization. This research aims to investigate the relationship between high involvement management and employee work passion in the private security industry, despite the fact that the few studies on employee work passion did not really relate to private security corporations.

Aim and Objectives of the Study

This study aims at empirically investigating the relationship between high involvement management and employee work passion of private security firms in Rivers State. However, the specific objectives are to;

i. Explore the relationship between incentives and employee work passion of private security firms in Rivers State
ii. Discover the relationship between employee participation and employee work passion of private security firms in Rivers State

Research Questions

The study seeks answers to the following research questions;

i. To what extent is the relationship between incentives and employee work passion of private security firms in Rivers State?
ii. To what extent is the relationship between employee participation and employee work passion of private security firms in Rivers State?

Research Hypotheses

H_{01}: There is no significant relationship between incentives and employee work passion of private security firms in Rivers State

H_{02}: There is no significant relationship between employee participation and employee work passion of private security firms in Rivers State

Review of Related Literature

Theoretical Foundation: George Casper Homans is the one who introduced the social exchange hypothesis. This idea was used to determine which friendships would result in rewards and which may result in hardships or penalties at work. According to social exchange theory, when someone receives assistance, support, or a reward from another person, they become satisfied and obligated to trade or return the favour in order to maintain the equilibrium of their interpersonal relationship (Homans, 1958: Lin, 2004). In a similar vein, social exchange theory (SET) denotes a social behaviour that results in an exchange process where people contrast a friendship that presents benefits at work with one that carries risks or consequences in their social relationships. According to this theory, parties may quit or leave a relationship if the risks or unfavourable effects of maintaining a social connection or friendship outweigh the benefits. Employees are obligated to keep their friendship if the reward outweighs the hazards or discontent. Generally speaking, the goal of making friends at work is to minimize expenses and maximize rewards. Although most partnerships begin with a give-and-take dynamic, this does not imply that they are always equal. According to social exchange theory, friendships and social associations end when the costs and benefits of each interaction are balanced.

Conceptual Framework

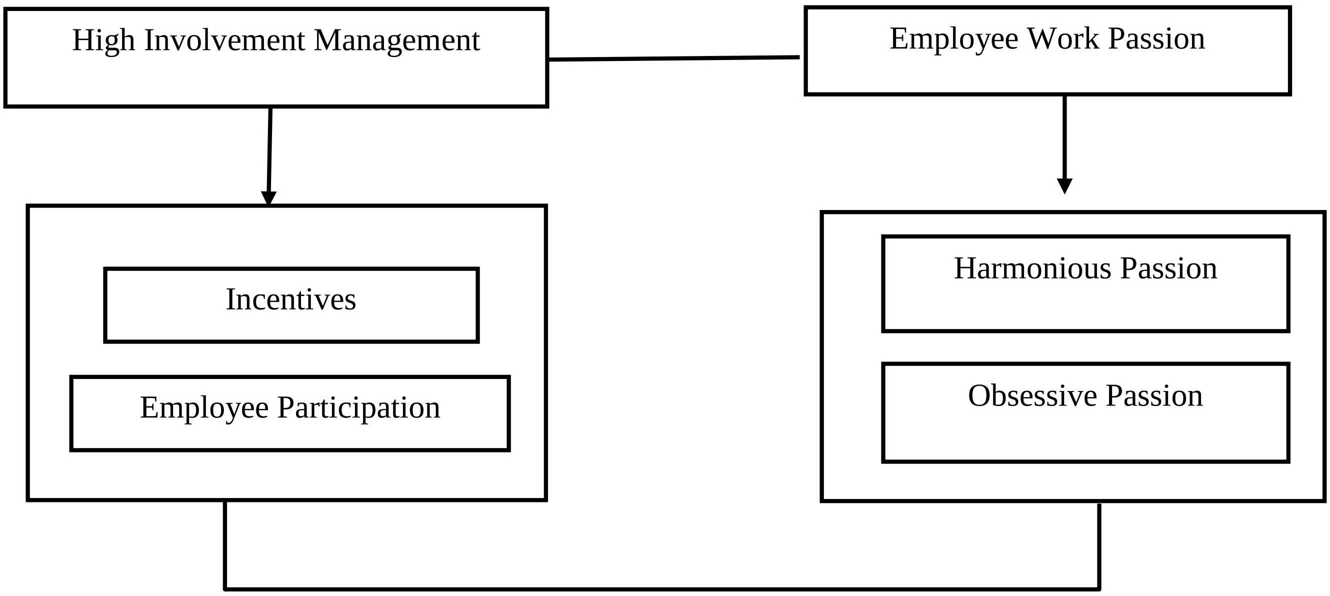

Fig. 1 Operational Framework of High Involvement Managementand Employee Work Passion
Source: adapted from: Akhigbe, O. J. (2020); Nwinye, and Gilbert, (2023); Nwibere, (2021);

High Involvement Management

According to Wood and Bryson (2014), High Involvement Management refers to initiatives that spread information and foster capability development so that workers can engage in organizations directly or indirectly. Thus, His includes two kinds of activities: those that give employees the chance to acquire the knowledge and experience needed to guarantee they have the capacities to work with engagement; and those that encourage greater diversity, initiative, and coordination through work organization techniques like teamwork, flexible job assignments, and idea-capture schemes. This entails intensive training in collaboration, technical adaptability, and idea generation, as well as knowledge sharing, particularly with relation to the business's demand and economy (Wood & Bryson, 2014).

Four factors were noted by Böckerman, Bryson, and Ilmakunnas (2013) as to why HIM can raise labour productivity and, consequently, employee wages. The first step in understanding high-involvement tasks is to establish human resources tailored to the needs of the organization. This competence development can lead to higher labour productivity by including both off-the-job and on-the-job training. Second, employees can use their tacit knowledge of labour and manufacturing processes in ways that are not possible when they are only performing the tasks that managers and supervisors assign them. This is made possible by increased workplace control and the delegation of decision-making responsibilities to workers. Third, the switch to team-based output, which frequently incorporates high-involvement tactics, will boost labour efficiency in situations where partners' labour contributions complement one another. Fourth, HIM will stimulate greater employee initiative through labour intensification (Ramsey, Scholarios, & Harley, 2000) or the motivational impact of enhanced work fulfillment or organizational involvement that may accompany job enrichment.

Incentives: According to Palmer (2012), rewards are incentives that come from outside sources and push an individual to work more. They are given in return for an individual achieving higher performance levels since a satisfied employee will put in more effort and produce better work. The idea of rewards attracts a lot of thought, especially when it comes to the beginning of the process of finding qualified employees who can successfully accomplish the objectives of the organization. The necessity for employees to get recognition and rewards for their achievements underlies the significance of bonuses. Employees can be offered monetary or non-monetary incentives through incentive programmes, which encourage them to perform harder on a particular task. According to Zysman (2020), incentives are forms of supplemental remuneration that organizations offer to their employees in addition to their base pay in an effort to encourage and motivate them to be more productive at work and strive for continuous improvement of work performance inside the company.

Employee Participation: Employee participation, as described by Sofijanova and Chatleska (2013), constitutes the method of empowering and including workers on the job so that their contributions can be used to improve both individual and organizational performance. According to Bhatti and Nawab (2011), employee participation is the culmination of task-related activities designed to increase workers' commitment to the organization as a whole and their sense of involvement in their workplace. When an employee participates in decision-making, they are referring to Park's Take (PDM) policy. Alternatively put collaborative decision-making at work. (Michelle 2003). Noah (2008) explains that this type of allocation is unique in that it creates a communication gap between management and employees while giving the subordinates more freedom and authority over their job duties. This pertains to the worker's participation in the strategic planning processes of the company. The level of employee involvement inside a company might vary. It means that while all employees in an organization participate in the planning process, in certain organizations, only the senior management does.

Employee Work Passion

The study of organizational behaviour and management has given more emphasis to the idea of work passion (McAllister, 2017). The definition of passion is an intense drive towards a task that one enjoys, values, and devotes attention and effort to. Therefore, in order for an activity to be considered a passion for someone, it must hold significance in their lives, be enjoyable, and be a regular source of time for them (Vallerand, et al. 2003). The definition of work passion is an individual's ongoing, emotionally upbeat, meaning-based state of well-being that results from ongoing cognitive and affective assessments of their position and the circumstances of their organization. Positive intentions and behaviours at work are a direct result of this sense of well-being (Zigarmi et al., 2011).

Harmonious Passion: Harmonious passion has been shown in numerous studies to have a good impact on psychological health, work motivation, and the importance of completed activities (Vallerand, 2019). This is due to the fact that harmonious passion produces happy feelings while working, which enhances concentration, encourages job absorption, and elevates mental health. Higher levels of intrinsic job satisfaction are the outcome for people (Vallerand, 2019; Lavigne, 2014;

McAllister, 2017). A positive internalization of work and a sincere appreciation for one's profession are referred to as harmonious passions. It is advantageous to both people and businesses. Workers with a strong, independent love for what they do are more likely to have personal assets that improve task performance.

Obsessive Passion: Conversely, an obsessive desire arises when an individual feels hard-pressed to work and finds it hard to step back from job-related issues (Orgambídez, 2014; Vallerand, 2003). This suggests that in cases of obsessive work passion, an individual experiences an inability to resist the internal drive to work since the activity has taken over their thoughts and feelings. The activity has gained precedence over other important elements of life, which will generate internal conflict in the person. This conflict will manifest as health and psychological problems, as well as a rise in work-related stress (Vallerand et al., 2003). Workers with an obsessive interest could possibly be deeply committed for the work, love it, and invest a significant amount of time and energy in it, but they might additionally sense terrible about not being able to spend more time with their families. The worker may feel pressured to remain with the task in order to maintain positive outcomes, such as feelings of superiority, self-esteem, recognition, or social acceptance, as a result of their work (Bayraktar & Jiménez, 2022). In addition, the inflexible persistence associated with obsessive enthusiasm can result in burnout, mental, and emotional tiredness, all of which impair an employee's ability to focus on their work (Marques 2007).

Empirical Review

Jawaria et al., (2020) explored the impact of high involvement work practices on employee performances in health sector, Pakistan. The quantitative methods of data collection and analysis were used in this study. The questionnaire was chosen as the data collecting instrument, and data was gathered via a survey. Physicians, dietitians, chemists, and other staff members at rural health centers are among the health department professionals that are the target audience for this poll. Through the distribution of the questionnaires, 202 employees were chosen for this survey. Once all the questionnaires were collected, the data was entered into SPSS for statistical analysis. The findings demonstrated a significant correlation between employee performances and each of the four elements of employee involvement. Every variable in this study maintains a strong correlation with every other variable. Additionally, it has shown that organisational training and shared information continue to be increasingly important in influencing employee performance. The key suggestions and avenues for additional research have been brought to light by this study. It has been determined that there is a higher association between employee performance and awards.

Blessing. D, (2022) studied the high involvement management and employee performance of deposit money banks in Rivers State. One type of quasi-experimental design that was employed was the cross-sectional survey. The study's population consisted of 321 workers from 15 carefully chosen deposit money banks. In this study, the sample cases were chosen using the cluster sampling technique. Primary data for the study were gathered using a questionnaire. Respondents received the instrument directly from the source. The retrieved data was examined using the statistical tool known as the Pearson product moment correlation coefficient to verify the previously put forward theories. The moderating effect of work satisfaction on the association between high involvement management and employee performance, on the other hand, was examined using partial correlation analysis. The analysis's findings showed that there was a substantial correlation between the employee performance metrics (service quality and staff adaptability) and the high involvement management aspects (incentives, capacity building, and employee participation). Furthermore, it was found that the association between high engagement management and employee performance was strongly attenuated by job satisfaction. Accordingly, the study came to the conclusion that employee performance will be improved by a stake in the high participation management approach.

Akhigbe (2020) observed the high involvement management and employee performance of deposit money banks in Rivers State. A quasi-experimental survey in the form of a cross-sectional survey was employed. There were 321 employees in the sample population, drawn from 15 selected deposit money banks. For this investigation, sample cases were chosen using the cluster sampling technique. A questionnaire served as the primary data gathering tool for the study. The respondent received the instrument in private. The retrieved data were assessed using the statistical approach of Pearson product moment correlation coefficient in order to assess the hypothesis. Partial correlation analysis was used to look at the moderating role that workplace satisfaction played in the link between high involvement management and employee performance. The study demonstrated a significant relationship between measures of employee performance (service quality and staff adaptability) and high involvement management components (incentives, capacity building, and employee participation).

Methodology

To reach the target population for this study, the researcher employed a cross-sectional research strategy. This is because the study subjects are people, and because people are prone to change, it is impossible to control their behaviour. Twenty-one (21) private security firms in Rivers State, Nigeria are the study's population, according to finelib.com. In Rivers State, 160 security guards were chosen at random from among the 21 private security firms. Responses to the survey ranged from strongly agree to strongly disagree on a five-point Likert scale. 160 questionnaires were distributed to the managers of the non-alcoholic beverage enterprises in the southern region of Nigeria; 152 copies of the questionnaires were gathered. The spearman correlation coefficient was used to evaluate the hypotheses and descriptive statistics were employed to analyze the data. For the correlation study, SPSS version 23.0 was utilized.

Data Analysis and Results

Incentives and employee work passion

H_{01}: There is no significant relationship between incentives and employee work passion of private security firms in Rivers State

			incentives	harmonious passion	obsessive passion
Spearman's rho	incentives	Correlation Coefficient	1.000	.921**	.874**
		Sig. (2-tailed)	.	.000	.000
		N	152	152	152
	harmonious passion	Correlation Coefficient	. 921**	1.000	.883**
		Sig. (2-tailed)	.000	.	.000
		N	152	152	152
	obsessive passion	Correlation Coefficient	. 874**	. 883**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	152	152	152

Source: Field Survey Data, 2024, SPSS (Output)

The association between incentives and measures of employee work passion such as harmonious passion and obsessive passion are experiential to be significant at a $Pv < 0.05$ in the two hypotheses.

The result shows that incentives has a strong significant relationship and positively correlates with harmonious passion at a Rho = 0.921 and a Pv = 0.000 and incentives further contributes strong and positive correlation towards obsessive passion at a Rho = 0.874 and a Pv = 0.000. Therefore, we reject null hypotheses one and two relating to incentives of harmonious passion and obsessive passion, because the Pv (0.000) <0.05 level of significance.

Employee Participation and Employee Work Passion

H_{02}: There is no significant relationship between employee participation and employee work passion of private security firms in Rivers State

			employee participation	harmonious passion	obsessive passion
Spearman's rho	employee participation	Correlation Coefficient	1.000	.872**	.886**
		Sig. (2-tailed)	.	.000	.000
		N	152	152	152
	harmonious passion	Correlation Coefficient	. 872**	1.000	. 896**
		Sig. (2-tailed)	.000	.	.000
		N	152	152	152
	obsessive passion	Correlation Coefficient	. 886**	. 896**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	152	152	152

Source: Field Survey Data, 2024, SPSS (Output)

The association between employee participation and measures of employee work passion such as harmonious passion and obsessive passion are experiential to be significant at a Pv < 0.05 in the two hypotheses. The result shows that employee participation has a strong significant relationship and positively correlates with harmonious passion at a Rho = 0.872 and a Pv = 0.000 and employee participation further contributes strong and positive correlation towards obsessive passion at a Rho = 0.886 and a Pv = 0.000. Therefore, we reject null hypotheses one and two relating to employee participation of harmonious passion and obsessive passion, because the Pv (0.000) <0.05 level of significance.

Discussions of Findings

From the results generated by all the hypotheses, it demonstrated that there exist a significant and positive connection between the variables under research since their correlations from the SPSS table were *0.921, *0.874, *0.872, *0.886. From the outcome, it was obvious that all the elements of high involvement management had good link with employee work passion of private security firms in Rivers State. The first hypothesis suggested that incentives has a positive linear noticeable association with employee work passion based on the P-value less than 0.05 (P-value = 0.000 <0.05) which means that both variables have direct positive relationship which advances in the same positive direction. The second hypothesis showed that employee participation has a positive linear notable correlation with employee work passion based on the P-value less than 0.05 (P-value = 0.000 <0.05) which implies that both variables have direct positive relationship which moves in the same positive direction. Similarly, the positive correlation is attuned with the findings of previous studies like

Jawaria et al., (2020); Blessing. (2022); Akhigbe, (2020). From their findings, high involvement management has a positive impact on employee work passion.

Conclusion

In conclusion, high involvement management in the areas of incentives and employee participation is necessary for private security firms in Rivers State to adapt towards employee work passion.

Recommendations

Given the findings of the study and its conclusions, the following suggestions are made:

i. Improving incentives among employees of private security firms can create a positive work environment that drives performance and innovation. The management of private security firms can adopt strategies such as granting employees and teams the necessary autonomy to complete their tasks, providing meaningful work to create a sense of purpose, offering recognition and rewards for achievements to foster ownership and pride, facilitating collaboration and mutual aid for learning and idea sharing.

ii. Establishing a work environment that promotes employee participation in decision-making is crucial for private security management as it enhances employees' sense of acceptance and flexibility inside the organization.

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PRODUCT DIFFERENTIATION STRATEGIES AND COMPETITIVE ADVANTAGE OF ALUMINUM MANUFACTURING FIRMS IN RIVERS STATE

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Abstract
This study investigated the relationship between product differentiation strategies and competitive advantage of aluminum manufacturing firms in Rivers State. Specifically, the objectives of the study were to ascertain the extent to which product differentiation strategies relates with competitive advantage of aluminum manufacturing firms in Rivers State. The population of the study was seventy-seven (77) registered aluminum manufacturing firms in Rivers State. The sample size is forty-four (44) with was determined from Tero Yamine sample size formula. Five (5) copies of the questionnaires were distributed to (5) respondents from each of these aluminum manufactory firms. the respondents were (220) staff members from each of the aluminum manufactory firms and ranging from product manager, marketing manager, sales manager, customer relations managers, and supervisors. Six (6) research hypotheses were tested using Pearson Product Moment Correlation with the aid of Statistical Package for Social Sciences to establish the relationships between the predictor and criterion variables. Results of the test showed that product quality, product design, product innovation have significant and positive relationships with sales growth and cost leadership– the measures of competitive advantage. Therefore, the study concluded that that product differentiation strategies positively relates with competitive advantage of aluminum manufacturing firms in Rivers State**.** Therefore, the study recommended that managers of aluminum manufacturing firms should heighten product differentiation strategies in order to advance on their competitive advantage

Keywords: product differentiation strategies, competitive advantage, sales growth, cost leadership and aluminum manufacturing

Introduction

The economy is significantly influenced by manufacturing, which generates employment opportunities and enhances the quality of life by producing a wide range of products, such as pharmaceuticals, technology, and food. Manufacturing companies contributed significantly to the manufacturing sector, as evidenced by the National Association of Manufacturers (2016) report, which reported a total output of $2,175 billion and a workforce of nearly 12.3 million employed. Jobs are generated in all sectors of the economy by manufacturing, and the United States' economic expansion is closely linked to the innovation and entrepreneurial endeavours it fosters (Bosman, Hartman, & Sutherland, 2019). The significant extent of this economic expansion can be attributed to the improved accessibility of knowledge regarding products and processes, as well as the advancement in the development of innovative products and manufacturing techniques. Industry 4.0 is the term that is most frequently employed to describe this phenomenon (Abubaker et al., 2017). The term "Industry 4.0" refers to the integration of data, people, processes, services, systems, and IoT-enabled industrial assets to transform manufacturing and other industries. The objective of this transformation is to generate, capitalise on, and implement practical information in order to foster innovation and collaboration within industrial ecosystems and achieve an intelligent industry (I-Scoop, 2017).

Engineering and industrial design are closely associated with the aluminium manufacturing industry (Samanta, 2017). The practice of outsourcing the production of products to external providers is widely used. In the past, the practice of outsourcing manufacturing to third parties was implemented to attain financial benefits, particularly in relation to excise charges. The past seven years of modifications have resulted in a significant dilution of these. The government proposed in the 1997-98 budget to modify the excise levy's premise to the Maximum Retail Price (MRP) (Pawar & Dave, 2021). A total of 43 distinct product categories have been included in the MRP network in the subsequent budgets. In addition to excise benefits, third-party manufacturing offers increased flexibility in inventory planning and production. The marketing company's decision-making process is predominantly unrestricted by the necessity to consider production overheads and the capacity to manage labour costs (Pawar & Dave, 2021). Another method is centred on the design principles, proposed rationale, and anticipated outcomes of implementing a technology intervention. This intervention encompasses a variety of elements, including the distribution of decision-making authority, the ability to operate in real-time, the distribution of decision-making authority, the focus on service, intelligent products, intelligent factories, compatibility, flexibility, and integration across different levels (Ghobakhloo, 2018). Another method of incorporating Industry 4.0 technology is to evaluate specific areas or duties that could be enhanced, such as product design and engineering, planning, supply chain, and factory operations (Groover, 2015).

The primary focus of strategic management has been on the identification of the source of enduring competitive advantage, which is essential for an organization's success. The pursuit of competitive advantage is considered a critical component of the discipline (Porter, 1985, 1991). In order to maintain a competitive edge in the global market, organisations must establish and maintain a strong brand that will attract and retain customers and surpass competitors. Competitive advantages are unique qualities that a corporation or external factors possess that provide the company with a competitive advantage over its competitors in a specific market, as evidenced by anecdotal evidence. The creation and maintenance of these advantages require a significant quantity of effort. Competitive advantages can be classified as both existing and potential within the context of time perspective (Dimitrova, 2014). Competitive advantage is the term used to describe the distinctive features or characteristics of a product or brand that give it a competitive advantage over its closest competitors (Yuleva, 2019). The study assessed competitive advantages by taking into account two factors: cost leadership and sales growth. Cost leadership is the organization's capacity to reduce costs and expenses in order to maintain a competitive edge, while sales growth is the increase in sales activities at the end of the fiscal year.

The literature is replete with research that seeks to establish a correlation between various components of product differentiation strategies and competitive advantage. Negulescu (2019) conducted a study that examined the significance of evaluating a company's competitive advantage when determining its strategy. Ghasemi and Yaghmaei (2015) examined the impact of competitive advantage on the dominance of firms in the global hospitality market by examining corporate reputation and emotional effort. In her research, Yuleva (2019) investigated the competitive advantages and mechanisms employed by small and medium-sized enterprises. Reguia, in 2014.The focus of the investigation is the relationship between competitive advantage and product innovation. The consequences of product innovation were investigated by Pramuki and Kusumawati (2020). Nevertheless, none of these studies attempted to establish a correlation between the competitive advantage of aluminium manufacturing firms and their product differentiation strategies. The primary objective of this investigation is to ascertain the correlation between the competitive advantage of aluminium manufacturing enterprises in Rivers State and the methods of product differentiation. Competitive advantage will be evaluated in accordance with cost leadership and sales development. The primary objective of the investigation was to evaluate the conceptual framework and conduct tests for a set of null hypotheses.

Ho1: Product differentiation strategies does not significantly relate with sales growth of competitive advantage of Aluminum manufacturing firms in Rivers State.

Ho2: Product differentiation strategies does not significantly relate with cost leadership o competitive advantage of Aluminum manufacturing firms in Rivers State.

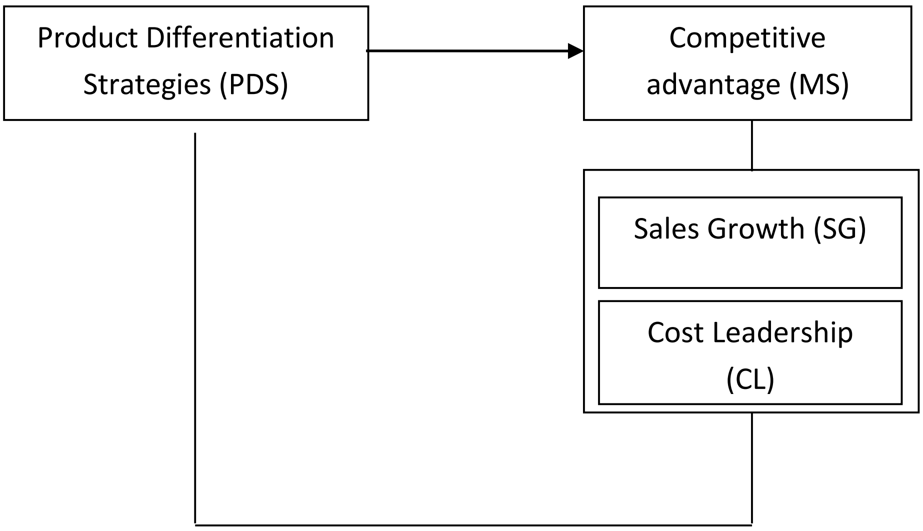

Figure 1: Conceptual framework of product differentiation strategies and competitive advantage of Aluminum manufacturing firms in Rivers State.

Source: Researchers Conceptualization (2024)

Theoretical Foundation/Resource Based Theory

Firm resources are defined as the assets, capacities, organisational processes, firm qualities, information, and knowledge that a firm has control over, as per the resource-based approach (Barney, 1991). The proposal posits that a corporation gains a competitive advantage by developing a successful strategy that utilises resources that are unreplicable by any existing or prospective competitor. Additionally, the theory assumes that a resource or capability must possess the qualities of rarity, value, non-imitability, lack of substitutes, and non-transferability in order to provide a competitive advantage. The resource-based approach posits that the resources of an organisation are heterogeneous and not completely mobile, which leads to variations among organisations (Diris, Iyiola & Ibidunni, 2013). One of the most frequently referenced and significant theories in the management industry is the Resource Based Theory (RBT), which is widely recognised. According to Namjoo and Keramati (2018), resources are essential for a corporation to establish sustainable competitive advantages. For instance, the implementation of green manufacturing and cleaner production practices frequently leads to an enhancement in the firm's performance and a competitive advantage (Ashrafi & Mueller, 2015; Shan et al., 2019). In order to establish a competitive advantage, enterprises are motivated to implement environmentally sustainable supply chain processes (Sharfman et al., 2009).

The Concept of Product Differentiation Strategies

In the resource-based approach, firm resources are defined as the assets, capacities, organisational processes, firm qualities, information, and knowledge that a firm has control over (Barney, 1991). The proposal posits that a corporation gains a competitive advantage by using resources that are incapable of being replicated by any existing or prospective competitor to develop a successful strategy. In addition, the theory asserts that a resource or capability must possess the qualities of rarity, value, non-imitability, lack of substitutes, and non-transferability in order to confer a competitive advantage. An organization's resources are heterogeneous and not completely mobile, which leads to variations among organisations, according to the resource-based approach (Diris, Iyiola & Ibidunni, 2013). Resources-Based Theory (RBT) is widely acknowledged as one of the most frequently referenced and significant theories in the management industry. Namjoo and Keramati (2018) contend that resources are essential for creating sustainable competitive advantages within a corporation. For example, the implementation of green manufacturing and cleaner production practices frequently leads to an enhancement in the firm's performance and a competitive advantage (Ashrafi & Mueller, 2015; Shan et al., 2019). Enterprises are seeking to establish a competitive advantage by implementing environmentally sustainable supply chain processes (Sharfman et al., 2009).

The Concept of Competitive Advantage

The concept of competitive advantages investigates the economic aspects of a company's operations, with a particular emphasis on its capacity to generate a substantially higher return on invested capital and to align its strategy with the primary financial markets over an extended period (Yuleva, 2019). Porter (1980) posits that competitive advantage is an essential factor in determining a firm's performance in competitive marketplaces. Competitive advantage is the term used to describe the unique qualities or characteristics of a product or brand that give them a competitive advantage over their closest competitors (Yuleva, 2019). Therefore, a "competitive advantage" is the value that a company can produce for its consumers, which exceeds the cost of providing that value. When there are few other companies engaging in similar activities and when its activities in an industry or market provide economic value, a company acquires a competitive edge. (Barney, 2002). A competitive advantage is achieved by a company that provides a product or service that customers perceive as providing greater benefits and value than that of its competitors. Additionally, the organization's exceptional performance will be consistently attributed to the presence of a competitive advantage, which will ultimately result in increased revenues. Consequently, decision-makers are perpetually confronted with the challenge of understanding competitive advantage. "Competitive advantage refers to a firm's ability to outperform its competitors in terms of profitability, which is the fundamental objective of the organization's existence" (Grant, in 1997). The profits generated by their competitive advantages are the primary motivation for the majority of organisations to strive.

Measures of Competitive Advantage

Diris, Iyiola, and Ibidunni (2013) assessed competitive advantage in terms of increased sales growth and market share. Portars 1985 Porter's generic strategies refer to the three basic approaches that a company might adopt to get a competitive advantage in the market. The four main competitive strategies in business are differentiation, cost leadership, differentiation focus, and cost focus. The study will adopt the cost focus of Porter's generic strategies and use the measure of Diris, Iyiola, and Ibidunni (2013) to analyse sales growth and cost focus.

Sales Growth

Sales growth refers to an increase in the number of sales over time, whether it is from year to year or from one era to another (Juniarti, 2014). Sales growth refers to the upward trend in sales volume over consecutive years (Machek & Machek, 2014). The competitiveness of business organisations is assessed based on the rate of sales growth (Didia & Nwokah, 2015). Sales growth serves as a metric that reflects the level of demand and competitiveness of enterprises operating within a particular industry (Iskandar, 2021). An organization's growth can be depicted by the alteration of a certain variable over a period of time (Machek & Machek, 2014). Therefore, a company that experiences favourable growth signifies the advancement of the company (Ghozali & Handriani, 2018). As the size of a firm increases, the level of sales intensity also increases, resulting in larger profits compared to smaller firms (Akani & Okwandu, 2022).

Cost leadership

Cost leadership is a strategic approach that focuses on achieving low costs in various aspects of a business's activities. This can be achieved through factors such as cheap pricing, minimising input costs (Sabir et al., 2021), optimising the design of products, capitalising on economies of scale, and streamlining the process design (Saleh et al., 2021). Cost leadership include the design process, economies of scale, product design, price reduction ability, and input management. Cost leadership improves the value generation of the company by reducing prices, improving product design, reducing input costs which dictate output costs, and enabling organisations to obtain competitive advantages.

Empirical review of Product Differentiation Strategies and Competitive Advantage

Iskandar (2021) conducted a study to assess the impact of profitability and sales growth on a company's value, considering leverage as a moderating factor. The research aimed to explore how these financial metrics influence business value when leverage is accounted for. Data were sourced from the financial statements of manufacturing companies in the consumer goods industry sub-sector, disclosed to the Indonesia Stock Exchange (IDX) from 2016 to 2018. The sample included 13 out of 43 companies, selected using purposive sampling. Multiple regression analysis was applied to the data. The study concluded that there is no significant correlation between sales growth, profitability, and firm value, suggesting that these factors do not simultaneously enhance a company's value. However, leverage was found to influence profitability, thereby increasing firm value, as indicated by a positive regression coefficient. This suggests that while leverage does not moderate the impact of sales growth on company value, it does enhance profitability, which in turn increases firm value.

In their 2019 study, Bosman, Hartman, and Sutherland examined how manufacturing business characteristics affect decision-making processes related to investments in Industry 4.0 technologies. The research focused on the influence of business size, access to capital, and industry type on decisions regarding the adoption and implementation of Industry 4.0 technologies within manufacturing enterprises in the Midwest USA, specifically Indiana. A survey was developed, tested, and distributed to 138 manufacturing enterprises in the region. Participants were asked to prioritize technology categories based on past spending, personnel capabilities, and expected return on investment. The survey data was supplemented with publicly available information. The Kruskall Wallis test, a non-parametric method using rank-order data, was employed to analyze the priorities for Industry 4.0 adoption. Findings revealed that smaller manufacturers (fewer than 20 employees or sales below $10 million) prioritize digital technologies that enhance manufacturing efficiency, quality, and safety. In contrast, larger manufacturers (20 or more employees or sales of $10 million or more) focus more on enterprise support operations solutions.

Adimo (2018) explored the relationship between product differentiation techniques and organizational success at Sameer Africa Ltd in Nairobi, Kenya. The study investigated the impact of product diversification on the performance of the company, involving a total of 112 employees, including top management, heads of departments, junior workers, and 90 dealers in Nairobi. Using stratified random sampling and simple random sampling methods, 134 participants were selected. The research was grounded in the principles of Strategic Balance Theory, and primary data was collected via self-administered questionnaires. Quantitative data were analyzed using descriptive statistics presented in tables, and inferential statistics such as Pearson correlation and regression analysis were employed to test the hypotheses at a significance level of 0.05.

The study revealed a positive correlation between product differentiation and organizational performance, indicating that differentiation strategies effectively enhance organizational success.

In 2018, Soegoto examined the impact of product diversification strategy on customer and retailer purchasing decisions, and its effects on competitive advantage. The study focused on how product diversification influences the purchasing choices of customers and retailers both individually and collectively. Utilizing a quantitative approach, the research employed linear regression analysis to explore the relationships between product differentiation strategy, positional advantage (independent variables), and purchasing decision (dependent variable). The study sample consisted of 400 respondents, selected using saturated random sampling, who were customers of retailers in Bandung. The Classical Assumption Test and hypothesis testing were conducted using Z, T, and F tests with a significance threshold of 5%, analyzed through statistical methods. Results demonstrated a significant impact of product differentiation strategy and positional advantage on purchasing decisions, both individually and together, highlighting the importance of these strategies in influencing consumer behavior and gaining a competitive edge.

Methodology

Research design refers to the systematic plan or framework that directs the process of collecting and analysing data in a study (Akpomi & Kayii, 2020; Baridam, 2001). This document outlines the techniques and processes for gathering the required data to analyse and solve problems. It also includes a detailed plan, structure, and strategy for doing research to gain answers to specific questions and to manage any potential variations. A population refers to the complete set of individuals, groups, organisations, or items that a researcher aims to study. The study encompasses a total of seventy-seven (77) registered aluminium manufacturing companies in Rivers State. Sample refers to the subset of the population that enables the researcher to make inferences about the entire population. The sample size is 44, obtained using Tero Yamine's sample size formula. Nevertheless, a total of five questionnaires were provided to five responders from each of the industrial organisations. Hence, the survey participants will consist of 220 employees from each aluminium manufacturing company, including individuals holding positions such as product manager, marketing manager, sales manager, customer relations manager, and supervisor. The validity of a research instrument refers to the extent to which the instrument consistently and accurately measures the intended variable. The validity of an instrument is typically quantified using numerical measures, sometimes represented as a correlation coefficient. A coefficient of 1.00 indicates that the instrument has flawless validity. The study's instrument will be assessed for reliability using the Cronbach's alpha test. This study utilised a statistical method that encompassed both descriptive and inferential analysis. Descriptive statistics, such as the mean, standard deviation, and range, are employed to show data at the main level of analysis. The statistical method known as Pearson Product Moment is used for inferential analysis. Correlation was employed to examine the hypotheses at the secondary level of analyses, whereas univariate analysis was utilised to address the research objectives.

Univariate Descriptive Statistics of Research Questionnaire

The questionnaire is the instrument used in collecting primary data for the study. Its production, distribution and usage took the pattern shown below.

Table 1 Questionnaire Distribution, Retrieval and Usage

S/N	Questionnaire	Quantity	Percentage (%)
1	Produced Copies	77	100
2	Distributed Copies	77	100
3	Retrieved Copies	44	95.67
4	Copies not Retrieved	33	3.33
5	Valid Copies	40	93.33

Source: Research Desk, 2024

From Table 1, it can be seen that a total 77copies (100%) of the questionnaire were produced. All 77 copies (100%) were distributed by the researcher to the target respondents. Again, only 44 copies (95.67%) were retrieved, i.e. 33 copies (3.33%) were not retrieved.

Test of Hypotheses

The Pearson Product Moment Correlation was employed to examine the associations between the variables due to the presence of a linear relationship, which is a crucial prerequisite for utilising the Pearson Product Moment Correlation in assessing the relationships. A linear relationship occurs when there is a direct correlation between the increase in one variable and the increase or decrease in another variable.

Ho_1: Product quality does not significantly relate with sales growth of competitive advantage of Aluminum manufacturing firms in Rivers State.

Table 2. Relationship between product differentiation strategy sales growth of aluminum manufacturing firms in Rivers State

		product differentiation strategy	Sales growth
product differentiation strategy	Pearson Correlation	1	.778**
	Sig. (2-tailed)		.000
	N	33	33
Sales growth	Pearson Correlation	.778**	1
	Sig. (2-tailed)	.000	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS output from field survey, 2024

The SPSS output in Table 2 indicates that the correlation coefficient (0.778) and the probability value (0.000) demonstrate a positive, strong, and significant association between product differentiation strategy and sales growth ($r = 0.778$, $N = 33$, $p = 0.000 < 0.05$). Thus, the researcher refutes the null hypothesis that posits no meaningful relationship between product differentiation strategy and sales growth of aluminium manufacturing enterprises in Rivers State.

Ho_2: product differentiation strategy does not significantly relate with cost leadership of competitive advantage of Aluminum manufacturing firms in Rivers State.

Table 3: Relationship between product quality and cost leadership of aluminum manufacturing firms in Rivers State

		product differentiation strategy	Cost leadership
product differentiation strategy	Pearson Correlation	1	.815**
	Sig. (2-tailed)		.000
	N	33	33
Cost leadership	Pearson Correlation	.815**	1
	Sig. (2-tailed)	.000	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS output from field survey, 2024

The SPSS output in Table 4 reveals that the correlation coefficient (0.815) and the probability value (0.000) indicate a positive, very strong, and significant association between the product differentiation strategy and cost leadership ($r = 0.815$, $N = 33$, $p = 0.000 < 0.05$). Thus, the researcher refutes the null hypothesis that posits no significant relationship between product differentiation strategy and cost leadership of aluminium manufacturing enterprises in Rivers State.

Discussion of Findings

The correlation analysis revealed a positive, strong, and significant association between product diversification strategy and sales growth ($r = 0.778$, $N = 33$, $p = 0.000 < 0.05$). Consequently, the researcher rejects the null hypothesis that posited no meaningful relationship between product differentiation strategy and the competitive advantage of aluminium manufacturing in Rivers State. The analysis also showed a favorable, highly robust, and statistically significant link between product differentiation approach and cost leadership ($r = 0.815$, $N = 33$, $p = 0.000 < 0.05$). Thus, the researcher refutes the null hypothesis claiming no significant relationship between product differentiation strategy and cost leadership in aluminium manufacturing enterprises in Rivers State.

The conclusions of this study align with Prajogo (2007), who investigated the strategic purpose of quality performance. Prajogo found that product quality is influenced by differentiation strategy but not by cost leadership strategy. Similarly, Sambo, Ukpata, Atiga, and Fumba (2022) found that product quality strongly influences customer satisfaction and loyalty in Nigeria, suggesting that changes in product quality and customer satisfaction can impact customer loyalty. Shafiwu and Mohammed (2013) also found a strong and statistically significant correlation between product differentiation and profitability in Ghana's petroleum industry.

In Haarla’s (2003) study on the competitive advantage of a Finnish printing paper company, it was shown that product differentiation, initially driven by manufacturer’s technology, is now influenced by both technology and customer demand. Haarla concluded that while cost leadership remains the primary strategy, product differentiation plays a crucial but supportive role. Additionally, the correlation study indicated a positive, robust, and statistically significant association between product quality and both sales growth and cost leadership.

Conclusion

In view of the findings of this study, the study concludes that product differentiation strategy positively relates with competitive advantage of aluminum manufacturing firms in Rivers State.

Recommendations

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

1. Managers of aluminum manufacturing firms should heighten product differentiation strategies in order to advance on the competitive advantage
2. Product differentiation strategies of the firm should be careful improved to enhance competitive advantages of the firm

Contribution to Knowledge

This study focused on the relationship between product differentiation strategy and competitive advantage of aluminum manufacturing firms in Rivers State. The findings of this study are unique because the variables were uniquely combined to contribute to add value to existing body of knowledge. The context, approach and perspectives also made this study different from previous studies hence it fills knowledge gap identified.

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EFFECT OF BRANDING OF MADE-IN-NIGERIA BEVERAGES ON CONSUMERS' VALUE: MEDIATING ROLE OF BRAND KNOWLEDGE

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Abstract
Consumers' value creation is a key success factor for all businesses in a competitive business environment. For beverage companies, without value creation, all effort would be a mirage. Thus, how this value is created through the branding of beverage products is imperative. This paper examined the effect of Made in Nigeria beverage branding on consumers' value and, the mediating role of brand knowledge. The study used a cross-sectional research design to gather, analyse, and evaluate data from consumer beverages in the northeastern states of Taraba and Adamawa in Nigeria. A cohort of 400 consumer beverages was selected using the Taro Yamane statistical approach and a simple random selection procedure. Data collection was conducted using a questionnaire. The questionnaire underwent face validation by three professionals. Convergent validity was evaluated by calculating the average variance extracted (AVE). The reliability of the measurements was tested using the Cronbach Alpha and composite reliability techniques. Data was gathered from many social media channels using the Google Form application and analysed using the Smart PLS v4 structural equation model (SEM). The study found that made-in-Nigeria beverage branding has a significant effect on consumers' value. The study also found that brand knowledge complementarily mediates between the branding of Made in Nigeria beverages and consumers' value in the northeastern states of Nigeria. The study recommends that: companies that produce beverages in Nigeria should build product brands that reflect the idiosyncrasies of the consumers in times of the benefits they can drive from them such as inculcating colour, designs, trademarks and flavours that carry the cultural values of the consumers. As a matter of necessity, the Made in Nigeria beverage-producing companies should invest heavily in marketing campaigns to ensure that consumers are aware of their beverage brands and what they stand for. This would help consumers understand what the brands can offer and the value they should attach to it.

Keywords: Made in Nigeria Beverage Branding, Brand knowledge and Consumer Value

Introduction

In Nigeria, the beverage industry represents a dynamic and competitive sector characterized by the production and distribution of a wide array of locally manufactured drinks. With the increasing emphasis on supporting indigenous products and stimulating economic growth, understanding the effect of branding of made-in-Nigeria beverages on consumer value becomes imperative.

Branding is an important mechanism for improving consumer patronage and enhancing the financial value of the company in today's competitive environment. It represents an extremely valuable legal property that affects consumers' value to give the company long-term financial security (Agnihotri & Bhattacharya, 2020). As a company's strategic tool, branding has the propensity to predict consumer markets positively, increase firm competitiveness, enhance sales and demand, and increase a country's GDP (Amin, 2019; Chen, 2018).

Branding is derived from an activity and consists of several aspects, such as a name, logo, design, signs, and symbols, which are used to identify and distinguish it from competitors. Similarly, consumers do not just buy products but also benefit from them. branding helps consumers identify the source of a product and assign responsibility for its performance to a particular manufacturer in the case of failure (Okafor & George, 2016). According to Pulligadda, Kardes, and Cronley (2015), consumers become aware of and loyal to a brand by learning from their past interactions with it, both in a hard and soft way. Thus, the power of any brand lies in what the consumers have seen, read, heard, learned, thought, and felt about the brand over time (Rindell & Santos, 2021). When companies build brand recognition and loyalty, they create value for their products (Agnes & Darmawan, 2020).

Marketers occasionally assume that they comprehend the values of their consumers. Values are not inherent but rather emerge from consumers' experiences. Consumer value creation is crucial for businesses to achieve long-term benefits. To understand the relationship between branding and consumer value, consider the question, "What exactly is consumer value?" Consumer value is a subjective and dynamic concept that is based on consumer perceptions and assumptions. It is what consumers think about a brand and consider essential or significant to them. Consumer value is the significance assigned to a thing and the advantage obtained from it. It is also seen as the proportion of the benefit derived from a brand to the cost incurred. Companies offer products that carry their brand, and consumers buy them with the anticipation that the price will align with the value or significance they attribute to it. The greater the extent to which it fulfils this commitment, the more consumers attribute value to it, and vice versa. Therefore, the consumer value of a brand is derived from its capacity to consistently enhance its relevance to consumers, establish a competitive advantage, and generate profits by maintaining a focused and unified corporate structure (Vallés, Salas, Fumás, & San-Juan, 2022).

In recent years, there has been an increase in consumer value research due to its alignment with marketing philosophy. companies do not engage in production without considering the contribution to consumer value and the overall attainment of the company's objective (Truong & Pinkse, 2019). Companies consider both the quality of the brand that consumers experience and the brand elements that they perceive as satisfying their needs. As a result, marketers assess consumer value by considering consumer personal values (implied beliefs that affect consumer behaviour), desired values (what consumers aspire to or wish to occur), and perceived values (an evaluation of past experiences or the degree of benefits obtained in exchange for the costs incurred) (Vriens & Hofstede, 2016).

Brand knowledge is sine qua non to the predictive power of branding on consumer value. As a crucial tool, it has the propensity to mediate the predictive relationship between branding and consumer value because it explains how consumers perceive, evaluate, and interact with brands (Guèvremont, 2020). Brand knowledge helps consumers recognise and recall brands more easily, perceive quality and value, form associations and images, develop brand loyalty and trust, and influence purchase intentions and behaviour which is key to organisational equity (Takaya, 2023). Brands with strong brand knowledge and positive associations are more likely to be considered and chosen by consumers over competitors (Gautam & Pokhrel, 2023). Brand knowledge affects brand switching behaviour and preferences across different product categories.

Consumers with brand knowledge interpret and respond to brand communication and engagement efforts better, able to engage with marketing campaigns and social media content because they are aware of and can recall a brand while making purchasing decisions (Odoom, 2023).

The paper worries that branding of made-in Nigerian beverages is supposed to possess human-like characteristics that would affect consumers, making them create value according to brand personality theory. These could be possible when they convey authenticity and cultural identity through logos, packaging, local flavours, and messages that provide consumers with unique experiences of sincerity, excitement, competence, sophistication, and ruggedness. They could tell compelling stories about the heritage, craftsmanship, and cultural significance of locally-made products, creating superior emotional connections with local consumers (Ismail, 2022). This is based on the fact that brands that consistently deliver on these promises build trust and reliability, value cooperation, and evoke patriotism and national pride (Long, 2018). Contrary, made-in-Nigerian beverage brands still struggle in the market where foreign beverages are present. These consequently affect their product patronage, competitiveness and share of the market. It is against this background that is paper was purposed to determine the effect of branding of made-in-Nigeria beverages on consumers' value in the Northeastern states of Nigeria. The paper specifically determined the effect of branding of made in Nigeria beverages on consumers' value, and the mediating role of brand knowledge on the relationship between branding and consumers' value. **Questions that the paper deconstructed were:** Does the branding of Made in Nigeria beverages affect consumers' value? Does the branding of Made in Nigeria beverages affect brand knowledge? Does brand knowledge of Made in Nigeria beverages affect consumers' value? And does brand knowledge mediate the relationship between the branding of Made in Nigeria beverages and consumers' value?

Literature Review

Made in Nigeria Beverage Branding

Branding refers to the systematic development of a distinct and recognizable brand for a product, service, or organization. Maintaining consistent visual, linguistic, and experiential components helps achieve this (Nugraha, 2021; Frczek, 2018). The process entails the establishment of a brand name, logo, tagline, trademarks, colour palette, typography, and other visual elements, along with the establishment of brand values, personality, and positioning in the minds of consumers (Bresciani & Del Ponte, 2017). Efficient branding differentiates items or services from competitors, fostering confidence and reliability in consumers' perceptions (Cho, Ye, & Kim, 2024). Brands that consistently fulfil their commitments are more likely to be seen as dependable and credible, resulting in higher levels of customer loyalty and repeat purchases (Bratanova, Kervyn, & Klein, 2015). By establishing emotional ties through narrative, brand values, and visual appeal, we can foster love and affection. Branding also has an impact on perceived quality because well-known names are frequently associated with enhanced performance and higher quality (Mathur & Gangwani, 2021). Brand associations are established through experiences, interactions, and exposure to brand-related content, which influence consumers' overall perception and appraisal of the brand (Kim & Song, 2018). Robust branding enhances consumers' perceptions, fosters brand loyalty, facilitates brand expansion, and confers a competitive edge to companies.

Made-in-Nigeria beverages are unique, locally-produced drinks with deep historical and cultural significance (Olakunle & Adeyemo 2023). The products are meticulously created using ingredients acquired from the local area, using traditional recipes and production techniques. These beverages are manufactured by Nigerian-owned indigenous companies and are made up of ingredients that are highly regarded for their use in traditional ceremonies, social gatherings, cultural importance, and health advantages (Reygaert, 2017). These beverages can either contain alcohol or be alcohol-free, and they can offer employment opportunities for small-scale manufacturers. There is social and economic value to beverages made in Nigeria as well. Trade and tourism boost local economies (Talmage, 2020). There has been an increasing fascination in recent years with reviving and promoting these beverages. The goal is to save historic recipes, bolster local producers, and advance cultural heritage. Furthermore, there is a prevailing inclination towards innovation and modernization within the industry. Effective branding of products can enhance their competitiveness for beverage companies and boost customer loyalty (Kokoreva & Silina, 2022). Thus, we hypothesized that the branding of made-in-Nigerian beverages does not affect consumer value.

Consumers Value

It is impossible to achieve long-term benefits for a company without adding value to consumers (Shou, Wang, Wu, & Wang, 2019). Value creation has garnered attention in the literature since it is a crucial requirement for all stakeholders in the corporate environment (Chukwu, Musa & Uzoma, 2020; Hanzaee & Yazd, 2017). In a broader sense, value refers to the significance given to anything. It is what a person considers important. Value is a product of consumer purchases and aspirations to purchase again.

Two views are considered to dissect the importance of the term value. Value creations are viewed from the perspectives of consumers (consumer value) and firms (organisation value). Consumer value (CV) is defined as what consumers think about a brand or product and consider to be essential to them; Organisational value, on the other hand, is defined as what an organisation produces to achieve its financial goals and gain a competitive advantage (Bakutyte & Grundey, 2012). To a firm, value is an asset tapped by an assessment of the benefits derived by consumers (Chukwu et al., 2020). This study focused on the consumer value perspective, encompassing various aspects such as customer value, customer-perceived value, superior customer value, brand values, customer satisfaction, service quality, value chain, shareholder value, value process, and systemic customer value (Prameka, Do, & Rofiq, 2016).

Aside from customer satisfaction and loyalty, CV has attracted the attention of marketing executives due to its universality (Tasci, 2016). The CV paradigm does one thing: it confirms what consumers already know and love about a product's brand. CV distinguishes from the firm's value since it is built to the product's brand and how it is used. Instead of coming from the people who sell the brand, it is seen as coming from the people who use the brand, the consumers (Lude, Prügl, & Rauschendorfer, 2023). As emphasised by Sampson (2015), a CV is made up of a generalised value (product value, service value, personnel value, and image value) as well as general sacrifices (consumers' finances, time, energy, and morals). CV is the ratio of perceived benefit to perceived cost (Militina & Achmad, 2020; Paananen & Seppänen, 2014). Costs include both the money spent on the purchase and maintenance, as well as the time spent on delays, errors, and effort. Benefits increase value to the extent that the product or service improves the customer's performance or experience; Costs that are both tangible and intangible lower the value (Chukwu et al., 2020; Hanzaee & Yazd, 2017). It is also the consumer's total judgement of the utility of a product or service based on perceptions of what is received and what is supplied. From another side of the spectrum, CV should be determined not only based on an individual consumer's experience but also the general experience of all consumers (Sampson, 2015) because, it is a consumer's perceived choices for an assessment of those product characteristics, attribute performances, and outcomes that arise from use that simplify realising the consumers' goals in use conditions (Tasci, 2016). Consumer value creation is relevant and frequently examined through the components of perceived consumer value, which vary depending on the subject and selection of subjects (Kovanoviene et al., 2021).

Furthermore, many of these definitions rely on subjective terms such as consequences, market-perceived quality, utility, emotional bond, perceived worth, and perceived benefits, and two people using the same definition may still consider value differently, depending on how these other terms are defined (Bayir, 2023). Consumer value (CV) is a subjective and ambiguous concept that can vary across different purchase situations. It is a product or service that consumers create for a brand, and its construction and proposition should be based on understanding consumer needs (Kovanoviene et al., 2021). From the above lens, CV can be defined as consumer benefit, cost, utility, perceived profit relating to sacrifice, psychological price, worth, and quality (Rikala, 2021).

However, there is no universally accepted definition of CV due to the wide range of consumer perceptions. A CV is distinguished by interactive reasoning, preference, and experience (Paananen & Seppänen, 2014). Before creating a CV, consumers must have interacted with the brand, compared it to other substitutes, and made a personal decision about it. Therefore, CV is revealed through intrinsic and extrinsic assessments, which are influenced by factors such as perceived benefit/cost ratio, quality, satisfaction, utility, and the need for a solution. Santos-Vijande, Gómez-Rico, Molina-Collado, and Davison (2022) state that consumer value is divided into three categories: functional, and emotional. Functional value is the rational and economic evaluation of people, such as the quality of a product, brand, or service. Emotional value refers to the perceived benefit of inducing certain feelings in the consumer (Kovanoviene et al., 2021). Emotional value and attitude have a close relationship in consumer behaviour research because they both deal with feelings or reactions induced in the minds of consumers. A CV framework developed by Chukwu et al. (2020) categorises CV into four distinct groups: functional/instrumental value, experiential/hedonic value, symbolic/expressive value, and cost/sacrifice value. These values help organisations understand how to build a brand that consumers appreciate.

CV is a multidimensional concept composed of two major dimensions: functional and affective value. Functional value is influenced by factors like price, quality, and assortment range, while emotional value is based on internal stimuli that pique the consumer's desire to purchase a product brand (Ingegneria et al., 2010). Understanding how a firm builds a brand that consumers value is crucial for organisations to effectively meet their needs and achieve long-term success. Consumer value (CV) is a complex concept that encompasses various components and their dynamic antecedents across four perspectives: individual, group, company, and group of companies.

There is no universality of usage in measuring CV, and the choice depends on the variables and nature of the research. Liu (2021) suggests that CV should be measured in monetary terms, as it is definitive in terms of cost and benefit. However, this approach may not be effective if consumers' purchasing intentions are based on transactional and financial benefits. This study also focuses on the predictive power of branding on CV, using a multifaceted approach that uses functional, social, and emotional brand attribute performance dimensions and active and reactive value dimensions. The underlying value indicators will be measured using brand attribute performance, brand quality, brand satisfaction, utility, and experience effectiveness.

Value component models organise a brand's actions or outward manifestations according to the different meanings and effects they have on consumers. Kaufman (1998) identifies five benefits as consumption values: functional value, social value, emotional value, epistemic value, conditional value, and conditional value. There are eight types of customer benefits or value: excellence, politics, efficiency, esteem, play, aesthetics, morality, and spirituality (Kovanoviene et al., 2021; Chukwu et al., 2020; Paananen & Seppänen, 2014).

The means-ends model assumes that consumers acquire and use products or services to achieve favourable ends, with means being products or services and ends being personal values that consumers value (Herjanto & Amin, 2021). Some scholars agree on customer satisfaction, repurchase intentions, and word-of-mouth as measuring tools for CV. Lin, Yeh, and Hsu (2022) support their case with two domains of consumer value measurement: self-reported items that assess the consumer's perception of value, and a multidimensional method where customer value consists of several interrelated components or dimensions. Thus, understanding the components of a CV and their dynamic antecedents is crucial for businesses to effectively communicate with and engage with their customers. By adopting a multifaceted approach that considers functional, social, emotional, and other dimensions, businesses can better understand and respond to their customers' needs and preferences.

Brand Knowledge of Made in Nigeria Beverages

Brand knowledge is the understanding and awareness of a brand's identity, values, positioning, and attributes (Rossiter, 2014). It is formed through various sources such as advertising, word-of-mouth, personal experiences, and interactions with the brand across different touchpoints. Brand knowledge significantly influences consumer behaviour, influencing their attitudes, preferences, perceptions, and behaviours towards brands (Kaur & Moktan, 2024). It helps consumers recognise and recall brands more easily, leading to informed purchasing decisions (Aziziha, Faraji, Isakhani Zakaria, Hajirasouliha, & Mousavi, 2014). Positive brand knowledge is associated with higher perceived quality and value, increasing willingness to pay and repeat purchases (Ghaleb & Kaplan, 2020). Strong brand associations and images contribute to favourable brand knowledge, enhancing consumer loyalty and trust (Fahira & Moh. Djemdjem Djamaludin, 2023). Brand loyalty and trust are more likely to develop, leading to long-term relationships and advocacy. Positive branding knowledge also influences attitudes, purchase intentions and behaviour, leading to brand growth and profitability (Ghaleb & Kaplan, 2020). Effective branding knowledge enhances consumer engagement with brand messages and content. Brand extensions and line extensions are more likely to be accepted due to familiarity with the brand and its attributes (Grønhaug, Hem, & Lines, 2002). Brand equity, the value and strength of a brand, is created through brand knowledge, resulting in better consumer value and increased market share, pricing power, and overall profitability. Therefore, we hypothesized that branding of Made in Nigeria beverages does not significantly affect the brand knowledge of consumers.

Made-in-Nigeria beverage branding is gaining popularity since it may boost local companies and the economy. Practitioners and policymakers must understand how Made-in-Nigeria beverage branding affects customer value-brand knowledge consumer awareness, affiliations, and impressions of a brand-effect on brand assessments. Consumers' impressions of quality, authenticity, and trustworthiness in Made-in-Nigeria beverage branding may depend on their understanding of the brand's origin, history, and beliefs (Ugwuanyi, 2017).

Made-in-Nigeria beverage branding promotes Nigerian culture, tradition, and ingredients by highlighting the distinctiveness and excellence of locally manufactured drinks (Abioro & Odunlami, 2021). Consumers who recognise the brand's Nigerian identity may find the beverage more culturally relevant and emotionally resonant, increasing its perceived value (Agdigos et al., 2022).

Made-in-Nigeria beverage branding may provide utilitarian (taste, price), sensory (cultural authenticity, emotional connection), and symbolic (social standing, national pride) advantages to consumers (Wan et al., 2016). Brand knowledge may impact consumers' value assessments, mediating branding activities and consumer value (M.Z A. Tarabieh, 2022). Understanding how brand knowledge mediates may influence Made-in-Nigeria beverage branding efforts and policies. Practitioners may establish and communicate brand knowledge via different marketing channels, this study also hypothesized that brand knowledge does not mediate the between branding of Made in Nigeria beverage and consumer value.

This paper uses brand equity theory to analyze the impact of branding on consumer value perceptions and behaviors highlighting the importance of brand knowledge in shaping consumer value, particularly in the context of Made-in-Nigeria beverages. The theory provides valuable insights for practitioners and policymakers in the Nigerian beverage industry, highlighting whether brand awareness, associations, perceived quality, benefit positively affect value of consumers.

Methodology

The study used a cross-sectional survey research design to gather, analyse, and evaluate data from individuals who drink beverages in the northeastern states of Nigeria, notably Taraba and Adamawa. A cohort of 400 individuals who drink beverages were selected using the Taro Yamane statistical approach and a simple random selection procedure. Data collection was conducted using a standardized questionnaire named "Effect of Made in Nigeria Beverage Branding on Consumers' Value" (EMINBBOCOVA). The questionnaire underwent face validation by three professionals. Convergent validity was evaluated by calculating the average variance extracted (AVE). The research determined that all items exhibited convergence with the underlying concept, as they achieved the suggested threshold of 0.50. The reliability of the measurements was tested using the Cronbach Alpha and composite reliability techniques. All the coefficients obtained were over the threshold of 0.70, as shown in Table 1. Data was gathered from many social media channels and analysed using the Smart PLS v4 structural equation model (SEM).

Results and Discussions

The quality of the variables in this paper was assessed by evaluating the measurement and structural models.

a. Assessment of the Measurement Model

The measuring process began with assessing the factor loadings, which was followed by determining the Cronbach and composite reliability coefficients and the validity of the constructs using the average variance extracted (AVE) and variance inflation factor (VIF) to determine multicollinearity, as shown in Table 1.

Table 1: Summary of Factor Loading, Cronbach Alpha and Composite Reliability, Average Variance Extracted (AVE) and Variance Inflation Factor (VIF)

Variables	Outer loadings	α	CR	AVE	VIF
Made in Nig Beverage Brands		**0.78**	**0.77**	**0.53**	
BD1	0.65				1.36
BD2	0.79				1.85
BD3	0.82				2.07
BD4	0.67				1.41
BD5	0.71				1.51
Brand Knowledge		**0.80**	**0.80**	**0.56**	
BK1	0.66				1.52
BK2	0.76				1.91
BK3	0.85				2.49
BK4	0.74				2.01
BK5	0.72				1.75
Consumers Value		**0.89**	**0.94**	**0.63**	
CV1	0.81				2.83
CV2	0.71				1.92
CV3	0.76				2.45
CV4	0.82				1.94
CV5	0.86				2.32
CV6	0.78				1.91

Source: *Smart PLS v4 algorithm*

As shown in Table 1, confirmatory factor analysis was used to identify factor loadings for each item in the paper's underlying constructs. Factor loadings represent the degree of connection between each item in the correlation matrix and the designated principal component. The factor loadings range from -1.0 to +1.0, with higher absolute values indicating a greater connection between the item and the underlying factor (Hair, Hult, Ringle, & Sarstedt, 2022). The result showed that all items had factor loadings greater than the requirement of 0.50. Similarly, Cronbach Alpha and composite reliability results demonstrate that all constructs (BD, BK, and CA) have high-reliability coefficients, indicating that all exhibit internal consistency in measuring what they are designed to evaluate. The average variance extracted (AVE) for the three constructs varies from 0.53, 0.55, and 0.63, demonstrating good convergent validity.

Table 2: Result of Fornell-Larcker Criterion

	BD	BK	CV
BD	**0.73**		
BK	0.42	**0.75**	
CV	0.28	0.33	**0.80**

Source: *Smart PLS v4 Algorithm*

The outcome of the Fornell-Larcker criterion for discriminant validity is presented in Table 2. Discriminant validity denotes the degree of differentiation between the underlying constructs. The Fornell and Larcker criterion is calculated by comparing the square roots of AVE to the correlation matrix. The diagonals (0.73, 0.75, and 0.80) in Table 2 exceeded the corresponding correlation coefficients, suggesting that the constructs under consideration are distinct.

b. Assessment of the Structural Model

To analyse the structural model, we utilised the coefficient of determination, which was assessed by measuring the standardised root mean squared residual (SRMR). Subsequently, we proceeded to examine the path coefficient. The choice of (SRMR) was made because it is the most suitable for a variance-based structural equation model. As per scholarly consensus, a model is deemed to have a good fit when the values are less than 0.08 (Hair, Hult, Ringle & Sarstedt, 2022).

Table 3: Model Fit (Fit Summary) or Coefficient of Determination

	Saturated model	**Estimated model**
SRMR	0.078	0.078
d_ULS	1.234	1.234
d_G	0.447	0.447
Chi-square	989.180	989.180
NFI	0.696	0.696

Source: *Smart PLS v4 Algorithm*

According to the results in Table 3, the obtained (SRMR) value was 0.078, which is lower than the stated requirement of 0.08. As a result, it was determined that the study's model has a high degree of model fit.

Table 4: Path Coefficient of Direct and Indirect Relationship

Hypothesis		β	x̄	STDEV	T statistics	P values	Sig
H01	BD -> CV	0.18	0.19	0.06	3.03	0.00	S
H02	BD -> BK	0.42	0.43	0.05	8.90	0.00	S
H03	BK -> CV	0.25	0.26	0.06	3.91	0.00	S
H04	BD -> BK -> CV	0.11	0.11	0.03	3.83	0.00	S

Source: *Smart PLS v4 Bootstrapping*

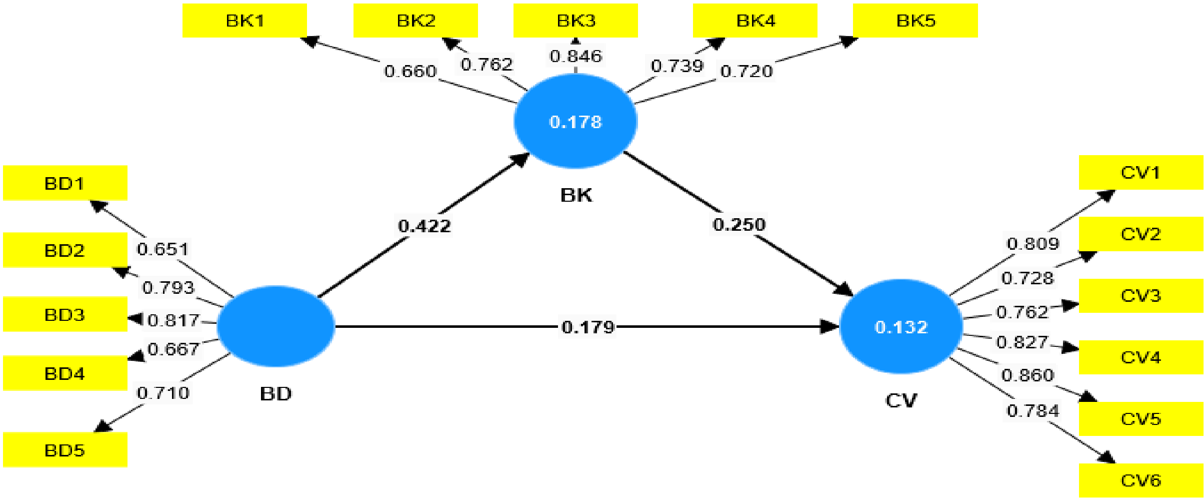

Figure 1: Graphical Representation of Direct and Indirect Relationships

Results from an analysis of the direct and indirect links among branding, brand knowledge, and customer value are presented in Table 4.

H0₁: states that branding of Made in Nigeria beverages does not significantly affect consumers' value. The result BD->CV (β= 0.18, t= 3.03 and p .0.00<0.05) revealed that branding of Made in Nigeria beverages significantly affects consumers' value in northeastern Nigeria. Since the t statistics 3.03 was above the critical region of 1.96 and the probability level is 0.00 was less than the level of significance 0.05, the null hypothesis **H0₁** was rejected while the alternate hypothesis was accepted.

H0₂: states that branding of Made in Nigeria beverage does not significantly affect brand knowledge in northeastern Nigeria. The result BD->BK (β= 0.42, t= 8.90 and p .0.00<0.05) revealed that branding of Made in Nigeria beverages significantly affects brand knowledge in northeastern Nigeria. Since the t statistics 8.90 is above the critical region of 1.96 and the probability level is 0.00 was less than the level of significance 0.05, the null hypothesis **H0₂** was rejected while the alternate hypothesis was accepted.

H0₃: states that brand knowledge does not significantly affect consumers' value in northeastern Nigeria. The result BK->CA (β= 0.25, t= 3.91 and p .0.00<0.05) revealed that brand knowledge significantly affects consumers' value in northeastern Nigeria. Since the t statistics 3.91 is above the critical region of 1.96 and the probability level is 0.00 was less than the level of significance 0.05, the null hypothesis **H0₃** was rejected while the alternate hypothesis was accepted.

H0₄: states that brand knowledge does not significantly mediate between Made in Nigeria beverage branding and consumers' value in northeastern states of Nigeria. The result BD->BK->CA (β= 0.11, t= 3.83 and p.0.00<0.05) revealed that there was a partial (complementary) mediating role of brand knowledge on the relationship between Made in Nigeria beverage branding and consumers' value in northeastern states of Nigeria. Since the t statistics 3.83 is above the critical region of 1.96 and the probability level is 0.00 is less than the level of significance 0.05, the null hypothesis **$H0_4$** was rejected while the alternate hypothesis was accepted.

Discussion of the Findings

The findings of this study in **$H0_1$** revealed that branding of Made in Nigeria beverages significantly affects consumers' value in northeastern Nigeria. The finding suggests that branding plays a crucial role in shaping consumers' perceptions and evaluations of Made-in Nigeria beverages in northeastern Nigeria. This has implications for marketing strategies, competitive advantage, economic impact, and policy considerations. Effective branding of Made in Nigeria beverages can differentiate their products, attract consumers, and drive purchase decisions, potentially leading to increased sales, revenue growth, and job creation. The finding agrees with the finding of Huang (2024) who found that co-branded IP goods enhance client impressions of worth, which in turn boosts buyer intentions. The findings concur with the findings of the study by Inês and Moreira (2023) who found that the perceived value and brand equity of this plant-based beverage brand affect the satisfaction and loyalty intention of consumers. This aligns with a study by Daşkin, Pala, Avşar, and Dönek (2023) who reported that consumers' perceptions of brand image and packaging significantly affect their perceived value of Made in Nigeria beverages. However, contrasting findings were observed in a study by Samadou and Kim (2018) which found that while branding had some effect on consumers' perceived value, other factors such as price and product quality were more salient determinants. This suggests that the effect of branding on consumers' value may vary depending on contextual factors and consumer preferences.

The findings of this paper in $H0_2$ showed that branding of Made in Nigeria beverages significantly affects brand knowledge in northeastern Nigeria. This implies that consumers are aware of the Made in Nigeria beverage brands. The finding agrees with the position of Aziziha, Faraji, Isakhani Zakaria, Hajirasouliha, and Mousavi (2014) who stated that brand knowledge helps consumers recognise and recall brands more easily, leading to informed purchasing decisions. The finding also agrees with that of Ghaleb and Kaplan (2020) who opined that positive brand knowledge is associated with higher perceived quality and value, increasing willingness to pay and repeat purchases. And also agrees with Fahira and Moh. Djemdjem Djamaludin (2023) supported that strong brand associations and images contribute to favourable brand knowledge, enhancing consumer-brand loyalty and trust which are more likely to develop, leading to long-term relationships and advocacy.

The finding of this study in $H0_3$ revealed that brand knowledge significantly affects consumers' value in northeastern Nigeria. This implies that familiarity with a beverage brand affects the importance placed on it. When consumers can remember and recall a brand of beverage, it means they have created value for it. The findings concurred with the opinion of Ghaleb and Kaplan (2020) who mention that positive brand knowledge also affects value, purchase intentions and behaviour, leading to brand growth and profitability.

The findings of this study in $H0_4$ revealed that there was a partial (complementary) mediating role of brand knowledge in branding of Made in Nigeria beverages and consumers' value in northeastern states of Nigeria. This suggests that becoming aware of a brand builds a strong connection between consumers and the brand in the sense that it enables them to easily remember the brand and place importance as a result of the benefit they derive from it. The finding agrees with the findings of Priilaid, Human, Pitcher, Smith, and Varkel (2017), who claim that brand familiarity plays a role in influencing consumer value towards brands; other factors such as taste, price, and availability significantly affect their preferences. The findings of the study agree with the claim of Chen (2018), who states that for value to develop, all of the information about a brand may get ingrained in a consumer's memory and affect his or her response to marketing activities. This suggests that brand familiarity, coupled with factors like taste, price, and availability, can create a strong foundation for consumer value. Chen's assertion about the importance of brand information being stored in a consumer's memory highlights the significance of marketing efforts in shaping consumer perceptions and behaviours. The paper contributes to knowledge by providing insights into the impact of branding on consumer value, the role of brand knowledge in consumer behavior, the importance of marketing strategies, the need for contextualized branding strategies, and the overall theoretical and practical implications in the field of branding and marketing. The findings offer valuable insights for researchers, practitioners, and policymakers in understanding and navigating the complexities of branding strategies and consumer behavior in emerging markets like the Nigerian beverage industry.

Conclusion and Recommendations

The study concludes that made-in-Nigeria beverage branding has a significant effect on consumers' value in the northeastern states of Nigeria. Additionally, the study found that brand knowledge complementarily mediates between the branding of Made in Nigeria beverages and consumers' value in the northeastern states of Nigeria. Thus, the study recommends that:

i. Since branding significantly affects consumers' value, companies that produce beverages in Nigeria should build product brands that reflect the idiosyncrasies of the consumers in times of the benefits they can drive from them such as inculcating colour, designs, trademarks and flavours that carry the cultural values of the consumers.

ii. As a matter of necessity, the Made in Nigeria beverage-producing companies should invest heavily in marketing campaigns to ensure that consumers are aware of their beverage brand and what they stand for. This would help them understand what the brands can offer and the value they should attach to it.

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EFFECTS OF AUGMENTED SERVICE ON CUSTOMER SWITCHING RESISTANCE BEHAVIOUR AMONG SELECTED TELECOMMUNICATION FIRMS IN NIGERIA.

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Abstract
The study was conducted to examine the effect of augmented service on customer switching resistance behaviour among the selected telecommunication firm. The population of the study was 5,670,548 subscribers of Abia State, Nigeria. The three GSM service providers were purposively selected. Using Taro Yamane's formula gave a minimum sample size of 400 subscribers. The sample was distributed using the Bowley's formula. Data was collected mainly through the use of questionnaires. Demographic data was analyzed using descriptive statistics like tables and percentages. Data on variables were analyzed and hypothesis tested using simple linear regression. The finding of the study indicated that augmented service has a significant effect on customer switching resistance behaviour. This implies that the presence of augmented service which are non-core services such as voice mail, roaming services, call forwarding, call conferencing, global position radio service (GPRS), music, news, games, ring-back tones, among others, can make GSM subscribers develop behavioural loyalty to a particular GSM service provider, as this can be seen in their switching resistance behaviour and making all purchases in a particular category from a single service provider. Based on the research findings, it was concluded that that augmented service has a significant effect on customer switching resistance behavior among telecommunication firms in Abia State, Nigeria and we recommended that that managers of GSM services should develop augmented services to increase subscriber's convenience and that augmented services should be up-to-date, easy to use, and less expensive to users.
***Keywords**: Augmented service**,** customer switching resistance behaviour*

INTRODUCTION

Following the deregulation of the industry, which was under the exclusive control of Nigerian Telecommunication Limited (NITEL), four major players entered the market with significant investments: MTN, Airtel, Globacom, and 9mobile (formerly Etisalat). These players have made significant contributions to the expansion of the Nigerian economy. In order to provide high-quality services, the telecom sector has invested $70 billion, while the Augmented Services (VAS) sector of the Nigerian telecom market has invested $200 million (NBS, 2017). Despite the industry's massive investments and the implementation of Mobile Number Portability (MNP), there remain significant problems with subpar service delivery. Due to GSM service providers' inability to match customers' expectations for ease, customers are not receiving high-quality services. These service delivery shortcomings include poor network connectivity, call drops, overbilling, illegal airtime deductions for ineffective calls, a high degree of hidden charges for alert services that are not subscribed to, frequent call static during calls, connection errors, lengthy wait times to reach customer support agents, inadequate internet services for surfing, and multiple instances of network outages without prior notice or customer apology (Izogo, 2017). Due to this, customers moved between telecommunications service providers in pursuit of higher-quality services, which made it harder for operators to gauge how loyal customers were to the industry. As a result, the competition in the mobile telecommunications market has grown at an unprecedented rate over the past few years, intensifying the competition among them, and this trend does not appear to be ending anytime soon, as some of the operators are currently facing financial difficulties that could lead to takeovers, as was the case with Etisalat (now 9mobile). Since mobile customers are more likely to transfer between service providers that offer enticing packages with intriguing features, the main issue facing service providers nowadays is how to keep their subscribers. Because of this, service providers aim to increase subscriber loyalty by providing excellent services which include augmented services. It is on this note that this paper seeks to examine the effect of augmented services on customer switching resistance behaviour.

LITERATURE REVIEW

Even though mobile telephony at first only offered voice-based services, it still revolutionized the telecommunications industry. After some time, service providers started sending data over the same channel as voice calls, making better use of the channel resources that were available. Any extra non-voice service is therefore referred to as a augmented service (AS) or value added services (VAS) . Augmented services non-core services which are offered to the customers apart from the core or basic services being offered, such as voice calls and fax transmission ( ). Augmented services, such as voice calls and fax transmission, are non-core services provided to clients in addition to core or fundamental services. With the advent of new mobile apps beyond the core services, such as voice and text messaging (short message service, or SMS), mobile value added services (MVAS) are continuously changing. According to Kimani (2012), AS are "augmented services," which are upgraded services that add value to bearer services and basic teleservices for which a separate license is provided. The delivery platforms for SMS, interactive voice response (IVR), and Wireless Application Protocol (WAP) are the key foundations for Mobile Value Added Services (MVAS) (Varshney and Vetter, 2002; Coursaris, Hassanein, and Head, 2003). Every VAS differs from the others in that it has distinct qualities of its own.

The four components of AS are: A content/application owner who develops and owns the original copyrighted items and programs that are delivered to clients as AS; Aggregators combine contents and applications from the owners (or smaller boutiques) and distribute an application tailored to the customer's demands, while also handling IVR, quality control, billing, and accounting for the aggregated contents and applications. Software developers create applications (including in-house quality checks and integration with third-party developers for parts of the entire process), while technology enablers provide a platform that connects to the network and acts as a bridge between the aggregator and the network operator. These technologies also handle account reconciliation, integration of various applications, billing data that is forwarded to the network operator, and platform management and upkeep in accordance with service level agreements (SLAs). To offer consumers comprehensive AS solutions, each of the four primary AS components has a significant role to play in the business. The application determines the category of mobile augmented services to offer. The following four types typically comprise mobile AS apps (Kimani, 2012; Varshney and Vetter, 2002; Coursaris et al., 2003).

A range of telecommunication services, including short message service (SMS), voicemails, email, call waiting, missed call alerts, call filters, virtual private networking (VPN), call conferencing, call forwarding, mobile chat, and multimedia messaging service (MMS), are included in the first category of mobile communication services. Right now, augmented services are most successfully applied in mobile communication services. Their primary goal is to make it easier for subscribers to communicate with one another. The second category includes mobile entertainment services, which offer users entertainment application services such as ringtones, images, games, pictures, music, mobile television, video live streaming, mobile social networks (Facebook, Twitter, WhatsApp), and other fun and entertaining services. Mobile entertainment is only the second largest achievement of mobile augmented service applications in mobile telecommunications. Moore and Rutter (2004) defined mobile entertainment as any leisure activity carried out using a portable technology device that is, or has the potential to be, networked and permits the transfer of data (such as voice, sound, and images) while on the move and across long distances to multiple geographical places.

The second category includes mobile entertainment services, which offer users entertainment application services such as ringtones, images, games, pictures, music, mobile television, video live streaming, mobile social networks (Facebook, Twitter, WhatsApp), and other fun and entertaining services. Mobile entertainment is only the second largest achievement of mobile augmented service applications in mobile telecommunications. Moore and Rutter (2004) defined mobile entertainment as any leisure activity carried out using a portable technology device that is, or has the potential to be, networked and permits the transfer of data (such as voice, sound, and images) while on the move and across long distances to multiple geographical places. Fast and simple access to entertainment is always appealing to customers claim (Kalakota and Robinson ,2001). Kalakota and Robinson (2001) suggested that entertainment apps like digital music and games might be considered as the ideal complement to mobile devices, using the phrase "time filler" rather than "time killer" services.
Services for mobile transactions make up the third group. They offer a range of commercial and banking services to its users, including online tickets, bill payments, m-payments, m-shopping, and E-top up. The fourth is mobile information services, which give consumers quick access to information on breaking news, stocks, sports, finance, and other topics as well as other informative demands. Notably, people can receive news quickly from mobile information providers. This service has a cost associated with it, which makes it extremely profitable and a source of income. Augmented services, in addition to voice services, are becoming attractive to Nigerian mobile telecommunication service providers since they offer a way to make extra money.

Customer switching resistance behaviour: Resistance to change can be described by several human qualities that can be applied not only to employees but also, most likely, to individuals and, thus, consumers. According to Agboola and Salawu (2011), when faced with change, humans will naturally display resistance. By analyzing the systems model of resistance, these writers demonstrate that resistance arises not from the change itself, but from people's impression of losing what they value. Indeed, Mullins (2005) contends that people are acclimated to their routines, and in most situations, they value them and believe there is no need to modify them since they make them feel comfortable. Antonacopoulou and Gabriel (2001) remind us that Freud (1984) stated that people believe they are already flawless and do not see the need to change anything. Furthermore, Hurn (2012) states that "there is often a sense of security in the past, the way things have always been done and which appear to have done reasonably well". As a result, the adjustment looks to be both ineffective and harmful. In the case of a brand name change, the key issue for customers is the loss of previous references to the brand (Kapferer, 2007), which causes confusion and resistance to the change. For these reasons, consumers may begin to distrust the new (replacement) brand since they can no longer rely on their references to the (old) brand, and hence cease buying it. One of the major assumptions of the RTC theory is that people are more likely to accept a change if it is gradual, and that they may still rely on their previous routines and references when embracing the change. When applied to consumer behavior, customer resistance and reaction to change are strongly tied to the force of consumer attitudes to engage with a brand (Wendlandt and Schrader, 2007). Consumer resistance to change can be characterized as the likelihood of opposing a change (Roux, 2007); in other words, a negative attitude toward brand name changes.

Theoretical Review

This work was anchored on Stakeholder theory

According to stakeholder theory (Jensen, 2001), managers should consider the interests of all stakeholders when making value-maximizing decisions. When an organization carefully analyzes both its stakeholders' and its own interests, it may maximize value for itself and society as a whole. Stakeholders include employees, consumers, owners, investors, and the general public (Jensen, 2001). Employees expect the employer to provide a safe working environment, proper training for their positions, a fair compensation or salary, fringe benefits, and after-work perks that will allow them to retire comfortably. Customers want affordable prices, high-quality goods and services, and friendly and helpful service. Owners and investors who have dedicated time and resources to guarantee the company's success expect a return on their investment. To be successful, the business must integrate and reconcile the needs of its stakeholders with those of the organization (Enikanselu, 2008). This study was anchored on stakeholder theory. This is because an organization will attract and keep consumers if it can strike a balance between addressing the needs of the organization and the needs of its stakeholders (customers), rather than satisfying the needs of one group at the expense of the other. Thus, the theory serves as the theoretical foundation for the current investigation.

Empirical Review

Rahman and Fardous (2020) did a work on effects of value-added service on customer retention: "a case study on telenor bangladesh". The main purpose of the thesis is to showcase and describe the effect of value added service on customer retention. The investigation was done through a qualitative study which is based on a semi structured interview of 10 managers and by analyzing previous theories. A conceptual structural model was used to analyze the concept as a logical reasoning to bridge of the value-added services with the customer retention. This study explores the significance of value-added services and provides a better opportunity to understand the antecedence and aftermath of these factors on the customer's mind. In order to keep up with the dynamic and service oriented telecom industry new strategy and policies are necessity to hold the leading position. According to authors there are six factors of value-added service which leads to customer retention**.** The factors are customer satisfaction, loyalty, service quality, innovation, new service and offerings, and advertising and promotion. All the six influencing factors are being analyzed here. The finding for this overall study initially indicates that the value-added service provides ample possibilities that will help to retain customer for them and that the value-added service has an immense impact that can help the organization to retain its customer successfully, they recommended that for the companies to stay in the battle field companies have to come up with new innovative service and offerings according to customer demand.

Manzoor, Usman and Shahid (2020) conducted a research in Pakistan with the objective of investigating the factors affecting brand switching behaviour of customers in the British telecommunications industry. Using a quantitative approach and with a sample of 204 respondents selected with convenient sampling technique, and using regression analysis to test the hypotheses for correlation, they found that price, brand image, network quality, value added services and promotional activities directly influenced customer switching behaviour among youngsters.

METHODOLOGY

Survey research design was used in this study. The population for this study consist of all GSM subscribers of the selected service providers (both active voice and internet subscribers), which are MTN, Globacom and Airtel within Abia State, Nigeria. MTN has 2,954,182 subscribers, Glo 1,127,827 subscribers and Airtel has 1,588,539 (NBS, 2022). The entire population of subscribers for these service providers in Abia State is 5,670,548 subscribers as of December 2022. The Table below gives a breakdown of the subscriber spread in Abia State, Nigeria.

Table 1: Active voice and internet subscribers of the selected telecom operators

	Active Voice Subscriptions	Active Internet Subscriptions	Total
MTN	1,652,557	1,301,625	2,954,182
GLO	657,821	470,006	1,127,827
AIRTEL	935,769	652,770	1,588,539
Grand total			**5,670,548**

Source: NBS (2022)

Table 1 shows that MTN has the highest number of subscribers, followed by AIRTEL and GLOBACOM as at the end of December, 2022.

To scientifically generate a sample size, the Taro Yamane's formula (1964), was adopted.

$$n = \frac{N}{1+N(e)^2}$$

Where N = Population size
n = Sample size
e = level of significance(0.05)

$$n = \frac{5,670,548}{1+5,670,548\ (0.05)^2}$$

n = 399.971
n = 400

However, in other to determine appropriately the sample size to be allocated to the subscribers of the three major GSM service providers, Bowleys' (1964) formula in Kwahar (2016) would be used as follows:

$$nh = \frac{nNh}{N}$$

Where: n = Sample size of the entire population
nh = The Sectorial size of respondent required
Nh = Total number of subscribers in each organization
N = Total population size

Therefore, size to be allocated to the subscribers of the three major GSM service providers is given in the table 2 below

Table 2: Individual Sample Size of Subscribers in the three Major GSM Service Providers

S/No	GSM companies	Individual Determination	Sample size
1	Mtn	400X 2,954,182 /5,670,548	208
2	Globacom	400 X1,127,827/5,670,548	80
3	Airtel	400 X1,588,539/5,670,548	112
		Total	**400**

Source: Author's Computation

This research study was conducted using multi-stage sampling technique in selecting respondents who are subscribers of MTN, Glo and Airtel. In this study, the study area which is Abia State, Nigeria, is divided into 17 Local Government Areas. Then 9 out of the 17 Local Government Areas were purposively selected for the study because they have the highest population. That is three local governments were selected from senatorial zone. The selected Local government Areas were: Umuahia South, Umuahia North, Osisioma ngwa, Aba South, Aba North, Bende, Ohafia, Obingwa and Aruchukwu.

The respondents was civil/public servants, private company employees, self-employed, and students of Michael Okpara University of Agriculture Umudike, Abia State university students (Umuahia campus), students of Abia State Polytechnic and students of Abia State School of health. A total of 400 respondents was conveniently selected from the cluster and questionnaires administered to them. The table below gives the population distribution of the 9 selected Local Government Areas in Abia State, Nigeria, based on 2022 projection by the National Population Commission (NPC) and National Bureau of Statistics (NBS).

Table 3: Projected Population Distribution of 9 Local Government Areas in Abia State, Nigeria.

S/N	**Local Government Areas**	**Population**
1	Umuahia South,	202,500
2	Umuahia North	324,900
3	Osisioma ngwa	321,300
4	Aba South	622,400
5	Aba North	155,600
6	Bende	280,500
7	Ohafia	358,200
8	Obingwa	264,900
9	Aruchukwu	246,600
	Total	**2,776,900**

Source: National Population Commission (2017)

Table 4 Sample distribution for each GSM companies among 9 Local Government Areas of Abia State, Nigeria.

		MTN	GLO	AIRTEL	TOTAL
1	Umuahia South,	202,500/2,776,900 X 208=15	202,500/2,776,900 X 80= 6	202,500/2,776,900 X 112=8	29
2	Umuahia North	324,900/2,776,900 X 208=24	324,900/2,776,900 X 80=9	324,900/2,776,900 X 112=13	46
3	Osisioma ngwa	321,300/2,776,900 X 208=24	321,300/2,776,900 X 80=9	321,300/2,776,900 X 112=13	46
4	Aba South	622,400/2,776,900 X 208=47	622,400/2,776,900 X 80=18	622,400/2,776,900 X 112=25	90
5	Aba North	155,600/2,776,900 X 208=12	155,600/2,776,900 X 80=5	155,600/2,776,900 X 112=6	23
6	Bende	280,500/2,776,900 X 208=21	280,500/2,776,900 X 80=8	280,500/2,776,900 X 112=11	40
7	Ohafia	358,200/2,776,900 X 208=27	358,200/2,776,900 X 80=10	358,200/2,776,900 X 112=14	51
8	Obingwa	264,900/2,776,900 X 208=20	264,900/2,776,900 X 80=8	264,900/2,776,900 X 112=11	39
9	Aruchukwu	246,600/2,776,900 X 208=19	246,600/2,776,900 X 80=7	246,600/2,776,900 X 112= 10	36
	TOTAL				400

Source: Author’s Computation

The table 4 gives a break-down of how the sample size was distributed in the 9 Local Government Areas of Abia State, Nigeria.
The source of data for this work was primary. Hence, questionnaire schedule used.
The method of data collection was mainly through questionnaire. The questionnaire was designed to obtain data from the subscribers of the three major GSM service providers on the question relating to augmented service and customer switching resistance behaviour. Responses to all statements was measured on a five-point likert rating scale ranging from 1(strongly disagree) to 5(strongly agree). Questionnaire was structured or unstructured (open or closed). Data collected through structured questionnaire was analyzed using descriptive statistics and simple linear regression. Descriptive statistics was used to analyze the demographic characteristics of the respondents while simple linear regression was used to analyze the hypothesis. Furthermore, Jarque- Bera histogram normality test, Breusch-Godfrey serial correlation test and Breusch-Pagan-Godfrey test of heteroskedasticity were used for testing normality of the result.

DATA ANALYSIS
The information on distribution and retrieval of questionnaire is shown on table 5 below;
Table 5: Distribution and Retrieval of Questionnaire

Questionnaire	Frequency	Percentage
Returned and Useable	384	96
Returned but not Useable	5	1
Not Returned	11	3
Total	**400**	**100**

Source: Field Survey (2024)

As shown in Table 5, a total of 400 copies of the questionnaires were distributed to individual subscribers of the three major GSM service providers in Abia, Nigeria. Out of these, 384 (96%) were returned and useable, 5 (1%) were returned but not useable, while the remaining 11 (3%) were not returned. The analysis of data for this study was therefore based on the sample of 384 respondents.
The analysis on the demographic data of the respondents is given on table 6 below:

Age	**Frequency**	**Percentage**
25-30years	134	35
31-35years	98	26
36-40years	93	24
41 and above years	59	15
TOTAL	**384**	**100**
Educational Qualification	**Frequency**	**Percentage**
WASSCE	51	13
OND	67	17
HND	80	21
B.Sc	176	46
M.Sc	7	2
Ph.D	3	1
Sex	**Frequency**	**Percentage**
MALE	211	55
FEMALE	173	45
TOTAL	**384**	**100**
Marital Status		

Single	175	45
Married	206	54
Separated	3	1
Divorced	0	0
TOTAL	**384**	**100**
Occupation status		
Civil/public servant	53	14
Private company	63	16
Self-employed	79	21
Student	189	49
Total	**384**	**100**

Source: Field Survey 2024

Table 6 above shows that 211 or 55 per cent of respondents were males, while 173 or 45 per cent of respondents were females. This shows that either sex or genders were properly represented in the sample and therefore the findings of the study can be considered fairly balanced, in that the discrepancy between the number of male and female respondents is not too wide; 206 0r 54 percent of the respondents were married; 176 or 46 percent of the respondents have B.Sc; 186 or 49 per cent of respondents were students. This shows that student respondents dominate the study since they are the most active users of these GSM services.

Test of Hypotheses:

HO_1: Augmented service does not have any significant effect on customer switching resistance behaviour among the selected telecommunication firms. The result is indicated in table 7 below:

Table 7: simple regression result on the effect of augmented services on customer switching resistance behaviour

Dependent Variable: customer switching resistance behaviour

Independent Variable: augmented services

Variable	Coefficient	Std. Error	t-Statistic	Prob.
augmented service	0.215918	0.125959	1.714187	0.0045
C	3.489263	0.376437	9.269182	0.0000

R-squared	0.036305	Mean dependent var	4.125250
Adjusted R-squared	0.023950	S.D. dependent var	0.576423
S.E. of regression	0.569478	Akaike info criterion	1.736491
Sum squared resid	25.29584	Schwarz criterion	1.796041
Log likelihood	-67.45962	Hannan-Quinn criter.	1.760366
F-statistic	2.938438	Durbin-Watson stat	1.977121
Prob(F-statistic)	0.090466		

Source: Field Survey, 2024

Augmented service was taken in this study as the independent variable used to test the effect of augmented service on customer resistance to switch. The partial slope coefficient of 0.215918 measures the elasticity of customer resistance to switch with respect to the augmented service. Based on the result on table 7, it could be seen that augmented service has a coefficient of 0.215918, which suggests that augmented service has a positive effect on customer resistance to switch. This implies that a unit change in customer resistance to switch will bring about 0.215918 changes in augmented service ie a unit increase in augmented service will lead to 0.215918 increase in customer resistance to switch.

Based on decision rule stated earlier, it could be seen that in table 7 that the significant probability is 0.0045 which is less than 0.05. Therefore, we reject the null hypothesis and accept the alternate. We conclude that augmented service has a significant effect on customer switching resistance behaviour

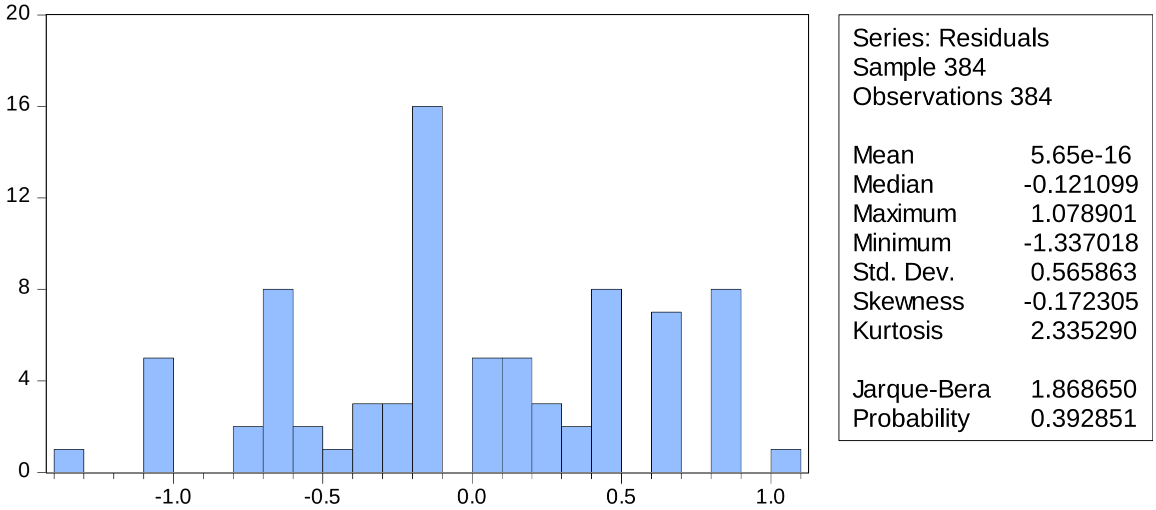
Discussion of findings

From analysis it was discerned that augmented service has a significant effect on customer switching resistance behaviour. This implies that the presence of augmented service which are non-core services such as voice mail, roaming services, call forwarding, call conferencing, global position radio service (GPRS), music, news, games, ring-back tones, among others, can make GSM subscribers develop behavioural loyalty to a particular GSM service provider, as this can be seen in their switching resistance behaviour and making all purchases in a particular category from a single service provider (Reynolds and Arnold, 2000; Bansal & Taylor,1999). Augmented services are enhanced services which add value to the basic tele-services and bearer services for which separate license are issued (Nagel, 2003). It could refer to non-core services which are offered to the customers apart from core or basic services been offered, such as voice and text messaging. Hence, these augmented services should be easy to use and up-to-date for GSM subscribers.

The finding is in line with the work of (Chinda (2019); Sanjida and Jannatul (2022) who stated that augmented services affect consumer loyalty which can be seen in their switching resistance behaviour, but the finding is not in line with the work of Santouridis and Trivellas (2010), which opined that mobile telephone users pay much more attention to core-service issues than to service enhancement issue like augmented services

According to Chinda (2019), an important assumption of regression is that the error, or residual, is normally distributed and uncorrelated with the predictors. Hence, three measures of normality test are used in this study. They are Jarque- Bera histogram normality test, Breusch-Godfrey serial correlation test and Breusch-Pagan-Godfrey test of heteroskedasticity. Furthermore, the credibility of the regression estimate used in testing $H0_1$ was hinged on the results of the three post-estimation tests which evaluated the normality of the regression residual, serial correlation and heteroskedasticity.

The first is the normality test using Jarque- Bera histogram and it is shown in fig 1 below:



Based on the Jarque- Bera histogram normality test assumption, the histogram normality test presented above attested that the normality of the regression residual. This is based on the Jarque-Bera statistics of 1.868650 and a corresponding probability 0.392851. Since the Jarque- Bera statistics has a probability value of 0.392851 which is greater than 5%(0.05), we accept the null hypothesis which suggest that residuals of the regression are normally distributed

The second test is Breusch-Godfrey Serial autocorrelation test and the result is shown on table 8 below:

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.781667	Prob. F(2,380)	0.1753
Obs*R-squared	3.582891	Prob. Chi-Square(2)	0.1667

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Sample: 384
Included observations: 384
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
value-added services	-0.029975	0.125823	-0.238234	0.8123
C	0.087579	0.375905	0.232982	0.8164
RESID(-1)	0.005455	0.112446	0.048516	0.9614
RESID(-2)	0.213725	0.113311	1.886190	0.0631

R-squared	0.044786	Mean dependent var	5.65E-16
Adjusted R-squared	0.007080	S.D. dependent var	0.565863
S.E. of regression	0.563856	Akaike info criterion	1.740670
Sum squared resid	24.16294	Schwarz criterion	1.859772
Log likelihood	-65.62682	Hannan-Quinn criter.	1.788422
F-statistic	1.187778	Durbin-Watson stat	2.087299
Prob(F-statistic)	0.320112		

Based on the assumption of Breusch-Godfrey serial correlation test, the outcome of the result indicated that Chi-Square and f-statistics have a probability value of 0.1667 and 0.1753 respectively. The result suggested that the residuals are not serially correlated because both probability outcomes are greater than 5% suggesting that the null hypothesis which proposed that the residuals of the regression are not serially correlated which state that autocorrelation do not exist among the residuals should be accepted and its alternate rejected.
The third post estimation test is the Breusch-Pagan-Godfrey test of heteroskedasticity. The result is indicated in the table 9 below:

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.073424	Prob. F(1,382)	0.7871
Obs*R-squared	0.075236	Prob. Chi-Square(1)	0.7839
Scaled explained SS	0.047751	Prob. Chi-Square(1)	0.8270

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Sample: 384
Included observations:384

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.381492	0.244487	1.560378	0.1227
value-added services	-0.022167	0.081808	-0.270969	0.7871

R-squared	0.000940	Mean dependent var	0.316198
Adjusted R-squared	-0.011868	S.D. dependent var	0.367687
S.E. of regression	0.369863	Akaike info criterion	0.873312
Sum squared resid	10.67027	Schwarz criterion	0.932862
Log likelihood	-32.93246	Hannan-Quinn criter.	0.897187
F-statistic	0.073424	Durbin-Watson stat	1.834993
Prob(F-statistic)	0.787131		

Based on the heteroskedasticity test output according to the table above, the probability value of 0.7871 which is greater than 5%. Based on the hypothesis that has been created previously, the results of hypothesis testing indicate that the null hypothesis is accepted (p-value is greater than 0.05). Thus, it can be concluded that the residual variance is constant (homoscedasticity). Because the residual variance is constant (homoscedasticity), the regression model has fulfilled the OLS assumption and hence the result is therefore reliable for making credible decision.

CONCLUSION AND RECOMMENDATIONS

Based on the research conducted, it was concluded that that augmented service has a significant effect on customer switching resistance behaviour. Owing to this fact, customers get the main product along with some perks at the same price. When customers have high perception of value and high levels of satisfaction with the mobile augmented services, they are more likely to reuse or repeat the purchase of the services again in the future, encourage their friends and relatives to do so and exhibit resistance to switch behaviour.

Based on the findings of this study, we recommended that managers of GSM services should develop augmented services to increase subscriber's convenience. Augmented services should be up-to-date, easy to use, and less expensive to users.

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MODERATING EFFECT OF AUDIT REPORT TIMELINESS ON THE RELATIONSHIP BETWEEN AUDITOR'S ATTRIBUTES AND MARKET VALUE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract
This study examined the moderating effect of audit report timeliness on the relationship between auditor's attributes and market value of listed deposit money banks in Nigeria. The auditor attributes were proxied by auditor tenure, auditor type and auditor expertise while market value was proxied by Tobin's Q.10 deposit money banks were used as sample from a population of 14. Data were collected from the 10 sampled banks and analysed using panel multiple regression analyses. It was found that auditor type, auditor tenure and audit report timeliness had insignificant effect on market value except audit expertise that had significant effect on market value. However, when the variables were moderated with audit report timeliness, all the independent variables had positive and significant effect on market value. It was recommended that shareholders of the banks should always insist on timely audit report as it improves the market value of the banks.

Key words: market value, auditor's attributes, audit report timeliness; auditor type, audit expertise.

INTRODUCTION

Market value is the term used to describe how much an asset or a company is worth on the financial market, according to market participants. It is commonly used to refer to the market capitalisation of a company, which is a function of the number of shares in circulation and the current market price. The market value of an organisation is perpetually changing because a number of factors predict the market value of the company; these factors are not dissociated with the behaviours of investors in predicting the market. One of the variables that influence the participation of investors in the capital market is the report of external auditors.

External audit report is a document that provides confidence to shareholders and investor on the quality of financial reports and builds trust in corporate reporting. The objective of external auditing is to provide reasonable assurance about whether the financial statement as a whole are free from material misstatement, whether due to fraud or error, thereby enabling the auditors to express an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework, report and communicate auditor's findings in accordance with generally accepted accounting practice and standards. Kiabel (2016) highlighted that external auditors have the duty of reporting to the shareholders and other user of financial statement that the accounts examined by them shows a true and fair representation of the financial transactions of the company or that they do not reflect a true and fair view. Okoli (2014) stated that the investors and other stakeholders or users of financial statements rely on the audited financial statement for investment which has its consequence on market value. Snnivasan (2012 noted that audit quality is a central component that improves market value. Ajekwe and Ibiamke (2017) assert that audit quality is vital to achieved efficient and effective resource management because it can lead to rapid improvement of firm value.

The function of external auditing reflects on the quality of financial report or information maintained to create confidence among the stakeholders and reflect the efficiency and credibility of audit firms. When investors have confidence and trust in the audited financial statements it encourage investors to invest more in the company believing that their investment is safe and secure, which in turn lead to increase in market value.
Literature on this subject has shown that the attributes of the auditor like tenure of the auditor, the type of the auditor and the auditor's expertise have effect on the market value of the firm. Proponents of audit tenure and market value opine that an auditor that has audited a company for more than one term are conversant with the transactions and complexity of the company and may produce quality audited statements that are devoid of material misstatements (Santos *et al*, 2015). This means that investors have confidence in auditors that have served the company for a long time relative to the auditors that are just starting audit work with a company and are willing to invest in companies with long audit tenure. On the contrary, Okolie (2019) opined that long tenure auditors are likely to compromise audit quality because of the long standing relationship with the management. On this basis investors may choose not to invest in companies that don't change auditors on regular basis; this may certainly affect the market value of such companies.

The type of auditor is another attribute of the auditor that could affect market value of a company. Some investors believe that audited statements produced by the big four audit companies are accurate. This is because the size of the big four in terms of staff strength and the technical competence in terms of the equipments makes investors believe in the quality of audit produced by such firms. These set of inventors are ready to patronize companies with the big for thereby increasing the market value of the companies. However, Hamdan and Musa (2020) avowed that the big four audit companies are associated with high audit fee that reduces the profit value of the company as such some companies elect to go for auditors that have competent history. This implies that investors are also interested in companies that engage auditors that have audited many companies without any history of corporate failure.

Another attribute of the auditor that affects the market value of the company is audit expertise. Audit expertise is a function of the experience of the auditor in specific industries. Many potential and already existing investors believe that some auditors do better in specific industries. These types of investors are ready to invest only if they observe that the auditor has experience in auditing companies in such an industry. This motivates the investor to sink in funds to the company causing a rise in the market value of such a company.

Literature has captured in different forms the effect of auditor's attributes on market value but the philosophy of this study connotes that investors may not just be interested in the attributes of the auditor alone but the timely release of the audited report and subsequently the publishing of the audited statements is of paramount importance to the investor. Users of financial statements essentially focus on the timeliness of financial reports which enhance their reliability to make decisions. The availability of financial statements on a timely basis boosts investors' confidence. However, the delay of this information may hamper its usefulness. Thus, for capital markets to function effectively, they require a vibrant reporting system to enhance investors' assurance of quality investment decisions. Information contained in the financial statements is expected to possess excellence before its receipt by various users as they demand timely financial information. As such, one of the striking qualities of financial reporting is timely information which translates to excellent judgment regarding the state of affairs of an enterprise. This can only be achieved when the auditor releases the audit report on time.

Timely information maintains its economic value and minimizes information asymmetry by improving the pricing of securities. Timely financial information also minimizes the likelihood of false information regarding the company. The crucial role of external audit necessitates investors to place more emphasis on information provided by audited reports. A timely audit report serves as the bedrock of confidence for all users of financial information. Timely financial information enables stakeholders involved in the decision process to utilize the information before its loss of value. This refers, explicitly to a shorter period that an independent auditor submits the audited annual report compared to the end of the client's accounting year. Shareholders are keen on the period which an audit report takes before its' release. Moreover, a strong correlation exists between auditors' attributes like audit tenure, type of auditor and the expertise of the auditor and reporting time lag. As such, audit delay seems to be closely associated with the audit functions. This holds as an auditor cannot issue a report until the end of the audit (Shukeri andIslam, 2012). In developing markets, the availability of timely financial information remains the crucial avenue that shareholders are informed of the value of their investments. As emerging markets struggle with difficulties of the current global situation due to financial crisis, the uncertainties about the safety of investments increase thus, the request for the timely audit report.

Based on the importance of the timeliness of the audit report, this study is motivated to examine the moderating effect of audit report timeliness on the relationship between auditor's attributes and market value of deposit money banks in Nigeria. The moderation is necessary because, the attributes of the auditor no matter how high they are may not make economic sense to investors if the audited report is not released on time. This connotes that given the tenure of the auditor, the type of the auditor and the expertise of the auditor if the report which is expected from the auditor is not released on time, the importance of the report to the investor will be impaired. This may have negative consequences on the market value of the firm because investors may have invested in alternative companies. On the other hand, the attributes of the auditor have to be synergized by timely report to have positive effect on market value.

LITERATURE REVIEW

Agency Theory

In a modern corporation, the separation of ownership and control is inevitable. This relationship is fraught with agency problems (Jensen & Meckling, 1976). This theory is based on the relationship between the principal (shareholder) and the agent (managers). This separation provides the opportunity for an agent (manager) to be appointed to manage the daily operations of the company. Agency theory posit that managers are motivated by their personal gains and work to exploit their personal interest and not the interest of shareholders. This conflict is what necessitate the involvement of a third party called the auditor. It is expected that the attributes of the auditor will enable the auditor to bridge the gap between the agents and the principal. This has made agency theory suitable to anchor this study.

Auditor's Attributes

The attributes of the auditor are characteristics of the auditor that enables the auditor to perform his work with maximum satisfaction. These attributes includes the expertise of the auditor in carrying audit services and the tenure of the auditor. Other attributes are the size of the auditor which connotes the manpower, assets and technical gadgets meant to facilitate the work of the auditor.

Audit Timeliness

The timeliness of accounting information refers to the provision of information to users quickly enough for them to take action. Ugwunta, Ugwuanyi and Ngwa (2018) stated that an efficient and effective capital market needs a transparent financial reporting system to boost investors' confidence in making investment decisions. Thus, timely financial reporting is considered as one of the qualities of financial reporting that leads to quality decision making. Investors in today's markets rely on accountants to provide greater information on a timely basis. Sulong, Gardner, Hussin, Sanusi, and McGowan, (2013) stated that timeliness of financial reporting may allow the information to be available to decision-makers before it loses its capacity to influence business decisions. Omid (2015) stated that greater benefits are derived from the timely reporting of financial statements, and specifically timely reporting refers to the shorter time between the date of accounting financial year end and the date an independent auditor issues an audited annual report. The delay in releasing the financial statement is most likely to boost uncertainty associated with the decisions made based on the information contained in the financial statements (Ashton, Willingham & Elliott, 1987). Therefore, timely reporting will enhance decision making and reduce information asymmetry in the capital market (Owusu-Ansah & Leventis, 2006).

Market Value

Market value is the worth of a firm at a particular time. It represents the cost of shares of a company at a particular point in time. Market value represents the external assessment and expectation of firm's future performance. It has a correlation with historical profitability and growth levels but also incorporate future expectations of market changes and competitive moves. Market value can be measured in terms of market capitalisation, Tobin's Q and share prices. This study measures market value using Tobin's Q because it captures both the previous and present prices of shares giving a better informed accounting number for decision making.

Empirical Reviews

Utile et al (2024) examined auditor's characteristics and market value of 30 manufacturing companies in Nigeria using structural equations modelling as the tool for data analysis. The result indicates that auditor's size, type and industry specialisation had positive and significant effect on market value. Abdulkarim et al (2023) examined the impact of Audit attributes on value of listed insurance companies on the Nigeria Exchange Group (NXG) for the period of Ten (10) years (2009-2019). Ex-post factor and correlational research design were employed for the study and data was analysed using descriptive statistics, correlation matrix and multiple regression analysis. The findings reveal that audit fees have positive and significant effect on value of listed insurance companies in Nigeria. However, the findings also reveal that Big4 and audit tenure have negative but insignificant effect on value of listed insurance companies in Nigeria.

Izukwe and Jerroj (2022) found positive association between auditor's characteristics and value of service companies in Nigeria with 22 companies purposively sampled and analysed via multiple regression analysis. Amaka and Unuora (2021) investigated the effect of audit attributes on firms' value in Nigeria. A sample of 37 financial firms, comprising of both banking and non-banking firms listed on the floor of the Nigerian stock exchange was used for this study. Data was analysed using the Dynamic Panel Generalized Method of Moment. Audit attributes were found to have significant effect on the value of the firm. Hammed, et al (2017) investigated the effect of audit firm attributes on market value with evidence from Malaysia. The study found that audit fee was significantly and positively related to Tobin's Q. However, audit firm rotation was insignificantly related to Tobin's Q.

METHODOLOGY

This study adopted the correlation research design which investigates the relationship between the dependent and the independent variables. This research design is selected because the study intends to find out how significant audit attributes affect the market value of Deposit Money Banks listed on the Nigerian Stock Exchange. The population of this study was all 14 deposit money banks listed on the Nigerian Stock Exchange. 10 Deposit Money banks were purposively sampled from 2016-2020. Data were collected from the annual reports of the 10 sampled companies; the data was analysed using multiple regression analysis. This was made possible after subjecting the data through some tests like the test of multicollinearity, Hausman specification test, correlation, normality and heteroscedasticity.

Table1: Variables and their Measurements

Symbols	Variable name	Variable type	measurement
TQ	Tobin's Q	Dependent	Total market value of firm/ total asset value of the firm
ADE	Audit Expertise	Independent	No of years the auditor has audited the company.
ADT	Audit tenure	Independent	1 if firm is audited by an audit firm for more than 3yrs otherwise 0
ATL	Audit report timeliness	Independent	No of days between the end of financial statement report and the end of audit reports
AUT	Auditor type	Independent	1 if firm is audited by big four and 0 otherwise

Source: Author's compilation

Model Specifications

$TQ_{it} = \beta_{01} + \beta_1 ADE_{it} + \beta_2 ADT_{it} + \beta_3 AUT_{it} + \beta_4 ATLit + e_{it}$ …..(i)

$TQ = ATL(\beta_1 ADE_{it} + \beta_2 ADT_{it} + \beta_3 AUT_{it} + \beta_4 ATLit) + e_{it}$ ….(ii)

where:

TQ = Tobin's Q (market value)
ADE = Audit Expertise
ADT = Audit type
ATL = Audit timeliness
AUT = Auditor tenure
$e_i t$ = Error term
i = company
t = time
β_{01} = Intercept
β_1- β_6 = coefficient of the independent variables

RESULTS AND DISCUSSIONS

Table 2: Descriptive Statistics

Var.	Obs.	Mean	St. Dev.	Min.	Max.
ADT	50	0.60	0.49	0.00	1.00
AUT	50	5.16	1.50	3.00	7.00
ATL	50	107.38	14.18	90	143
ADE	50	0.06	0.08	0.01	0.40
TQ	50	0.085	0.06	0.02	1.78

Source: STATA Version 15

The result of the descriptive statistics in table 2 above indicated that the total number of observations were 50. This is because data were collected from a panel of 10 companies for a period of 5 years. The table further indicated an average ADT of 0.6 and a deviation of 0.49 with a minimum of 1 and maximum of 0.00. This implied that the on the average, most of the companies were audited by the big four companies while there was a low variation of companies that were audited by the non big four. Furthermore, AUT had an average of 5.16 with a variation of 1.56. The maximum was 7 and the minimum was 3; this implies that most of the companies were audited by one company for more than three years however, the highest company had audited for seven years. ATL had a mean of 107.38 with a standard deviation of 14.18 and a minimum and maximum of 90 and143 respectively. This means that most of the auditors audited the companies for more than three months that audited reports are expected to be released. The low variation was an indication that few of the auditors released their reports above the average period that others released their annual reports. ATE had a minimum of 0.001 and a maximum of 0.400 which indicated that the average audit expertise was low but the high variation indicated that there were many companies with high technical expertise. TQ which was the proxy for market value had an average of 0.08 with the maximum as 1.74; the variation was 0.67. This was an indication that many companies had market value greater than their assets value.

Econometric Tests

To have a regression result that is devoid of material mistakes, Econometric tests were conducted on the data set to ascertain the suitability of the data for regression analysis. The tests included the test of multicollinearity, the test of heteroscedasticity and the test of correlation.

Table 3: Test of multicollinearity using variance inflation factor (VIF)

Variables	VIF
ADE	1.26
AUT	1.19
ADT	1.16
ATL	1.06
Mean VIF	1.16

Source: STATA Version 15

The test of VIF in table 3 above indicated that the VIF of ADE was 1.26 that of AUT was 1.19. The VIF for ADT was 1.16 and that of ATL was 1.06. The mean VIF was 1.06 meaning that there was absence of the problem of multicollinearity amongst the independent variables.

Test of heteroscedasticity: This test was conducted to determine whether the error terms in the model were consistent. The test indicated a p-value of 0.0751 which was an indication that the error terms were constant.

Data Analysis

The results of the econometric test above are indications that multiple regressions is the best technique of data analysis however, the data obtained was in panel form thus, the Hausman specification test was conducted to determine the most fit regression technique between the fixed effect and random effect the result was insignificant with a P-value of 0.4118. A further test to determine between the pooled OLS and the random effect was conducted. The result showed a P-value of 0.4186 which was also insignificant. This implied that the best technique of regression analysis to suit the data was the ordinary least square regression analysis.

Table 4: Ordinary least square regression results

Var.	Coef.	t	p
ADT	0.0292	1.69	0.097
AUT	0.0091	1.66	0.104
ATL	0.001	1.90	0.064
ADE	0.396	3.66	0.001
ADT*ATL	-0.000669	-2.01	0.50
AUT*ATL	0.0004162	2.00	0.051
ADE*ATL	0.0084667	33.31	0.000
Prob Model I			0.0003
Prob Model 2			0.000
R-Sq Model I			0.3701
R-Sq Model 2			0.9731

Source: **STATA Version 15**

Table four above is a table showing the results obtained from model 1and model 2 respectively. The results indicated that model 1 has a model significance of 0.003 and model 2 has the significance of 0.0000 which was an indication that both models are fit for generalisation of the results. Furthermore, the results indicated that a unit change in the auditor attributes investigated holding other variables constant may change market value by 37%. The table also indicated that if auditor attributes are moderated by audit timeliness, the auditor attributes would predict market value by 97%. This result is further explained that if auditor attributes are moderated by the timely submission of audit reports, other factors that may affect market value may amount to 3% (0.0287) only.

On specific notes, the table indicated that within the study period, ADT has insignificant 0.097 effects on market value. In addition, AUT and ATL also had insignificant 0.104 and 0.064 effect on market value however; ADE had significant 0.001 effects on market value of the companies investigated. The moderation of ATL on auditor attributes indicated that all the variables had significant effect on the market value of the companies studied. The moderation indicated the P-values of the independent variables as follow: ATL (ATD, ADE and AUT) 0.050, 0.000 and 0.050 respectively. This means that if the auditor attributes are moderated with timely report, market value would be enhanced

Audit Tenure and Market Value

The result of this study provides that audit tenure has insignificant effect on the market value of the banks investigated. Similar findings were also made by Usman (2021) and Wisdom et al (2019) on the same subject matter. The insignificant relationship between audit tenure and market value may be associated with the fact that long audit tenure by auditors reduces audit independence because the auditor over familiarise himself with the client and is subject to being influenced by the client. This makes potential investors to have doubt about the independence of the auditor as a result, market value is negatively affected. Also, long audit tenure makes the auditor to lose focus on audit objectives to other non audit services that may have financial benefits; this long relationship impairs investor confidence in the quality of audit by the auditor and consequently, market value in impaired. On the other hand, the positive relationship between audit tenure and market value may be associated with the believe that with lengthen audit tenure, the auditor acquires more knowledge in the company and can give continuous improvement in the quality of audit. Although audit tenure has insignificant effect on market value the implication is that whether the tenure of the audit is short of long it does not matter in respect of changes to market value.

Audit tenure was moderated with audit report timeliness to see if the synergy between the two would affect the market value of the banks investigated. It was found that the moderating effect of audit tenure and audit report timeliness had significant effect on market value. This connote that investors are interested in the timely report of the audit work in conjunction with the advantage of long or short tenure. This means that the long or short tenure of the auditor alone may not attract investors enough to change market value but when it comes alongside a timely report, it aids investors to make timely informed investment decisions which improve market value.

Audit Expertise and Market Value

Audit expertise has significant effect with market value of the banks investigated. This finding is similar to that of (Brooks, Cheng, and Reichelt 2013; Al-Matari, Al-Swidi, and Fadzil, 2014). This result is possible because the expertise of the auditor is key in determining the quality of report that the public experts. This study is in line with the signalling theory hence the expertise of the auditor sends signals to the capital market. The competence of the auditor in terms of other audit jobs the firm has done and the years of experience in auditing the client sends signals to the investors which may attract more investment or more investors or otherwise. Contrary to the finding of this study, Ziaee, (2016) found insignificant effect between audit expertise and market value using manufacturing firms. To Ziaee, the expertise of the auditor does not matter to the market and the signals may not change the perception of the investors towards the companies. The differences in the results may be as a result of the differences in the method of data collection and the domain of the study.

The result of the moderating effect of audit report timeliness and audit expertise on market value was positive and significant. This implies that if the auditor is an expert in auditing the client and the auditor releases the audit report on time, it will have positive significant effect on the market value of the Bank.

Audit Report Timeliness and Market Value

The result of multiple regression has shown that audit report timeliness has insignificant effect on the market value of the companies investigated. The findings are consistent with that of Ziaee (2016), Samuel, Mudzamir and Mohammad (2017) who also discovered that audit report timeliness has no significant effect on market value. The insignificant relationship between audit report timeliness and market value suggests that the length of time for audit assignment alone would not change the market value of the companies investigated. Notwithstanding, audit report timeliness is important when it is combined with other variables as seen from the moderating effect it has on other variables against market value. This means that in as much as audit report timeliness has insignificant effect on market value, it has a strong synergy with other attributes of the auditor to change market value.

Auditor Type and Market Value

Audit firm type has insignificant effect on the market value of the companies investigated. This is result is consistent with the findings of Hussani, Noor and Hasnah (2018) who also discovered that auditor type has insignificant effect on market value. This finding is true because, market value cannot change positively or negatively if a firm is audited by a particular auditor. Even though Ugwunta, Ugwuanyi, and Ngwa (2018) found positive and significant effect between auditor type and market value but there were comparing the two types of auditors the big 4 and others which one has effect on market value and found that the big four has significant effect on market value. This does not mean that auditor type has effect on market value because in this study the big four and the non big four are simultaneously studies against market value but the result indicates an insignificant relationship. However, when the result of auditor type was moderated with audit report timeliness, the result became positive and significant. This means that the type of auditor may not matter what may be of concern to the investors whose play out will affect market value is whether the auditor has released his report on time or not.

Moderating Effect of Audit Report Timeliness and Market Value

In line with the a-prori expectation, that the moderating effect of audit report timeliness and the auditor attributes investigated will have significant effect on market value of Deposit Money Banks listed on the Nigeria Exchange Group, the result of this study indicated that auditor attributes like type of auditor, tenure of auditor and the time the auditor takes to release audit report do not have significant effect on market value of the Banks except the expertise of the auditor. However, when the attributes were moderated with audit report timeliness all the variables had significant positive effect on market value. Audit expertise earlier had significant effect on market value but when it was moderated with audit report timeliness, the coefficient of effect became higher that when it was single regressed against market value. This means that the moderation brought improvements in the effect audit expertise had on market value. It is therefore imperative that companies investigated insist of time lines for submitting of audit reports with the auditors so that reports are submitted on time to enable investors improve the market value of the companies through purchase of shares and investment in other forms of assets.

CONCLUSION

The main purpose of this study was to examine the moderating effect of audit report timeliness and auditor attributes on market value of Deposit Money Banks listed on the Nigeria Exchange Group. The audit attributes of interest were the auditor type, the tenure of the auditor and the expertise of the auditor. It was found that auditor attributes studied could change market value by 37%. It was however found that when the variables were moderated by audit report timeliness, the percentage of change of market value became 97%. Specific findings were that:

(i) Audit tenure has insignificant effect on market value but when it was moderated by audit report timeliness, the synergy between the two has positive and significant effect on market value. This means for market value to change significantly, auditor type cannot be considered in isolation but should be moderated with the timeliness of the report of the auditor.

(ii) Audit expertise has significant effect on market value but when it was moderated with the timely report of the auditor, the coefficient of determination of market value was higher meaning that the combined effect of audit report timeliness and audit expertise has higher effect on market value of the Banks studied.

(iii) Audit report timeliness has insignificant effect on market value. This means that investors who are key players in changing market value are not concerned with the timely report of the auditors alone in making investment decisions that may change market value of the Banks.

(iv) Auditor type has no significant effect on market value. However the moderation of auditor type with timely submission of audit report made significant positive changes to market value. This means that the effect of auditor type on market value is appreciated if the time of the report by such an auditor is put into consideration.

v The moderating effect of audit report timeliness and auditor attributes has significant effect on market value this is because the attributes of the auditor alone cannot significantly affect market value except they are moderated by audit report timeliness.

Based on the analysis of data, it was concluded that audit attributes have weak effect on market value of the banks investigated. This is because the audit attributes studied have proven to have only 37% changes in the market value of the Deposit Money Banks listed on the Nigeria Exchange Group. Specific conclusions reached were that, auditor tenure, audit timeliness and auditor type has insignificant effect on market value. However, audit expertise had significant effect on market value. The moderating effect of audit report timeliness and the auditor attributes indicates that the synergy between audit report timeliness and auditor attributes would improve market value.

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SOCIAL MEDIA MARKETING AND CONSUMER PATRONAGE OF NATURAL MEDICINE PRODUCTS IN BAYELSA STATE, NIGERIA

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Abstract
This study places emphasis on social media marketing and Consumer patronage of natural medicine in Bayelsa State, Nigeria. The purpose was to determine the influence of Facebook and TikTok as proxies of social media platforms on patronage as well as consumption of natural medicine products in the area. An exploratory research design was employed, while primary data were obtained from 300 consumers using a 5-point Likert scale questionnaire (online and offline). The data obtained were analyzed using descriptive statistics, while the hypotheses of the study were tested using simple linear regression in Statistical Package for the Social Sciences (SPSS) version 23. We found out that Facebook and TikTok marketing had significant positive effects on consumer patronage of natural medicine products. Therefore, the following recommendations were made: Facebook should be used for marketing communication campaign programmes in Bayelsa State by natural medicine practitioners and dealers. This will enhance the exposure of natural medicine benefits to real and potential consumers. Hence, it was concluded that social media marketing is a good fit for showcasing the wonders of nature through plants and it's attributes.

Keywords: social media marketing, Facebook, TikTok, natural medicine, patronage

Introduction

New and extended communication channels are being created by the introduction and continuous evolution of digital communications technologies, enabling smooth interactions between individuals worldwide. Many Nigerian firms have gone online as a result of strong, effective digital technologies nowadays, utilizing electronic and internet-based tools to interact with clients and market their brands (Adebisi, 2022). Especially during the COVID-19 pandemic, when physical company operations were suspended, social media has emerged as one of the most widely used digital marketing tools by Nigerian firms (Aladejebi, 2020). Marketing initiatives that are conceptualized, organized, and carried out using social media platforms may be referred to as social media marketing (Etim, James, Nnana & Okeowo, 2021).

It is the process of marketing and promoting a company's offerings through the use of social media channels including social network discussion forums and media-sharing platforms. Social media, by definition, is the construction of highly interactive platforms using mobile and online technologies that allow people and groups to share, create, engage, and modify user-generated content (Kietzmann, Hermkens & McCarthy, 2011).

On the other hand, social media marketing is the application of unique marketing techniques to diverse platforms with the goal of successfully and efficiently achieving organizational objectives. Therefore, it is the use of strategic marketing techniques to communicate with a target audience and enrich information in order to elicit the desired response (Raudeliunien, Davidaviciene, Tvaronaviciene, & Jonuska, 2018).

Facebook's introduction of its advertising possibilities in 2005 marked the beginning of the rise of social media marketing (Red and Yellow, 2017). Its importance is multifaceted, and due to its distinctiveness, commercial and non-profit organizations, as well as private company owners, have managed to stand out in the face of fierce competition. Using a variety of marketing techniques to guarantee effective communication with its target audience is known as strategic social media marketing. These tactics include using Facebook, TikTok, and other platforms. Chunmei and Weijun (2015) note that social media has grown in popularity throughout the world and had an impact on

people's personal lives as well as society as a whole. Tens of thousands of activists and nonprofit organizations have benefited greatly from it; for instance, activists in Asian nations like Thailand, China, and other Asian countries have used social media to spread awareness of issues pertaining to their local cultures and the nation's economic development (Kent & Taylor, 2014).
There are 7.1 billion people on the planet, of which 5.1 billion use mobile phones exclusively, 4.39 billion use the internet, and 3.48 billion use social media (Kemp, 2019). There are 24 million social media users in Nigeria, according to the 2019 Global State of Digital Report. According to the survey, Nigerians spend an average of 3 hours 17 minutes on social media, which is longer than the global average of 3 hours 14 minutes (Udodiong, 2019).

Social media is quickly taking over as the go-to marketing tool for businesses in the twenty-first century, particularly in developed and developing nations, thanks to its interactivity, speed, efficiency, coverage, and global reach (Kraus, Palmer, Kailer, Kallinger & Spitzer, 2018, Awara, Udoh & Anyadighibe, 2018). While several businesses in Nigeria had already implemented social media marketing, its uptake reached an unparalleled zenith within the corona virus pandemic, compelling nearly all businesses to embrace social media marketing (Aladejebi, 2020). Businesses that practice natural medicine are also among the many that frequently use social media marketing techniques for advertising. Natural medicine companies, by definition, are companies that use ingenuity and inventiveness to offer clients natural medical services via digital channels such as websites and mobile applications. Natural medication dealers are compelled to look into new strategies for marketing and promoting their products to Nigerian consumers, who are more active online than they were a few decades ago, due to changes in customer behavior, rising competition, and technical advancements. As a result, social media has gained popularity as a platform for natural medicine practitioners to carry out a variety of marketing initiatives. One may find it interesting to learn that these businesses promote the advancement of natural remedies in medicine and wellness. They lessen the danger associated with conventional medications that include excessive amounts of chemicals that can have adverse effects on the body and are too costly for the average person to afford. Therefore, this study seeks to establish the effect of Facebook (Meta) and TikTok on consumer patronage of natural medicine products in Bayelsa State, Nigeria.

Statement of the problem
Even though natural medicine products benefit consumers and the economy, most people are unaware of them, and those who are aren't using them to their full potential. Additionally, as a developing country and with the introduction of the internet, there is the problem of trust, fear, and uncertainty, which could cause consumers to rely on traditional advertising media for the sensitization of their health and medical products and subsequently purchase them.
Thus, the focus of this study was on how Bayelsa State's natural medicine dealers and practitioners would use social media platforms to raise awareness, drive traffic, and establish credibility for their products—all of which would eventually result in consumer purchases. It is unclear, nevertheless, how Bayelsa State residents' use of natural medicine products has been impacted by the implementation of these social media marketing techniques. Thus, what is the impact of social media marketing, specifically Facebook and Tiktok, on consumers' inclination to purchase natural medicine products in Bayelsa state, Nigeria?

Objectives of the study
The main objective of the study was to evaluate the effect of social media marketing on customers patronage of natural medicine products in Bayelsa state, Nigeria. Specifically, the study sought to:

1. examine the effect of Facebook (Meta) marketing on consumer patronage of natural medicine products in Bayelsa state, Nigeria,

2. assess the effect of TikTok marketing on consumer patronage of natural medicine products in Bayelsa state, Nigeria,

Research Questions

The following questions guided this study:

1. To what extent does Facebook (Meta) marketing affect consumer patronage of natural medicine products in Bayelsa state, Nigeria?
2. To what extent does TikTok marketing affect consumer patronage of natural medicine products in Bayelsa state, Nigeria?

Research Hypotheses

The following null hypotheses were postulated to guide the study:

1. Facebook (Meta) marketing does not affect consumer patronage of natural medicine products in Bayelsa state, Nigeria.
2. TikTok marketing does not affect consumer patronage of natural medicine product in Bayelsa state, Nigeria.

The significance of the study

This study will be relevant to the following:

Natural medicine firms: The results of this study will be very beneficial to natural medicine companies in Nigeria. Natural medicine companies can advertise their products there, as this study will reveal which social media platform generates the most leads.

Consumers: since the study will highlight the impact of social media on the accessibility of online transactions for natural medicine, this group of people will gain from it.

Researchers and Students: Because this study builds upon the body of existing literature in a related field, it will be beneficial to both researchers and students.

The scope of the study

Examining social media marketing and consumer purchases of natural medicine products in Bayelsa state, Nigeria, is the primary goal of this study. This study only takes into account two social media attributes: Facebook and TikTok. Despite the fact that there are numerous others. The focus of this study was on users of natural medicine products.

Limitation of the study

There are some limitations expected in the course of carrying out this work. First, the study is limited in scope. Since only customers who patronized natural medicine products were examined. It may pose a challenge with respect to generalization of the research findings. Also, the research was restricted to only two attributes of social media platforms, whereas there are several other platforms which may enhance customer patronage which this study is not considering. The next limitation involved the method used to collect data. The study was hinged on the use of primary data to measure the effect of the social media platforms on consumer patronage of natural medicine products. Another limitation of the study was the inability of respondents to give needed information required by the researcher. Nonetheless, with available data and judicious used of the limited resources, reasonable analysis was carried out to ensure that research findings add up to the body of existing knowledge.

Theoretical framework

The underpinning theories of this study are:

1. Technology acceptance model (TAM) by Davis (1985)
2. Social Marketing Theory by Kotler and Zaltman in (1970).

Dynamic theory of innovation

Taylor, Burrows, and Logan (2002) developed the dynamic theory of innovation. It is a performance-driven methodology created to help businesses improve corporate performance and acquire a long-term competitive edge via ongoing innovation and adaptation. It was created in reaction to the high failure rate of globalization and environmental changes-related business organizations that were conservative (Kent, 2004). The fundamental tenet of the dynamic theory of innovation is that businesses operate in a dynamic, quickly changing, and evolving environment. As a result, in order for businesses to maintain a sustainable competitive advantage in this kind of environment, they must innovate, adapt, and adjust in order to stay up to date with the most recent developments in the market (Taylor, Burrows & Logan, 2002).

Social Marketing Theory

The dynamic theory of innovation was developed by Taylor, Burrows, and Logan (2002). It is a performance-driven methodology designed to assist companies in enhancing their overall business performance and gaining a sustained competitive advantage through constant innovation and adaptation. It was developed in response to the high failure rate of conservative business organizations linked to environmental changes and globalization (Kent, 2004). The dynamic theory of innovation's central claim is that companies work in a dynamic, ever-evolving, and fast-changing environment. Because of this, businesses need to innovate, adapt, and adjust in order to stay abreast of the latest market developments and retain a sustainable competitive advantage in this type of environment. In order to achieve this, social marketing theory recognizes a range of psychological and social system-level obstacles to information flow and uses the mass media to influence them (Lefebvre, 2000). The social marketing theory is pertinent to the research because it aims to comprehend the psychological and social elements that contribute to societal resistance to change. For the benefit of a target group, it so increases any social idea's acceptability, response, and practice (Burke 2010). The fact that this theory is improperly classified as a communication theory is one of its main criticisms (Glasgow Caledonian University, 2020). Additional critiques consist of. largely depends on advertising, takes a lot of time, and yields little return on investment.

Conceptual Review

Social Media

According to Strauss and Frost (2018), social media is an assortment of online communication platforms devoted to community-based feedback, engagement, content sharing, and cooperation. It consists of interactive computer-mediated technologies that enable the development and exchange of knowledge, concepts, professional interests, and other kinds of expression through online networks and communities. Social media is a computer-based technology that makes it easier to create virtual communities and networks and to share ideas and information (Carr & Hayes, 2015). Social media is internet-based by design and allows users to easily communicate electronically about other content, including videos and photos, as well as personal information. Through web-based software or web applications, users interact with social media via computers, tablets, or smartphones; they frequently use it for messaging. It serves as a term for media that is based on discussions and interactions between users on the internet (Fuchs, 2021).

Social Media Marketing

Applying unique marketing techniques to a variety of platforms to effectively and efficiently accomplish an organization's goals is known as social media marketing. Therefore, it is the use of strategic marketing tools to communicate with a target audience and enrich content in order to elicit the desired response. An organization can use social media marketing to provide its audience with helpful information and to gain a deeper understanding of their evolving needs in order to effect specific changes (Raudeliunien, Davidaviciene, Tvaronaviciene, & Jonuska, 2018).

Facebook marketing and consumer patronage

As of the third quarter of 2022, 2.96 billion people were using Facebook, making it the largest social media audience globally. The platform provides a vast range of targeting options (Statista, 2022). It is an online network that was started in 2004 by former Harvard student Mark Zuckerberg. With 157.2 million monthly visitors, it is the most exploited social network (Damnjanovic, et al., 2012). The user has to make a profile that is public to everyone who visits that page in order to gain access to this network. The "News" option allows users to view the relevant and popular activities of their friends and social parties that they are affiliated with, among other options.

When a user logs onto Facebook, their home page is called "News" (Djurica, Djurica, Maric, Jovanovic, 2013). Facebook provides advertisers with an extensive and competitive tariff system, based on a cost-per-click or cost-per-impression model. Many businesses are looking for ways to cut costs during the economic downturn, and social networking sites are a good way for them to market their brands and do so at a lower cost (Ramsaran-Fowdar et al. 2013).

TikTok marketing and Customer Patronage

According to the application store description, TikTok seems to be a place where users can express their creativity and watch amusing, short videos. TikTok caters to people who want to use their creative expression to entertain other people. TikTok is described by Yang and Zilberg (2020) as a creative expression platform. The COVID-19 pandemic has caused millions of people to be impacted by unfavorable events across the globe. Bates et al. (2020) claim that the isolated setting and social constraints made it possible for kids and teenagers to engage in organized physical activities, sports, and community-based physical activities. Johnson (2020) asserts that individuals now need to find new ways to amuse themselves and engage with others as a result of being forced into isolation.

With the help of the smartphone app Tiktok, countless users have been able to amuse themselves by making, viewing, and promoting businesses through brief video content. Publications have noticed and written about Tiktok users connecting over social media, which has led to Tiktok becoming a social media sensation. Khattab (2019) claims that the ability to share body-related images and videos puts pressure on each user to perform their body in front of other users and compare their results to those of other users in other shared images and videos.

Social Media Marketing

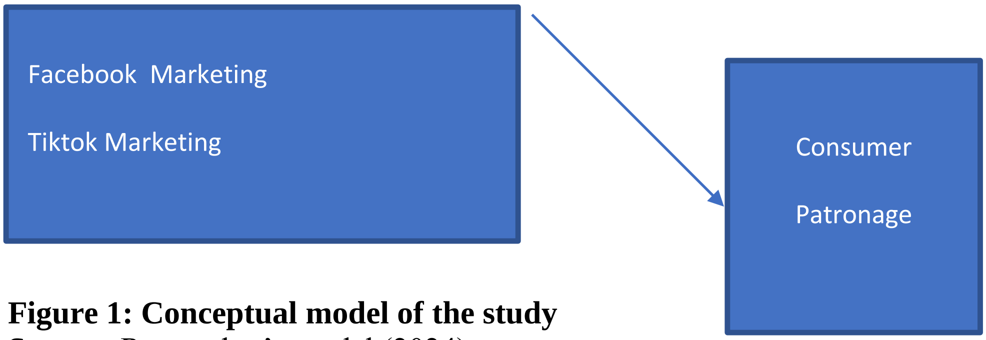

Figure 1: Conceptual model of the study

Source: Researcher's model (2024)

Empirical Review

Azer (2015). conducted an empirical study on Facebook's impact as a tool for advertising in Egypt, focusing on the transition from socializing to advertising. The purpose of this study is to determine whether Facebook is a useful advertising tool in Egypt and to provide marketers with actionable trends to help them fill in the formulaic gap. This work employed a quantitative approach based on an online survey of 400 Facebook users from the governorates of Alexandria and Cairo. Regression

analysis was used to test the proposed hypotheses, factor analysis was used to reduce the variables, and descriptive analysis was used to test the data in order to meet the research objectives.
The findings show that Facebook has an effect that stimulates consumption. The research only looks at two governorates in Egypt. The study's conclusions offer suggestions for how businesses can use Facebook communities to improve their advertising campaigns by making use of the consumption stimulation effect. None of the other studies that looked at Facebook were able to identify consumption stimulation as an effect of the platform, based on the reviewed literature.
The study conducted by Gesmundo, Jordan, Meridor, Muyot, Castano, and Bandojo (2022) examines TikTok as a platform for marketing campaigns, specifically focusing on the impact of brand awareness and recall on millennials' purchase intentions. The goal of this study was to ascertain how millennials' purchase intentions were impacted by brand awareness and brand recall. The analysis in this study was based on the Attention, Interest, Desire, and Action (AIDA) Model and Selective Exposure Theory (SET). The study used causal analysis that is descriptive. A sample of millennials who currently live in the National Capital Region (NCR) of the Philippines, ages 25 to 40, were surveyed for the study.

After using Google forms to distribute the survey, the researchers analyzed the data using PLS-SEM, frequency and percentage distribution, mean and standard deviation, and other statistical methods. According to this study, marketing campaigns have a greater impact on millennials' brand awareness than on their brand recall. Moreover, advertisements prompt them to make a purchase. In an effort to provide more information about TikTok and its marketing advantage, academic institutions, business owners, and marketing professionals and students will find this study to be a valuable resource.

Research design
The study adopted cross-sectional survey research design, which enable the collection of necessary primary data from target respondents at a single period of time for analysis and generation of findings.

Population of the study
The population included all customers and dealers of natural medicine products in Yenagoa, Bayelsa State. The actual numerical size of the population is however unknown.

Sample size determination
Since the population of the study is unknown as there are no available record of customers of natural medicine products in Bayelsa State. It is appropriate to use the Topman’s formular to determine the sample size.
The formular is expressed as

$$: n = Z^2 \cdot \frac{P.q}{(e)^2}$$

Where: n = Sample size
P = Probability of success
q = Probability of failure
e = Tolerable error margin
z = Confidence level

The Topman’s formular was deployed as follows:
Z = 1.96^2 (using the Z-score table)
P = 0.75
Q = 0.25
E = 0.05

$$n= 1.96^2 \frac{(080.x\ 0.20)}{0.05^2}$$

$$n = \frac{0.7203}{0.0025}$$

n= 300 respondents

Sampling Technique

The convenience sampling technique was adopted to select and administer questionnaires to natural medicine products customers to participate in the questionnaire survey. This sampling technique is appropriate for the study, because the population is infinite; and it enable the researcher to obtain required primary data from respondents who were easily accessible, readily available and willing to participate in the questionnaire survey, thereby minimizing time wastage in sampling.

Sources and method of data collection

Data for the execution of this study were obtained from primary source. The primary data were generated from respondents using the questionnaire method. The researcher administered copies of the questionnaire to customers who have been patronizing natural medicine products in one way or the other.

Instrument for data collection

The instrumentation deployed for this study is a well-designed 4-point likert scale questionnaire, otherwise known as "Social Media Marketing And Consumers Patronage Questionnaire (SMMCPQ). The questionnaire is divided into three sections (A, B and C). Section "A" was designed to collect demographic elements such as age, sex, education and frequency of patronage of natural medicine products. Section "B" contains twelve items four-point Likert scale designed to measure Facebook and TikTok. Each item requires the respondents to express their opinions under the options: - SA (Strongly Agreed), A (Agreed), D (Disagreed), SD (Strongly disagreed), and lastly Section "C" measured Customers Patronage and a three-item question was administered.

Validity of the instrument

The researcher adopted the content validation model to validate the survey instrument. Questionnaire copies were given to marketing and research experts at the Federal University, Otuoke, Bayelsa State to make professional inputs to ensure that the statements were in conformity with the research objectives.

Reliability of the instrument

Reliability of an instrument is an indication of the extent to which an instrument can produce consistent results over time. To determine the reliability of the instrument, test-retest option was employed, as well as the Cronbach Alpha technique. Pilot survey on 30 consumers was carried out and data were computed to obtain the alpha and standardized coefficient.

TABLE 1: Cronbach's coefficient Alpha reliability estimate for the study instrument (n=30)

S/n	**Variables**	**No of items**	**X**	**SD**	**Reliability**
1	Facebook marketing	3	14.13	2.67	0.757
2	TikTok marketing	3	5.53	4.93	0.744
3	Consumer Patronage	3	10.34	3.47	0.795

Source: SPSS, 2024

From Table 1, the result of the coefficient for each construct ranged from 0.7.44 and above. A construct is assumed to be reliable if its coefficient alpha (a) has a value of .744 and above. Such criteria ensured sufficient average inter-item correlation between the scales. It ensures the constructs remains internally consistent throughout the survey.

3.10 Model specification

The Linear regression model is shown below:

Y= bo + b1x1 +E ------- (1)

Y = bo + b2x2 + E ------- (2)

Where:

Y= Customer Patronage

b1= Facebook Marketing

b2= TikTok Marketing

(b1 and b2 are regression coefficients)

bo= Slope

E= Error

Data analysis technique

Data analysis was descriptive statistics indices for measurement; table of percentage of data which gives a better understanding of the movement of the flow of data and linear regression analysis to test the two hypotheses for the study. The analysis was computed electronically with the aid of Statistical Package for Social Science (SPSS) version 23.

Screening and Cleaning the Data

Before analyzing the data it is essential to check the data and set for errors. This is the very first stage known as pre-analysis stage and it involves screening and cleaning the data that comprising three basic levels: (1) checking for errors; (2) finding the errors in the data file; and (3) Correcting the error in the data file. All three steps have been taken for all variables (both categorical and continuous) employing frequency procedure. Furthermore, since missing observations can be problematic, and to avoid this problem, all the missing values have been replaced with estimates computed using “mean distribution method” as recommended by Keller and Warrack (2017). No outliers were identified on each individual item and on each construct as the sum of its items. Therefore, generating a clean, error-free data set.

Test of Hypotheses

Hypothesis one

Ho: Facebook (Meta) marketing does not affect consumer patronage of natural medicine products in Bayelsa state, Nigeria.

H1: Facebook (Meta) marketing affect consumer patronage of natural medicine products in Bayelsa state, Nigeria.

Table 2: Model summary showing the effect of Facebook on consumer patronage of natural medicine products

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456[a]	.208	.206	3.060

a. Predictors: (Constant), Facebook marketing

Source: SPSS,2024

Table 3:Analysis of Variance (ANOVA) result on the effect of Facebook on consumer patronage of natural medicine products

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	937.928	1	937.928	100.192	.000[b]
	Residual	3576.030	382	9.361		
	Total	4513.958	383			

a. Dependent Variable: Consumer Patronage
b. Predictors: (Constant), Facebook marketing
Source: SPSS,2024

Table 4: Coefficients table showing the effect of Facebook on consumer patronage of natural medicine products

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.668	.823		9.312	.000
	Facebook	.510	.051	.456	10.010	.000

a. Dependent Variable: Consumer Patronage
Source: SPSS,2024

Interpretation of result:
The regression tables (Table 2,3,and 4) show social media marketing dimension of Facebook being appraised for its ability to influence consumer patronage. Table 2, which is the model summary reveals that the relationship between both variables is 45.6 percent (as seen in the *R* column). The R^2 value (0.208) signifies that up to 20.8 percent of consumer patronage of natural medicine products is caused by social media marketing of Facebook when other variables are held constant. This relationship is strong and statistically significant. This indicates that the model has a good fit in estimating the population mean.

The F-test (100.192, $p<0.05$) of the relationship in Table 3 indicates that the overall prediction of the independent variable to the dependent variable is statistically significant, therefore, the regression model provides sufficient evidence to conclude that social media marketing dimension of Facebook significantly influences consumer patronage of natural medicine firms.
Table 4 is the coefficients table, which provides the necessary information on the capability of Facebook to predict consumer patronage of natural medicine firms. From the table above, it can be seen that, Facebook, significantly influence consumer patronage of natural medicine firms positively as its p value is less than 0.05 with positive t-test values. Additionally, the standardized beta coefficient column in Table 4 shows that with a beta coefficient of 0.456 (45.6 percent) Facebook makes the positive contribution to the model. The result of the regression requires that we reject the null hypothesis and accept the alternative.
Hypothesis Two
Ho: TikTok marketing does not affect consumer patronage of natural medicine products in Bayelsa state, Nigeria.
H1: TikTok marketing affect consumer patronage of natural medicine products in Bayelsa state, Nigeria.
Table 5: Model Summary table showing the effect of TikTok on consumer patronage of natural medicine products

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517[a]	.268	.266	2.942

a. Predictors: (Constant), TikTok marketing
Source: SPSS,2024

Table 6: Analysis of Variance (ANOVA) result on the effect of TikTok on consumer patronage of natural medicine products

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1207.942	1	1207.942	139.574	.000[b]
	Residual	3306.017	382	8.654		
	Total	4513.958	383			

a. Dependent Variable: Consumer Patronage
b. Predictors: (Constant), TikTok
Source: SPSS,2024

TABLE 7: Coefficients table showing the effect of TikTok on consumer patronage of natural medicine products

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.930	.846		7.014	.000
	TikTok	.494	.042	.517	11.814	.000

a. Dependent Variable: Consumer Patronage
Source: SPSS,2024

Interpretation of results:

The regression tables (Table 5, 6 and 7) show social media marketing dimension of TikTok marketing being appraised for its ability to influence consumer patronage of natural medicine firms. Table 5, which is the model summary reveals that the relationship between both variables is 51.7 percent (as seen in the *R* column). The R^2 value (0.268) signifies that up to 26.8 percent of consumer patronage of natural medicine firms is caused by the social media marketing dimension of TikTok when other variables are held constant. This relationship is strong and statistically significant. This indicates that the model has a good fit in estimating the population mean.

The F-test (139.574, $p<0.05$) of the relationship in Table 6 indicates that the overall prediction of the independent variable to the dependent variable is statistically significant, therefore, the regression model provides sufficient evidence to conclude that social media marketing dimension of TikTok marketing significantly influences consumer patronage of natural medicine firms. Table 7 is the coefficients table, which provides the necessary information on the capability of TikTok to predict consumer patronage of natural medicine firms. From the table above, it can be seen that, TikTok, significantly influences consumer patronage of natural medicine firm positively as its p value is less than 0.05 with positive t-test values. Additionally, the standardized beta coefficient column in Table 7 shows that with a beta coefficient of 0.517 (51.7 percent), TikTok marketing makes the positive contribution to the model. The result of the regression requires that we reject the null hypothesis and accept the alternative.

Discussion of findings

The test of hypothesis one revealed that Facebook marketing has a significant positive effect on consumer patronage of natural medicine firms in Bayelsa State. This finding is in consonance with Alzer (2015), who maintain that Facebook as an independent variable was found to be significant for advertisement purposes.

The test of hypothesis two revealed that TikTok marketing is effective on consumer patronage of natural medicine firms in Bayelsa State. This is supported by Gesmundo , Jordan , Meridor , Muyot ,Castano and Bandojo (2022), which revealed that, the use of TikTok as social media marketing can largely input brand awareness among millennials compared to enhancing their brand recall. Furthermore, social media marketing campaigns trigger their purchase intention. The implication is that, the use of Facebook and TikTok as a social media marketing campaign tools for natural medicine firms will be more effective and efficient, if it is carefully carried out considering element like privacy and security.

Summary of findings

After careful analyses, the following findings were made: 1. Facebook as a component of social media marketing has a significant positive effect on consumer patronage of natural medicine firms in Bayelsa State. 2. TikTok as a component of social media marketing has a significant positive effect on consumer patronage of natural medicine firms in Bayelsa State.

Conclusion

The relevance of social media marketing for economic progress is highly acknowledged in the world without uncertainty. This has been proven in various empirical evidences and in all fields of endeavors both locally and internationally. Likewise, this study examined social media marketing and consumer patronage of natural medicine products in Bayelsa State. To accomplish this purpose, primary data through questionnaire were obtained from natural medicine stores and their customers. The descriptive and inferential statistics were adopted to obtain and analyze data. Findings of the study revealed that Facebook and TikTok are significantly effective on consumer patronage of natural medicine products in Bayelsa State. The implication of this study is that the over dependence of orthodox medicine in Bayelsa State will be reduced to a barest minimum if the aforementioned social media platforms are adopted and used appropriately by natural medicine practitioners.

Recommendations

The following recommendations were made:

1. Facebook should be used for marketing communication campaign programmes in Bayelsa State by natural medicine practitioners and dealers. This will enhance the exposure of natural medicine benefits to real and potential consumers.
2. Natural medicine practitioners and dealers should also adopt TikTok social media platform to connect more closely with target audience for easy communication access and sensitization on the immense benefits of natural medicine products.

Suggestion(s) for further Studies

Studies should be carried out to check the effect of other social media marketing variables on consumer patronage of natural medicine products in other Local Government Areas in Nigeria and the World at large. Also, practitioners in natural medical fields should also endeavor to collaborate with marketing professionals for better understanding and application of marketing strategies.

Contribution to Knowledge

This study has contributed to knowledge by espousing and bringing to limelight the hidden treasure in marketing and its application in the field of natural medicine. Also, it has showed that marketing as a discipline and profession is not only for banks and hotels services, but also medical and health services.

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DIGITAL ASSET MAINTENANCE: A REQUISITE FOR ORGANIZATIONAL SUSTAINABILITY

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Abstract
The purpose of this paper is to provide understanding about the digital asset management and organizational sustainability as well as elaborate on the necessity of digital asset management for organizational sustainability. The baseline theory for this study was the Ross operating Business model, while the method used is the secondary methods where literatures were reviewed. The study elaborates on the necessity of digital asset management for organizational sustainability. The study also found that digital asset has a huge impact on organizations sustainability as it provides easy retrieval and access to digital files, collaboration among team members, brand image consistency and security of digital asset. The study concluded that digital asset management is a necessity for organization with digital asset that wish to last long in business. Based on the conclusion, the study suggested that organizations and business firms should adopt the use of digital asset management as it have a positively influence on organizational sustainability.

Keywords: digital asset management, digital asset maintenance, organization sustainability, operation business model, collaboration, brand consistency and asset security

Introduction

Companies are looking for ways to improve the sustainability of their operations. Sustainability is therefore every organization's top priority. Organizational sustainability has been described by Bestman et al. (2022) as the capacity of an organization to maintain a stable mode of operation over an extended period of time. Because it gives them a competitive edge over rivals, organizational sustainability is crucial for businesses that wish to endure over the long term. Firms are searching for strategies to stay in operation. In order to be in business for a long time, they are therefore implementing sustainable practices or approaches to their operations. According to White (2009), an organization may choose to concentrate on the social or environmental components of sustainability, depending on the circumstances. Digital asset management (DAM) is the method via which an organization controls its digital media (Beyer, 2002; Chudnow, 2002).
The methods and equipment used to arrange, store, retrieve, and distribute digital information are collectively referred to as digital asset management, or DAM. Another way to think of DAM is as a central repository for organizing, sharing, and storing digital materials. Digital assets are digitally stored materials including images, music, documents, movies, and other types of information that are valuable either now or in the future or add value to an organization.

The use of digital tools that can assist firms in achieving organizational sustainability is a result of technological advancement. The volume of business data and visual material that is being produced has demonstrated the benefits of digital asset management (DAM) and how important it is for businesses to use DAM to help them work more productively and efficiently toward their objectives. Digital asset management enhances teamwork and asset discoverability, which is crucial for business. Applications for digital asset management are automated systems and related procedures that businesses use to classify, search for, and recover digital assets in addition to managing digital data.

Usage tracking, asset-centric workflow, automated system management, and the enforcement of the rights and permissions linked to each asset are crucial administrative features of a digital asset management system (Bowen, 2002).
The implementation of digital asset management is critical to the sustainability of any company. Digital asset management includes the technology required to support the processes involved in using an organization's digital assets effectively, hence, it is a crucial component of businesses that are implementing it to be more effective in carrying out their responsibilities and to gain a competitive advantage in the market. Because it can impact an organization's final success. Thus, digital asset management is therefore necessary for organizational sustainability.

This paper aim to provide understanding of the concept of digital asset management as a necessity for organizational sustainability. Studies have explored the concept of digital asset management. But to the best of my knowledge studies on digital asset management as a requisite for organizational sustainability is relatively scarce. Thus, this paper aims to add to the body of knowledge in this regard.

Statement of Problem

Organizations in Nigeria's dynamic and rising economy must contend with sustainability issues, which has put strain on businesses and their digital assets. Digital assets are always being worked with by organizations since they are necessary for them to compete favorably, add value, and please their clients. Therefore, it is imperative that digital assets be managed. A company's ability to remain sustainable may be hampered by inadequate or nonexistent digital asset management, which can lead to a variety of problems like inconsistent brand image, copyright violations, time wastage, reduced workflow, increased costs, security risks, poor decision-making, and restricted cooperation. Therefore, digital asset management is essential to the survival of the firm in this dynamic market.

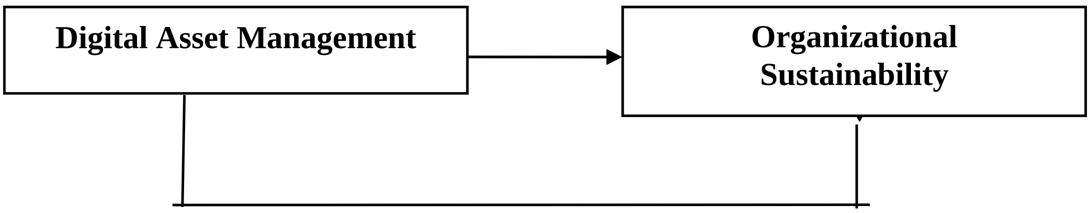

Fig. 1.1: *Conceptual framework of digital asset management and organizational sustainability*
Source*: *Research Desk, (2024).

Theoretical Foundation

The theoretical foundation of this study is hinged on the Ross' Business Operating Model. The theory was propounded by Jeanne Ross (2005), According to the theory "organizations should define an operating model to make information technology a proactive rather than reactive force in creating business value." The idea distinguished between four different Operating Models according to the degree of integration and standardization. Instead of standardizing and integrating actual activities, standardization and integration referred to the requirements of information technology for operations. "The operating model describes processes, and how the processes and systems are organize to execute task," according to Cooper, Dihiri, and Root (2012). The operational design that enables the company plan to be implemented is known as an operating model. It serves as a guide for how an organization works across several areas to accomplish its goals (SOMS 2017). As a result, the concept of an operating model is a theory developed in response to the requirement that companies have to comprehend how they implement their strategy in practice. According to Ross (2005), she suggested that organizations should have an IT focus while thinking about operating models.

DIGITAL ASSET MANAGEMENT

Digital asset management (DAM) is the method by which an organization controls its digital media (Beyer, 2002; Chudnow, 2002). A system that makes it easier to preserve, organize, manage, produce, and distribute digital assets is referred to as digital asset management (DAM) (Regli, 2016). A system called digital asset management arranges, shares, and keeps digital assets all in one place. Digital assets are digitally stored materials like documents, music, films, and other media that enhance an organization's value over the long run or provide instant benefit. Organizations are now adopting the usage of digital asset management (DAM) since it offers more benefits than only storing and exchanging digital content. Previously, organizations only used DAM for these purposes. Businesses are using digital asset management to take control of their digital assets because it offers security and allows them to define rights and restrictions for access and use. Assisting an organization in searching and retrieving digital assets from a database or repository is the aim of digital asset management. The process flow is rather simple; team members may transmit digital files easily from wherever in the organization to assist them reach their goals, and organizations can easily access the information they need at any time. The development of digital asset management has been affected by various fields of work (Boiko, 2002). Therefore, by centrally storing a significant volume of digital content, DAM is an organization's solution for content sharing and storage, freeing up team members and maintaining materials' relevance. A central repository serves as the foundation for the digital asset management system, making it easier for organizations to store, retrieve, use, and repurpose digital assets. Furthermore, digital asset management facilitates guaranteeing that information for digital assets is easily accessible. Applications for digital asset management (DAM) classify, find, and access digital assets (Franziska, Shellee, Howard & Levy 2005). According to Leland (2000), organizations that implement digital asset management (DAM) benefit from its efficient production cycle, cost savings, reduced time spent looking for lost or mislabeled digital files, and increased organizational standardization through consistent image creation, quality improvement, tracking of relationships and use in product groups, and effective redistribution of intellectual property.

Bowen (2002) states that asset-centric workflow, automated system management, usage tracking, and the enforcement of licenses and rights linked to individual assets are essential administrative features of digital asset management systems. A digital asset management system incorporates the technology required to support the procedures involved in effectively utilizing digital assets inside an organization. One feature of this is the capacity to ingest digital assets automatically into a central repository, from which they may be quickly and readily accessed, altered, and dispersed as needed. The upkeep of digital asset systems is included in digital asset management. Digital asset maintenance is widely described as "any system that monitors and manages digital assets of an entity or group to ensure that these assets are able to complete their lifecycle" by Vanier (2001). It can also mean safeguarding the intangible assets of a company, such goodwill, financial resources, and human capital in general intellectual property. Digital asset maintenance is a procedure that enables businesses of all kinds effectively use software to maintain their rich media assets. Maintenance of digital assets can be carried out on site, in the cloud, or by combining the two.

According to Johnson (2012), digital asset maintenance is a technique for controlling the use of digital assets to reduce operating costs while maintaining the required service throughout the asset's life cycle. One of the most important aspects of digital asset management is digital asset upkeep. The primary goals of digital asset maintenance are to establish a safe working environment and guarantee seamless daily operations. In addition to ensuring that businesses get the most out of the assets they invest in, digital asset maintenance will also reduce downtime brought on by inefficiencies or malfunctions, which can result in large losses in output from operations. Any company's digital asset has to receive the efficient maintenance care required for it to continue operating (Omotehinshe, 2015). As a result, the asset will last longer, be more readily available, and continue to operate as intended. Products with dubious quality may result from misaligned or faulty digital assets. A well-managed digital asset system maximizes daily production and reduces expensive downtime by operating effectively and having a lower failure rate. Maintaining digital assets involves keeping track of previous maintenance, planning for upcoming maintenance, carrying out safety inspections, monitoring incident or hazard reports involving digital asset systems, and taking the necessary corrective and preventive action when and when it's needed. Every company that owns digital assets has to deal with the consequences of day-to-day operations.

Organizational Sustainability

Bestman et al. (2022), organizational sustainability refers to an organization's capacity to maintain a consistent mode of operation over an extended period of time. Sustainability was described by Colbert and Kurucz (2007) as the ability to "keep the business going." Moreover, sustainability is defined as "achieving success today without compromising the needs of the future" by Boudreau and Ramstad (2005). Implementing corporate strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining, and enhancing the human and natural resources that will be needed in the future" is the definition of organizational sustainability. Varsei et al. (2014), organizational sustainability is the process of incorporating social justice, economic efficiency, and environmental responsibility into the way that industries operate. "The principle of enhancing the societal, environmental, and economic systems within which a business operates" is the essence of sustainability in an organizational context, according to the Chartered Institute of Personnel and Development (CIPD, 2012). This presents the idea of an organization aiming for sustainability having a three-way emphasis. Colbert and Kurucz's (2007) assertion that sustainability "implies a simultaneous focus on economic, social, and environmental performance" reflects this as well. A further point of emphasis in the CIPD (2012) is organizational culture, which is defined as "the creation of meaningful values that shape strategic decision-making and building a culture that reinforces desirable behavior." According to Colbert and Kurucz (2007), businesses are increasingly trying to gain recognition on a national and worldwide scale for their sustainability initiatives. One way to do this is by placing highly on one of the many "sustainability indices" that are becoming available, such the Dow Jones Sustainability index.

Digital Asset Management A Necessity for Organizational Sustainability

Digital asset management is a necessity for organizations that wish to last longer in business or want to outperform their rivals or stay in business longer must implement digital asset management. The central administration and structuring of business-related data is the fundamental purpose of a DAM system. A systematic classification of all assets that is updated continuously is one of the benefits of using an effective digital asset management system in a business. Digital asset management enables the instantaneous access of all authorized personnel to company-related content that is stored. These digital assets consist of documents or audio files in addition to pictures and videos. Tansley et al. (2005) noted that one of the most difficult aspects of file searching is locating the right file because there may be a large number of them. However, by utilizing DAM systems, staff members can efficiently and independently access and use assets. According to Love and Matthews (2019), file management is the first step toward the advantages of digital asset management, as it saves employees time and facilitates fast file access. When files are correctly inserted and there are established guidelines for system usage, employees can save time with DAM, according to Krüger, Stieglitz, and Potthof (2012). Employees will be free to concentrate on the finished product as a result of the significant reduction in time lost on the search process (Krüger, Stieglitz, and Potthof, 2012).

A strong brand messaging is a major factor in both positive consumer experiences and financial success. Maintaining brand coherence is essential for encouraging purchases. Organizations using digital assets are assisted by the DAM system in maintaining the uniformity of product-related material across various marketing channels. Using relevant material and accurate, current performance data are especially crucial. Any company's brand, which presents a professional image, logos, and images, is impacted by the crucial function that DAM plays in coordination and brand image (Reichert, 2010). The foundation of a consistent brand image and communication is the meticulous management of all digital assets and their upkeep. When uploading any image from a business's system, DAM gives complete copyright information (Fisher, 2006). As a result, businesses can maintain their images and movies in compliance with digital rights management laws by using Digital Asset Management assets (DRM).

Within organizations, the use of digital asset management (DAM) systems fosters and facilitates cooperation among creative teams. By promoting communication amongst all departments within a single system, DAM enhances collaboration and facilitates better teamwork. According to McIntyre (2010), digital asset management makes it simple for staff members to share digital assets and access files and comments, enabling teams from different departments to finish tasks on time. It also makes it possible for team members to share content in a more formal manner. The ability to manage digital rights is one of the main ways that digital asset management helps businesses. Precise security features found in the majority of DAM systems can prevent unauthorised access and brand asset theft. When uploading any photograph from a company's system, digital asset management gives you access to all copyright information (Fisher, 2006). As a result, businesses can maintain their images and movies in compliance with digital rights management laws by using Digital Asset Management assets (DRM). Frequent software maintenance guarantees that the DAM solution is protecting your priceless resources and that the software is up to date. When you use a DAM system, all of your digital assets are automatically protected and kept in a central location, allowing you to restrict access to only specific individuals. Users have to go through a difficult login procedure that verifies their identity as an authorized user in order to get access. Organizations and staff members will only have access to the files they require in this manner.

Organizations can give their digital assets structure and make them easily searchable by tagging them with keywords or metadata through the use of an efficient digital asset management (DAM) system. According to Hurst (2010), metadata is the description of a digital asset object (picture, graphic, PDF, video, etc.) using terms that are associated with that thing. Information like the file name, the creation date, a description, or keywords may be included in this association (Hurst, 2010). This Meta data improves organizational workflow.

Methodology

The method used in this paper is the secondary data collection method from the relevant sources of research, scholarly works, articles and government sources. This information was intensively reviewed to gather the needed information that will help to identify and provide solution to the problems of the study in order to achieve sustainability in organizations.

Summary and Conclusion

Businesses are looking for strategies to endure and continue operating. The use of digital tools that can assist firms in achieving organizational sustainability is a result of technological advancement. With the proliferation of visual content and business information, digital asset management has become an indispensable organizational tool. A review of the literature demonstrates that digital asset management is crucial for businesses looking to run efficiently because it promotes the use of digital asset systems for soft-proofing, workflow control, asset retrieval and repurposing ease, and the potential to publish to multiple media. Thus, digital asset management is a necessity for organization to achieve organizational sustainability as organizations use it for storing their digital asset and several activities that makes organization efficient.

Recommendations

- To attain organizational efficiency, businesses should make the most of their utilization of digital asset management technologies. This is crucial since the evaluation of the body of existing research indicates that the implementation of digital asset management leads to time savings in asset searches and the reuse of produced or acquired media (for increased profitability).

- To improve performance, organizations should promote the adoption of digital asset management as a component of their business operating model.

- Lastly, instead of using a collection of technologies, management should utilize digital asset management since it is a single solution that centralizes all assets.

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MARKET RISK AND STOCK PRICES OF QUOTED CONSUMER GOODS MANUFACTURING FIRMS IN NIGERIA

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Abstract
This study examined the effect of market risk on the stock prices of quoted consumer goods manufacturing firms in Nigeria. The purpose of the study was to determine the extent to which market risk affect the stock prices of quoted firms in Nigeria stock market. Panel data were sourced from financial statement of the quoted firms while time series data were sourced from Central Bank of Nigeria Statistical Bulletin. Stock prices of the quoted firms were modeled as the function of interest rate risk, exchange rate risk, equity price risk and commodity price risk. Panel data ordinary least square was used as data analysis methods. The study found that 77 percent variation in share prices of the quoted consumer goods manufacturing firms can be traced to variation in market risk as formulated in the regression model. The f-statistic and probability found that the regression model is significant while the Durbin Watson statistic of 0.692003 proved the presence of serial autocorrelation. The beta coefficient of the variables proved all the independent variables have negative effect on the share prices of the quoted consumer goods manufacturing firms except exchange rate risk. From the findings, the study concludes significant relationship between market risk and share prices of the quoted consumer goods manufacturing firms. It therefore recommends that the need for management of consumer goods manufacturing firms and manufacturing firms to formulate strategies of managing systemic risk and the implementation should not just be formulated but strategic and tactical measures should be put in place to absorb, retain and transfer systemic risk. Systemic risk management should be considered as part of strategic plans which need to be reviewed on a more frequent basis and macroeconomics policies should directed towards stabilizing Nigerian exchange rate to avoid depreciating naira exchange rate against key currencies that exposes the firms to exchange rate risk.

Introduction

Business entities in Nigerian economy are surrounded by uncertainties (risk) in their operations which they must surmount before they can survive or become successful. Kanchu and Kumar (2013) see risk as anything limiting the achievement of a certain predefined objectives. Some of those risks include financial risks, operating risks and market risks. Market risks being the subject of this study is however, the risk of an entity resulting from movements in market prices which consists changes in interest rates, foreign exchange rates, equity and commodity prices (Muriithi, Muturi &Waweru, 2016; Ekinci, 2016). The degree of deepeness of market risk as it affects performance of business organisations threw up a rhetorical question on how the risk operates. The risk can trigger off losses quickly in a volatile market condition.

The operation of manufacturing industry in Nigeria is not in isolation of exposure to market risk. This industry is important as Nigeria is one of the top oil and gas producers in Africa and has the continent's largest natural gas reserves. The manufacturing industry being the mainstay of Nigerian economy plays a vital role in shaping the economic and political destiny of the nation (Odularu, 2008). Nigeria as the economic driving force in West Africa is because of its richness in fossil fuels that has the major influence in its revenue generation. Nigeria neglected its strong agricultural produce sequel to the oil booms in the 1970's. By the year 2000, manufacturing contributed about 43% revenue to federal government and accounted for 48% of federal government's export earnings (Odularu, 2008). The main premise in finance is that there is a connection between risk and return. Higher risk is assumed to lead to higher return on stocks with rationale pricing of stocks, highly profitable firms are riskier than average (Fama &French, 2015).

Elmer (2014) defined market risk as the risk to earnings arising from changes in underlying economic factors such as interest rates or exchange rates, or from fluctuations in bond, equity or commodity prices. Banks are subject to market risk in both the management of their balance sheets and in their trading operations. Market risk is generally considered as the risk that the value of a portfolio, either an investment portfolio or a trading portfolio, will decrease due to the change in value of the market risk factors. There are three common market risk factors to banks and these are liquidity, interest rates and foreign exchange rates. Market Risk Management provides a comprehensive framework for measuring, monitoring and managing liquidity, interest rate, foreign exchange and equity as well as commodity price risk of a bank that needs to be closely integrated with the bank's business strategy. Market risk is the risk that a firm will incur losses because of a change in the price of assets held resulting from changes in interest rate, securities, commodity prices, foreign exchange rate and other market risk factors. Ekinci (2016) upholds that market risk is the risk of losses in liquid portfolio arising from the movements in market prices and consisting of interest rate, foreign currency and equity and commodity price risks. In the words of Ekinci (2016) and Namasake (2016), market risk exposure is more volatile than credit risk exposure because of rapid changes in market condition that can cause severe financial losses and possible collapse.

Prior to the deregulation of stock market in Nigeria, stock prices of newly issued and existing stocks were regulated by the regulatory agent of the market, the Nigerian Securities and Exchange Commission, without reference to internal factors such as financial information that can affect stock prices of listed firms. Stock prices in the Nigerian stock Exchange moves up and down in response to news and information expected about the particular stock in the market. The news and information cause buyers and sellers of common stocks to take buying and selling decisions which generate market activities that affect market value (Aflbi and Dada, 2014). Stock price constitute the value of a firm (Pandey, 2005).

However, one of the most controversial points among scholars in behavioral finance is the factors that determine stock value. There has been aged long point of departure among financial economists and behavioral finance scholars on factors that determine stock market return. There are five schools of thought on stock price behaviour. These are the fundamentalist schools, the technical school, the random walk hypothesis school, the Bahavioural School of finance and macro-economic hypothesis school.

The fundamentalist believe that the value of a corporation's stock is determined by expectations regarding future earnings and by the rate at which those earnings are discounted. The fundamentalists apply present value principles to the valuation of corporate stock, using dividends, earnings, assets and interest rate to establish the price of stock. The technical school opposes the fundamentalists' arguments, and claims that stock price behaviour can be predicted by the use of financial or economic data. They submit that stock prices tend to follow definite pattern and each price is influenced by preceding prices, and that successive prices depend on each other. According to Smith (1990), technical analysts engage themselves in studying changes in market prices, the volume of trading and investors' attitude. Both the "technical" and "fundamental" analyses have been challenged by scholars who subscribe to the random-walk hypothesis, which sees stock price movements in terms of a probability distribution of different possible outcome. The random-walk hypothesis is based on efficient market assumption that investors adjust security rapidly to reflect the effect of new information. Believers in the efficient capital market hypothesis argue that stock prices are essentially random and therefore, there is no chance for profitable speculation in the stock market. An interesting feature of random walk is the persistence of random shocks.

The first behavioural condition is irrational behaviour. It holds that investors behave irrationally when they do not correctly process all the available information while forming their expectations of a company's future performance. The second is systematic patterns of behaviour, which hold that even if individual investors decided to buy or sell without consulting economic fundamentals, the impact on share prices would be limited. Limits to arbitrage in financial markets ascertain that when investors assume that a company's recent strong performance alone is an indication of future performance; they may start bidding for shares and drive up the price. Some investors might expect a company that surprises the market in one quarter to go on exceeding expectations (Business Day, 2009). While the above theories are very appealing, they failed to explain financial market of the emerging countries like Nigeria. Studies on arbitrage pricing model has focused in testing the validity of the model in the emerging financial market like Nigeria (Monogbe, Edori Inivia Semion & Iki, 2016, Okorafor, 2008 and Connor and Sehgal, 2001). This study examined the effect of market risk on the stock prices of quoted consumer goods manufacturing firms in Nigeria.

Literature Review

Market Risk

Market Risk Market risk is the risk that a firm will incur losses because of a change in the price of assets held resulting from changes in interest rate, securities, commodity prices, foreign exchange rate and other market risk factors. Ekinci (2016) upholds that market risk is the risk of losses in liquid portfolio arising from the movements in market prices and consisting of interest rate, foreign currency, and equity and commodity price risks. In the words of Ekinci (2016) and Namasake (2016), market risk exposure is more volatile than credit risk exposure because of rapid changes in market condition that can cause severe financial losses and possible collapse. Interest Rate Changes Interest rate is the price charges placed for the use of money, which is usually expressed as an annual percentage of the principal.

The Central Bank of Nigeria (CBN) regulates the Monetary Policy Rate (MPR), formerly minimum Rediscount Rate (MRR) which is official interest rate that anchors all other interest rate in the money market and economy (Ogunbiyi & Ihejirika, 2014). Similarly Corb (2012) insists that interest rate is an economic tool used by CBN to control inflation and boost economic development. Market risk is a rather complex and multi-dimensional phenomenon that in turn determines the expediency of its analysis from various perspectives and hence the possibility of the existence of many definitions in sense of categories. Double aspect of macroeconomic phenomena, competition and monopoly, innovation and conservatism, entrepreneurship and routinism, professionalism and incompetence, greed for financial (and not only) gain with ignoring moral and ethical principles, leaves its stamp on the essence and occurrence of macroeconomic risks. While mitigating macroeconomic risks, collateral systems become more and more meaningful. These systems represent themselves rules and procedure for selection, evaluation and monitoring, movement, and usage of all-kind assets in order to mitigate macroeconomic risks.

Commodity Price Change

Commodities are reasonably interchangeable goods or materials bought and sold freely as an article of commerce which includes agricultural products, fuels and metals that are traded in bulk on a commodity exchange or spot market (businessdictionary.com). Ildirar and Iscan (2015) opine that commodities consist of the basic materials and natural resources used in virtually all products and manufacturing process, notably among them are oil, wheat, iron and robber that are the main components of many common goods in our lives. Farooki and Kaplinsky (2012) classified commodities into industrial crops (Timber), Fisheries, Cereals, Beverages, Livestock, Precious metals, Coal and Petroleum products. The price changes of the most important commodities in the worlds commodity exchange markets influence the price of local producers or imported productions (Algita & Indre, 2014).

Exchange rate risk

The exchange rate is the price of one country's currency expressed in terms of another country's currency. Exchange rate has been noted to be the product of interaction between the demand for and supply of foreign exchange (Ezejelue, 2008; Enekwe, Ordu & Nwoha, 2013), and in effect, Oladipupo and Onotaniyohuwo (2011) opine that exchange rate movements have ripple effects on the economic activities of a nation. Inevitably, exchange rate serves as the lubricating oil in the international transactions and in that case companies as well as nations get affected either favourably or unfavourably by the swings or fluctuations in exchange rate (Enekwe, Ordu & Nwoha, 2013). Agubata and Odubuasi (2018) found exchange rate to have positive effect on performance of manufacturing companies in Nigeria.

Equity Price Change

Equity price is the amount of money which one may buy or sell a share of common stock in the stock market. Hence change in equity price is the variations that occur on the price of share throughout the day especially when demand and supply varies. Mustafa and Nishat (2006) posit that market equity price is volatile and sensitive in the sense that changes occur rapidly due to political upheavals. Musyoki (2011) pointed out that asides profitability indices, other variables that affect share price includes interest rates, inflation rate, government regulation and investors behaviour.

Stock Price

Yunita (2018) suggested that stock prices are stock prices that occur on the stock market at a certain time that will be determined by market participants and determined by the demand and supply of shares concerned in the capital market. Then according Hasan, Kamil, Mustafa and Baten (2013) the stock price is the price formed in the market whose amount is influenced by the law of demand and supply. Stock prices are divided into four types, namely nominal price, initial price, opening price, market price) and closing price the nominal price of the stock is the price stated on the issued share. The initial price of a stock is the price that applies to investors who buy shares at the time of the public offering. The stock opening price is the stock price that applies when the stock market opens that day. The stock market price is the stock price when traded on a stock exchange determined by demand and supply. The closing price is the stock market price that is currently in effect when the stock exchange closes for the day.

Financial asset pricing models are constantly tested for validity and, consequently, extensions of these models are developed in order to meet the needs found during the investigations. The described relationship between corporate governance and stock returns, as well as stock prices, are relevant to the investigation of corporate governance as an explained factor in financial assets pricing models. **Azevedo et al. (2016)** added to **Fama and French's (1993)** CAPM three-factors an enterprise sustainability factor, which was presented as an important explainer in asset pricing models. Likewise, this research intends to investigate the relationship between enterprise sustainability and return, with a focus on binomial corporate governance and return. Considering asset pricing, **Sharpe (1964), Lintner (1965)** and **Mossin (1966)** proposed the Capital Asset Pricing Model, which relates the return on an asset, discounted at a risk-free rate, and is explained by the return on the market with the same discount rate. This model has some limitations, which generate criticism by professional and academic experts, as there are variables that affect the stock price that were not included in the traditional model.

The Capital Asset Pricing Model

The Capital Asset Pricing Model is a model for pricing an individual security or a portfolio. The Capital Asset Pricing Model model was developed independently by William Sharpe (1964), and

Parallel work was performed by Lintner (1965) and Mossin (1966) these model marks the birth of asset pricing theory. The CAPM suggests that the only variables that we need in calculating the expected return on security are: the risk-free rate (a constant), the expected excess return on the market, and the security's beta (a constant). The Capital Asset Pricing Model model is attractive because of its effectively simple logic and intuitively pleasing predictions relating to how it measures risk and the relation between expected return and risk. Unfortunately, the Capital Asset Pricing Model simplicity causes the empirical record of model to be poor, poor enough to invalidate the method used in the application of the model. The models empirical problems may reflect true failings or they may also be due to the shortcomings of the empirical tests, most notably, poor proxies for the market portfolio of invested wealth, which plays a crucial role in the models predictions.

Derivation of the Capital Asset Pricing Model

The Capital Asset Pricing Model is a simple linear model that is expressed in terms of expected return and expected risk. The model states that the equilibrium returns on all risky assets are a function of their covariance with the market portfolio. Under the assumptions of the Capital Asset Pricing Model, if a risk-free asset exists, every investor's optimal portfolio will be formed from a combination of the market portfolio and the risk-free asset. The precise combination of the market portfolio and the risk-free asset depends on the degree of investors risk aversion. Since investors can choose the combination of the market portfolio and the risk-free asset, then the equation of the relationship connecting a risk-free asset and a risky portfolio is:

$$E(Ri) = R\,f + \frac{E(Rm) - Rf}{\sigma 2m}\,\sigma im \qquad (1)$$

Where;

E (Ri): Expected return on i^{th} portfolio.

R f: Return on the risk free asset

E (Rm) : Expected return on market portfolio

σim : The covariance between asset *i* and the market portfolio

σ2 m: The variance of the market portfolio

Based on the equation (3) the original CAPM equation can be derived as follows:

$$E(Ri) = R\,f + [\,E(Rm) - R\,f]\,\beta i \qquad (2)$$

Equation 4 is known as Capital Asset Pricing Model and it could be shown graphically as the security market line (SML) which means the SML fundamentally graphs the results from the capital asset pricing model (CAPM) formula. The *x*-axis represents the risk (beta), and the *y*-axis represents the expected return. The market risk premium is determined from the slope of the SML. The SML model states that stocks expected return is equal to the risk-free rate plus a risk premium obtained by the price of risk multiplied by the quantity of risk. In a well-functioning market nobody will hold a security that offers an expected risk premium of less than [E (Rm)-R f] i.

If we think E (Rm) – Rf as the market price of risk for all efficient portfolios, than, it represents the extra return that can be gained by increasing the level of risk on an efficient portfolio by one unit. The quantity of risk is often called beta, and it is the contribution of asset *i* to the risk of the market portfolio.

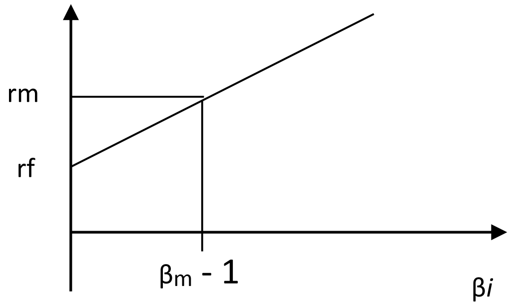

Figure 2.1: Security Market Line

The relationship between the single assets and the risk of the entire market portfolio can be expressed as β-coefficient. This coefficient corresponds to the ratio of the covariance of the market and the single asset to the variance of the market portfolio.

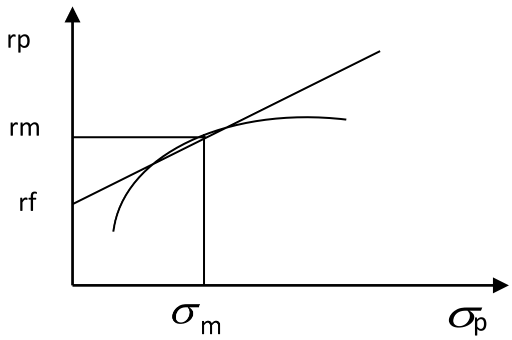

Figure 2.2: a broader look at the capital market line

The slope of the CML line is $\sigma = \frac{\bar{r} - rf}{\bar{r}M - rf}\sigma_{\mathrm{M}}$. The intercept of a straight line is the risk free rate, which means the risk and return of the asset portfolio when all the assets in the portfolio are invested in the riskless asset, i$Y = \frac{1}{N}\sum_{k=1}^{N}(r_{S\&Pk} - \hat{\bar{r}}_{S\&P})\ (r_{S\&Pk} - \hat{\bar{T}}A)$.

The point M on the capital market line (CML) is located at the effective frontier (EF), which means that when all funds are invested in risky assets, the corresponding point of is the market portfolio. On the capital market line, all points represent a linear combination of a risk free asset and a market portfolio M. Among them, the line rf-M represents risk-free asset and market portfolio changes between 0 and 1. On the line extending from point M to the upper right, all the points represent the investment in riskless assets is negative, while the market portfolio M investment ratio is greater than 1. The weight of risk-free assets is negative, indicating that someone lend funds at risk-free interest and fully invest in risky assets.

Assumption of Capital Asset Pricing Model

To understand how capital assets are priced, a model needs to be established, which is a theory. In order to make the model simple and straightforward, the model builder must refine the very real situation and concentrate on the most important elements. This goal can be achieved by making certain assumptions about the actual situation. In order to successfully build a model, a certain degree of abstraction is required and the assumptions need to be simplified (Bodie, 2009).

Any economic model is a simplification of complex economic issues, and Capital Asset Pricing Model is no exception. The core assumption of Capital Asset Pricing Model is to treat all investors in the securities market as individuals with the same initial preferences, and the capital asset pricing model develops on the basis of the Markowitz (1952) mean-variance principle. Capital Asset Pricing Model also inherits the assumptions of securities portfolio theory. The criteria for setting hypotheses are: The assumptions made should be sufficiently simple, so that we have enough freedom to abstract our problems and achieve the purpose of modelling. With regard to the hypothesis of a theory, our concern is not whether they completely describe the reality, because no model can fully characterize the reality, the concerned that they are fully close to what we want to achieve.

The Capital Asset Pricing Model assumptions are as follows (Bodie, 2009).

1. Investors evaluate the pros and cons of this portfolio through its expected rate of return and risk over a period of time.
2. Investors will never be satisfied, so when faced with the other two options of the same conditions, they will choose the one with the higher expected rate of return.
3. Investors are risk averse, so when faced with two other options that are the same, they will choose the one with the smaller standard deviation.
4. Every asset is infinitely divisible, which means investors could buy a portion of a share. 5. Investors can lend or borrow funds at a risk-free rate.
6. Tax and transaction costs are negligible.
7. All investors have the same investment period.
8. The risk-free rate is the same for all investors 9. For all investors, the information is free and immediately available
10. Investors have the same expectation that they have the same estimation of expected return, standard deviation and covariance between securities.

All investors are rationally risk-averse individuals whose aim is to maximize the expected utility of their end of period wealth. Therefore, all investors operate on a common single-period planning horizon. All investors are price-takers; so that, no investor can influence the market price by the scale of his or her own transactions.

Asset markets are frictionless and information is freely and simultaneously available to all investor. All investors have homogeneous expectations about asset returns, this mean that all investors arrive at similar assessments of the probability distribution of returns expected from traded securities. This says that investors will not be trying to beat the market by actively managing their portfolios Distributions of expected returns are normal. All securities are highly divisible, can be traded in small packages. All investors can lend or borrow unlimited amounts of funds at a rate of interest equal to the rate of risk-free securities. Investors pay no taxes on returns and there are no transaction costs entailed in trading securities, so expected return is only related to risk.

Let (σ_M, $\bar{r}_M$) denote the point corresponding to the market portfolio M. All portfolios chosen by a rational investor will have a point ($\sigma, \bar{r}$) that lies on the so-called capital market line

$$\bar{r} = rf + \frac{\bar{r}M - T_f}{\sigma_M}\sigma, \qquad (3)$$

Implications of the Capital Asset Pricing Model

The main implication of Capital Asset Pricing Model (CAPM) is that the expected rate of return on an asset is linked to a value of β that measures the risk of that asset. The return on risky assets equals the sum of risk-free returns and risk offsets, and high yielding assets must be accompanied by high risk. The size of the systematic risk can be expressed by the systematic risk measure coefficient. The expected return rate of a stock is directly proportional to the β coefficient. It is the first time that capital asset pricing model proves the linear relationship between risk and return from a mathematical point of view. As systemic risk cannot be dispersed by constructing an asset portfolio, to attract investors to invest, investors must be given the appropriate risk compensation with the corresponding rate of return (Zhou & Liu, 2018).

Since non-systemic risk can be dispersed, you can avoid the risk of a particular company by constructing a portfolio. The CAPM theory is the core content of the modern financial theory. Its role is to consider the rationality of the prices of different listed securities by predicting the quantitative relationship between the expected return and the standard deviation of the securities. This can help prepare the listed securities for pricing, and can estimate changes in various macroeconomic variables affect the price of securities. Capital Asset Pricing Model theoretically states that in an efficient portfolio, the β coefficient describes the systematic risk of any asset, and any other factors that affect the yield on the securities have been included in the β coefficient (Zhou & Liu, 2018). Capital Asset Pricing Model deriving the relationship between the return on securities and the risk of securities with a scientific rigorous reasoning method is of great significance to the investment management industry.

If the stock market line can accurately predict the return on securities, securities analysts can use it to conduct investment analysis and make the right decisions. The Capital Asset Pricing Model can also be used for capital budgeting, calculating the required return on an investment project and using it to measure whether a new investment project is worth investing. With the continuous development of academic research, the capital asset pricing model has prevailed in the financial field for over a decade, and the controversy over its effectiveness has been endless. In any case, this reflects the significant impact of the Capital Asset Pricing Model in academia. After long-term repeated argumentation and test by academics and real investors, this theory has been widely recognized in the investment management industry (Zhou & Liu, 2018). At present, many large fund companies in the world use negative investment management methods to imitate the market portfolio to build index funds, which is based on the Capital Asset Pricing Model. In addition, the market portfolio yield is also seen as a performance evaluation standard for active portfolio management.

Many industrial companies also use the theory of capital asset pricing for decision-making analysis of investment projects, management of investment income target and so on. The basic idea of Capital Asset Pricing Model is that all investors are price receivers, and under a given price system, they decide on their own needs for each type of securities. Since this demand is a function of price, total demand is also a function of price when we sum up all individual needs to get the total market demand. The price changes affect the demand for securities. If the total demand of each type of securities exactly meets the total supply of the market under a certain price system, the securities market will reach equilibrium.

At this time, the price will be the equilibrium price, and the rate of return will be the equilibrium rate of return. The theoretical idea of Capital Asset Pricing Model is to give the return rate of any portfolio of securities or securities by assuming the return on portfolios of known markets. In theory, the market portfolio includes not only ordinary stocks but also other types of investments such as bonds (Zhou and Liu, 2018). However, in the actual calculation process, it is generally considered that the market portfolio consists only of stocks.

The test of capital asset pricing model does not directly test the assumptions of capital asset pricing model. Instead, it tests the characteristics of the securities market line, namely, testing whether there is a positive correlation between the beta coefficient of a security or a portfolio and the expected return. Since the capital asset pricing model gives a succinct description of the relationship between the returns and risks of various assets in the capital market, if the model can successfully describe the actual conditions in the capital market, then the capital asset pricing model is undoubtedly of great importance to investors. In fact, many empirical tests have been conducted on the capital asset pricing model (Zhou & Liu, 2018). The key issue to empirically test the capital asset pricing model is to determine the market portfolio. Market portfolio is a portfolio of all assets in the market based on their market value ratio, but it is obviously impossible for a market index to contain information on all aspects of the market. Researchers usually use the stock price index as a representative of the market portfolio.

Obviously, if the stock index cannot effectively represent the market portfolio, the quantitative study of the capital asset pricing model cannot be correctly concluded. The capital asset pricing model assumes that the system risk of the market portfolio is all its risks, that is, the nonsystematic risk is zero. If the stock index used as a market portfolio is not efficient, nonsystematic risk cannot be zero. The capital asset pricing model considers that the income of a single asset is divided into two parts, one is risk-free gain, and the other is risk premium. The risk premium is defined as the product of the system risk β of a single asset and the excess return β. The β value of the market portfolio is assumed as 1.

The empirical research on the capital asset pricing model is very rich in specific content. These tests generally include three aspects: The first is the test of the relationship between risk and return. The second is the time series capital asset pricing model test. The American scholar Sharpe (1964) research is the first example of the relationship between risk and return. Sharpe (1964) selected 34 mutual funds in the United States as samples, calculated the standard deviation of the annual average yield and yields for each fund from 1954 to 1963, and returned the standard deviation of the fund's annual return and yield. His main conclusion is: From 1954 to 1963, the return rate of the US stock market exceeded the risk-free rate of return.

The correlation coefficient between the fund's average return and the standard deviation of its return was greater than 0.8, and the relationship between risk and return was almost linear. When examining the theory, early tests adopted a two-step regression. In the first step, the β coefficient of the portfolio is estimated using time series (Zhou and Liu, 2018). The second step is to use the cross-sectional data to conduct regression analysis of the β coefficient and the average return rate of each portfolio. The best fitting line of the observation is the stock market line. Haugen (1986) delineated four criteria against which the actual capital markets can be empirically tested. These criteria do not distinguish among the three forms of EMH as Fama suggests, but are grouped according to the behavior of security prices and returns as well as market participants. The markets are said to be efficient if they exhibit the following characteristics.

Security Prices' Responsiveness to New Information

Security prices should respond quickly and accurately to the receipt of new information that is relevant to valuation. The empirical tests related to this criterion include the measurement of stock price response, the stock price response to the announcement of dividends and stock split, the stock price reaction to earnings reports, and the stock price reaction to positive and negative events.

Security Returns' Responsiveness to Term- and Risk-Premium

The changes in expected security returns from one period to the next should be related only to changes in the level of the risk-free interest rate and changes in the level of the market risk premium associated with the security. Returns associated with factors other than these should be unpredictable (Zhou & Liu, 2018). Under this criterion, serial correlation and cross-sectional studies and conducted.

Trading Strategies' Ability to Discriminate Profitable Investments

It should be impossible to discriminate between profitable and unprofitable investments in the future by examining the characteristics of current investments. This implies that trading rules should fail to earn abnormal returns from buying profitable stocks and selling unprofitable stocks under the efficient market conditions. In this criterion, neither contrarian nor momentum trading strategies should outperform the traditional buy-and-hold strategy.

Professional Investors' Ability to Forecast Future Earnings

There is no significant difference between the average investment performance of the well-informed and the uninformed investors. If there were, the differences in performance between and within the two groups of investors should be due to chance. There are tests of security prices and returns predictability based upon several explanatory variables such as dividend yields, term-structure of interest rate, quarterly earnings reports, calendar effect, day-of-the-week effects, price-earnings ratios effect, price-to-book ratios effect, size effect, and trading volume effect. Fama (1970, 1991), on the other hand, categorizes the empirical approaches to test markets efficiency differently using his proposed three forms of EMH as guidelines

Tests of Returns Predictability

This group is catered to test the weak-form EMH and the random-walk model which consists of the tests of independence, tests of trading rules, tests of contrarian strategies, and the cross-sectional and time-serial tests of capital asset pricing models.

Event Studies

Semi strong-form EMH and the fair-game model are tested under the event studies to see how security prices and returns adjust to the arrivals of public information related to the specific firms' past earnings performance and the general economic, political, and social conditions and events.

Empirical Review

Oke (2013) applied the Capital Asset Pricing Model (CAPM) to the Nigerian stock market using weekly stock returns from 110 companies listed on the Nigerian stock exchange (NSE) from January 2007 to February 2010. The study undermines the CAPM’s predictions that higher risk (beta) is associated with a higher level of return and that the intercept should be equal to zero when estimating SML. The claim by the CAPM that the slope of the Security Market Line (SML) should equal the excess return on the market portfolio is also not supported by this study. This in effect, invalidates the prediction of the CAPM as far as Nigeria is concerned.

Adedokun and Olakojo (2012) investigated the empirical validity of CAPM in the Nigerian Stock Exchange (NSE) using monthly stock values of 16 firms from the 20 most capitalized firms in Nigeria between the period of January, 2000 and December, 2009. The empirical findings indicate that CAPM is inadequate to explain the role of asset risk for the determination of expected return on investment in Nigeria’s equity market. They established contrary to the hypothesis of the CAPM that higher risk is associated with higher asset return and asset price. Philip (2021) examined the effect of systemic risk and return on equity of quoted manufacturing firms in Nigeria. Panel data was sauced from financial statement of the manufacturing firm’s from and Central Bank of Nigeria Statistical Bulletin from 2010-2019. Return on equity was modeled as function of interest rate risk, exchange rate risk, equity price risk and consumer price risk. Panel data methodology was employed while fixed effects and random effects estimates were tested using the Hausman test. Panel unit roots and panel cointegration analysis were conducted on the study. The empirical results found that 83.8 percent variation on return on equity of the manufacturing firms can be explained by variation on the systemic risk indicators as formulated in the model. Interest rate risk has positive but no significant effect on the return on equity, exchange rate risk have positive and significant effect on the return on equity, equity price risk have positive and no significant effect on return on equity while consumer price risk have negative and significant effect on return on equity of the quoted manufacturing firms. From the findings, the study concludes that there is significant relationship between systemic risk and return on equity of the manufacturing firms. It recommends that systemic risk management implementation should not just be formulated but strategic and tactical measures should be put in place to absorb, retain and transfer systemic risk. Systemic risk management should be considered as part of strategic plans which need to be reviewed on a more frequent basis. Macroeconomics policies should directed towards stabilizing Nigerian exchange rate to avoid depreciating naira exchange rate against key currencies that exposes the firms to exchange rate risk.

Nguyen, Stalin, Diagne, and Aukea (2017) reviewed the basic ideas of the CAPM and APT model. It was established that the APT model has an advantage over the CAPM due to it accommodation for other factors different from market portfolio. However, the APM has an application difficulty as the factors to be used are not easy to identify. It is also established that while the CAPM places emphasis on efficient diversification and neglects unsystematic risk, the APT model neglects essential risks which is a part of systematic risk due its utilization of naïve diversification based on the law of large number. It is also stated that despite the unrealistic assumptions of the models in the real world, the models actually provides us an accommodating valuation to some extent.

Akpo, Hassan and Esuike (2015) examined the CAPM and APT model, their assumptions and possible reconciliation of the two models. The CAPM model is stated to be attractive based on its powerful and intuitive predictions of the relationship between expected return and risk. However, risk do not remain stable overtime hence a limitation to the model. The APT model is known for its accommodation for not only expected returns but also uncertain returns in arriving at the total return of an asset. Though the two models are known to be conflicting in assumptions, there are apparent agreements. The two models agree that investors can borrow and lend at risk free rate and that are no transaction costs, taxes or restrictions on short selling. However, the research appears to be in favor of the APT model as it recommended that investors and other investment companies should embrace a multifactor model as stock returns are affected numerous factors such as expectation about future levels of real GNP, expectations about future interest rate and expectation about future level of inflation.

Yunita (2018) analyzed and compared the accuracy level of the CAPM and APT model in determining the expected return. The Mean Absolute Deviation (MAD) was used to determine the eligible stocks to be selected for analysis under the two models. For the CAPM model, eighteen (18) eligible stocks were selected while sixteen (16) stocks were selected for APT model, and these companies are listed on the Jakarta Islamic Index. The data for analysis were generated from through the website for the period 2014-2018. The factors utilized under the APT model are Inflation, Exchange rate, Composite Stock Exchange Price Index and BI Rate. The result of the comparison between the two models suggested that there is no significant difference between the accuracy of the CAPM and APT model in estimating the stock return of the companies selected. However, the APT model is suggested to be a more accurate model as it is said to have high accuracy rate than CAPM.
Dini, Jajang and Euis (2020) aimed to determine (1) capital asset pricing model, and company stock prices in the Nikkei 225 Index technology sector; (2) capital asset pricing model on the company's stock prices in the Nikkei 225 index technology sector. The technique of data collection is done through secondary data, namely data obtained from the study of documentation and literature. The method used is descriptive method with census approach method. The population and sample of this study were the technology sector companies of the Nikkei 225 Index in 2016-2018. There were 57 companies in 2016-2018. The data analysis technique used is panel data regression analysis with a

ratio measurement scale. Based on the results of the research and the results of data processing, it is shown that (1) Capital Asset Pricing Model in the technology sector company Nikkei 225 Index shows fluctuating results each year and effective in determining efficient and inefficient stocks for investors to use in making investment decisions. The company's stock price in the technology sector, the Nikkei 225 index shows an increase in average stock prices each year; (2) Capital Asset Pricing Model has a significant positive effect on Stock Prices.

Methodology

This study used ex-facto research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. According to Asika (1991) the population is a census of all the elements or subject of interest and may be finite or infinite. The full set of cases from which the sample is taken is called the population. The population of this study comprises 25 quoted food and beverage firms on the floor of Nigeria stock exchange. In carrying out this study, we collected secondary data for estimation mainly from the Nigeria's monetary authority's Statistical Bulletin. Data for this study were the annual time series data ranging from 1986 through 2019 which were presented in tables. The data include time series of Nigeria oil price, exchange rate, real interest rate and inflation rate as predictor variables while stock market return was used as dependent variable.

Model Specifications

Thus, we express the model as follows;

$$SP = f(EXRR, CPR, IRR, EPR) \quad (3.1)$$

Transforming equation 1 and 2 above to econometric method, we have:

$$SP = \alpha + \beta_1 EXRR + \beta_2 CPR + \beta_3 IRR + \beta_4 EPR + \mu \quad (3.2)$$

Where

SP = stock prices of consumer goods manufacturing firms

EXRR = Exchange rate risk proxy by variation in Naira exchange rate per US dollar

CPR = Commodity price risk proxy by variation in inflation rate

IRR= Interest rate risk proxy by variation in real interest rate

EPR = Equity price risk proxy by variation in stock market all share price index

μ = Error Term

$\beta_1 - \beta_4$ = Coefficient of Independent Variables to the Dependent Variable

β_0 = Regression Intercept

Methods of Data Analysis

In order to estimate the regression model, E-views econometrics and statistical package will be used. The procedure involves specifying the dependent and independent variables; in this case, stock market return is the dependent variable while macroeconomic risk is the independent variables. The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 10 years, annual data covering 2013– 2022. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test.

Analysis and Discussion of Findings

Data Presentation

The estimates and results of the models and techniques as formulated in chapter three of this work are presented in this chapter. The panel data Ordinary Least Square (OLS) estimates for the models and the discussion of hypotheses and findings were also presented.

Table 1: Descriptive Analysis of the Variables

	SP	EXRR	CPR	IRR	EPR
Mean	14.39614	14.88371	26.40867	45.60936	34.36590
Median	14.36000	14.59000	27.17500	42.55000	31.51500
Maximum	25.64000	21.55000	51.88000	99.80000	51.88000
Minimum	3.000000	8.440000	9.490000	0.000000	23.91000
Std. Dev.	4.210837	2.163422	12.00454	39.67312	7.715531
Skewness	-0.088452	-0.141039	0.561380	0.069187	0.678731
Kurtosis	3.075244	3.635675	2.140026	1.312491	2.270796
Jarque-Bera	0.323368	4.231940	17.50128	25.08480	20.77638
Probability	0.850710	0.120516	0.000158	0.000004	0.000031
Sum	3.023190	3.125580	5.545820	9.577965	7.216840
Sum Sq. Dev.	3.705809	9.782023	3.011877	3.289569	1.244165
Observations	15	200	200	200	200

Source: Computed from E-view 9.0, 2023

With the exception of Skewness in investment policy all the variables have positive skewness. However, the Jarque-Bera tests show that the variables are not normally distributed. The mean values are all positive. The minimum and maximum investment policy is 3.000000and 25.64000 respectively. Higher indicator signifies better investment policy while lower indicator shows poor risk management in relation to the systremeic risk. The mean investment policy is 14.39614 which signify that the average investment policy of the firms within the periods covered in this study in Nigeria is 14.88371. The high standard deviation of 4.210837 indicates that the data is widely dispersed.

Table 4.3: **Presentation of Panel Unit Root Results at Levels**

Method	**Statistic**	**Prob.****	**Remark**
SP			
Levin, Lin & Chu t*	-3.98832	0.0000	Stationary
Im, Pesaran and Shin W-stat	0.06761	0.5270	not stationary
ADF - Fisher Chi-square	45.1784	0.1971	not Stationary
PP - Fisher Chi-square	31.3873	0.7673	not Stationary
EXRR			
Levin, Lin & Chu t*	-2.86168	0.0021	Stationary
Im, Pesaran and Shin W-stat	-1.13709	0.1278	not Stationary
ADF - Fisher Chi-square	44.1420	0.3008	not Stationary
PP - Fisher Chi-square	114.188	0.0000	Stationary
CPR			
Levin, Lin & Chu t*	4.62237	0.0000	Stationary
Im, Pesaran and Shin W-stat	1.04427	0.8518	not Stationary
ADF - Fisher Chi-square	20.2050	0.9961	not Stationary
PP - Fisher Chi-square	66.1183	0.0058	Stationary
IRR			
Levin, Lin & Chu t*	0.98170	0.8369	not Stationary
Im, Pesaran and Shin W-stat	1.34095	0.9100	not Stationary
ADF - Fisher Chi-square	23.1466	0.9848	not Stationary
PP - Fisher Chi-square	52.4847	0.0893	not Stationary
EPR			
Levin, Lin & Chu t*	-6.77365	0.0000	Stationary
Im, Pesaran and Shin W-stat	-2.05385	0.0200	Stationary
ADF - Fisher Chi-square	57.4413	0.0364	Stationary
PP - Fisher Chi-square	46.2999	0.2284	not Stationary

Source: Computed from E-view 9.0, 2023

Null: Unit root

Levin Lin & Chu Test: Assumes common unit root process

Im, Pesaran and Shin: Assumes individual unit root process
ADF-Fisher chi-square: Assumes individual unit root process
PP-Fisher chi-square: Assumes individual unit root process
** Probabilities for fisher tests are computed using an asymptotic chi-Square distribution

To check stationarity of data through panel unit root test. Panel unit root test are not similar to unit root test. There are two types of panel unit root processes, when the persistence parameters are common across cross-section then this type of processes is called a common unit root process. Levin, Lin and Chu (LLC) employ this assumption. When the persistent parameters freely move across cross section then this type of unit root process is called an individual unit root process. The Im, Pesaran and Shin (IPS), Fisher-ADF and Fisher-PP test are based on this form. The result shows that at 5% level of significance we accept null hypothesis that means the series are not stationary for some parameter while some of the variables are stataionary.

Table 4.4: Presentation of Panel Unit Root Results at Difference

Method	Statistic	Prob.**	Remark
	SP		
Levin, Lin & Chu t*	-9.34997	0.0000	Stationary
Im, Pesaran and Shin W-stat	-2.93225	0.0017	Stationary
ADF - Fisher Chi-square	74.2930	0.0004	Stationary
PP - Fisher Chi-square	109.678	0.0000	Stationary
EXRR			
Levin, Lin & Chu t*	-10.5262	0.0000	Stationary
Im, Pesaran and Shin W-stat	-6.00822	0.0000	Stationary
ADF - Fisher Chi-square	123.190	0.0000	Stationary
PP - Fisher Chi-square	199.298	0.0000	Stationary
CPR			
Levin, Lin & Chu t*	-2.66048	0.0039	Stationary
Im, Pesaran and Shin W-stat	-1.63994	0.0505	Stationary
ADF - Fisher Chi-square	53.7726	0.0715	Stationary
PP - Fisher Chi-square	48.7197	0.1623	Stationary
IRR			
Levin, Lin & Chu t*	43.49746	0.0094	Stationary
Im, Pesaran and Shin W-stat	72.1577	0.0000	Stationary
ADF - Fisher Chi-square	36.2683	0.0090	Stationary
PP - Fisher Chi-square	97.3111	0.0000	Stationary
EPR			
Levin, Lin & Chu t*	-5.11175	0.0000	Stationary
Im, Pesaran and Shin W-stat	-1.65709	0.0488	Stationary
ADF - Fisher Chi-square	54.0402	0.0682	Stationary
PP - Fisher Chi-square	75.5255	0.0006	Stationary

Source: Computed from E-view 9.0, 2023

At first difference, we reject null hypothesis and conclude that the variables are stationary at 5 percent level of significance, this implies that at first difference of the series at 5% level of significance in all case reject null hypothesis.

Table 2: Market Risk and Stock prices

Variable	Coefficient	Std. Error	t-Statistic	Prob.
		Fixed Effect Model		
EXRR	0.171139	0.286914	2.596481	0.0016
CPR	-0.235645	1.799415	-0.130957	0.8960
IRR	-0.997615	1.890118	-0.527806	0.5983
EPR	-1.168494	1.012560	-1.154000	0.2501
C	15.16691	5.550639	2.732463	0.0069
		Effects Specification		
Cross-section fixed (dummy variables)				
R-squared	0.770823	Mean dependent var		7.199403
Adjusted R-squared	0.570821	S.D. dependent var		1.292001
S.E. of regression	1.176487	Akaike info criterion		3.279411
Sum squared resid	242.2212	Schwarz criterion		3.691701
Log likelihood	-302.9411	Hannan-Quinn criter.		3.446258
F-statistic	2.708187	Durbin-Watson stat		0.692003
Prob(F-statistic)	0.000100			
		Random Effect Model		
EXRR	-0.082215	0.173285	-0.474451	0.6361
CPR	0.114131	0.043093	2.648447	0.0092
IRR	-0.008927	0.070448	-0.126714	0.8994
EPR	0.256502	0.057372	4.470820	0.0000
C	7.546584	3.967629	1.902039	0.0597
		Effects Specification		
			S.D.	Rho
Cross-section random			0.545760	0.1771
Idiosyncratic random			1.176487	0.8229
		Weighted Statistics		
R-squared	0.525663	Mean dependent var		4.055160
Adjusted R-squared	0.300551	S.D. dependent var		1.176811
S.E. of regression	1.176487	Sum squared resid		268.5195
F-statistic	1.021953	Durbin-Watson stat		0.583011
Prob(F-statistic)	0.405904			
		Unweighted Statistics		
R-squared	0.021291	Mean dependent var		7.199403
Sum squared resid	325.1116	Durbin-Watson stat		0.474003
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		8.683063	5	0.0000

Source: Extract from E-view

In testing the validity of fixed and random effect model, the study adopted the Hausman test coefficient, from the table 4.1, the probability coefficient of Hausman test of 0.0000 is less than the critical value of 0.05 therefore, the study accept that fixed effect model is appropriate. The estimated regression model on the effect of market risk on share prices of the quoted consumer goods manufacturing firms in Nigeria found from the fixed effect that the adjusted R^2 of 0.770823 indicates that 77 percent variation in share prices of the quoted food and beverage firms can be traced to variation in market risk as formulated in the regression model. The f-statistic and probability found that the regression model is significant while the Durbin Watson statistic of 0.692003 proved the presence of serial autocorrelation. The beta coefficient of the variables proved

all the independent variables have negative effect on the share prices of the quoted consumer goods manufacturing firms except exchange rate risk.
The study found that 77 percent variation in the share prices of the quoted consumer goods manufacturing firms were explained by variation in market risk as formulated in the regression model. This implies that 23 percent were explained by other factors not captured in the model. The study found that exchange rate risk have positive and no significant effect on the aggregate stock prices of the financial service sector and manufacturing sector. The coefficient of exchange rate risk proves that if the variable is increased by one percent, aggregate stock price of financial service will increase by 0.17 percent of the manufacturing firms. The positive effect of exchange rate risk confirmed the a-priori expectations of the study. It is in line with capital assets pricing model and justifies the paradigm that there is positive relationship between risk and return. The positive effect of exchange rate risk confirm the findings of Oke (2013) that the slope of the Security Market Line (SML) should equal the excess return on the market portfolio is also not supported by this study of findings of Adedokun and Olakojo (2012) that higher risk is associated with higher asset return and asset price and the findings of Philip (2021) that interest rate risk has positive but no significant effect on the return on equity, exchange rate risk have positive and significant effect on the return on equity, equity price risk have positive and no significant effect on return on equity while consumer price risk have negative and significant effect on return on equity of the quoted manufacturing firms. The study found that interest rate risk, equity price risk and commodity price risk have negative and not significant effect on the aggregate stock prices of the financial service sector but positive and not significant effect on the share prices of the quoted consumer goods manufacturing firms. The negative effect of interest rate confirmed the a-priori expectations of the study while the negative effect on aggregate prices of the manufacturing sector contradicts our a–priori expectations. The positive is in line with capital assets pricing model and justifies the paradigm that there is positive relationship between risk and return. The positive effect of commodity price risk confirms the findings of Nguyen, Stalin, Diagne, and Aukea (2017) that CAPM places emphasis on efficient diversification and neglects unsystematic risk, the APT model neglects essential risks which are a part of systematic risk due its utilization of naïve diversification based on the law of large number, Akpo, Hassan and Esuike (2015), Zhang and Li (2012) who noted that systematic risk was the only factor considered under the CAPM while three factors were considered under the APT model which is the systematic risk, daily exchange volume and volatility.

Conclusion And Recommendations

Conclusion

This study examined the effect of market risk on stock prices of quoted firms in Nigeria. The study used panel and time series data from 2012 to 2022. The study found that explain 77 percent changes on the dependent variables were explained by variation in the formulated models. The models were statistically significant from the value of f-statistics and probability. The f-statistic and probability found that the regression model is significant while the Durbin Watson statistic of 0.692003 proved the presence of serial autocorrelation. The beta coefficient of the variables proved all the independent variables have negative effect on the share prices of the quoted consumer goods manufacturing firms except exchange rate risk.

From the findings, the study conclude that there is significant relationship between exchange rate risk and share prices of quoted consumer goods manufacturing firms in Nigeria. Based on the analysis result, the study rejects the null hypothesis and accepts the alternate hypothesis, it therefore concludes that, exchange rate risk have significant relationship with share prices of the quoted firms within the time scope of the study. That there is no significant relationship between commodity price risk and share prices of quoted consumer goods manufacturing firms in Nigeria.

From the findings, concludes that, interest rate risk have no significant relationship with share prices of the quoted firms within the time scope of the study. However the probability value of 0.2501 shows that there is no significant relationship between equity price risk and share prices of quoted consumer goods manufacturing firms in Nigeria. Based on the analysis result, the study rejects the alternate hypothesis and accepts the null hypothesis, it therefore concludes that, equity price risk have no significant relationship with share prices of the quoted firms within the time scope of the study.

Recommendations

i. There is need for management of consumer goods manufacturing firms and manufacturing firms to formulate strategies of managing systemic risk and the implementation should not just be formulated but strategic and tactical measures should be put in place to absorb, retain and transfer systemic risk.
ii. Systemic risk management should be considered as part of strategic plans which need to be reviewed on a more frequent basis and macroeconomics policies should directed towards stabilizing Nigerian exchange rate to avoid depreciating naira exchange rate against key currencies that exposes the firms to exchange rate risk.
iii. Investors and other investment companies should embrace a multifactor model as stock returns are affected numerous factors such as expectation about future levels stock prices and expectations about future interest rate and expectation about future level of inflation.
iv. Nigeria exchange rate per US dollar should be well structured and defined. Policies to leverage the depreciation naira exchange rate should be formulated and there is need to strengthen Nigeria bilateral, unilateral and multilateral trade and investment relationship for better naira exchange rate that will enhance Nigeria financial market.

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THE INFLUENCE OF PROCUREMENT STRATEGIES ON ORGANISATIONAL PERFORMANCE

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Abstract
This research article explores the influence of procurement strategies on organisational performance through an explanatory research design and causal investigation in a controlled environment. By employing multiple regression analysis, the study examines the relationship between various procurement strategies and their impact on performance metrics. The findings indicate a significant correlation between strategic procurement practices and enhanced organisational performance, leading to actionable recommendations for practitioners.

Introduction

In today's competitive business environment, effective procurement strategies have emerged as crucial elements for enhancing organisational performance. Procurement, traditionally viewed as merely a cost center, is increasingly recognized as a strategic function that can significantly influence an organisation's operational efficiency, cost management, and overall competitiveness. As firms navigate complex supply chains and global markets, the need for robust procurement strategies becomes paramount.

The importance of procurement extends beyond mere transaction management; it encompasses the strategic sourcing of goods and services, the establishment of strong supplier relationships, and the integration of sustainable practices. Research indicates that organisations that implement well-defined procurement strategies can achieve substantial reductions in costs, improved quality of goods and services, and enhanced innovation capabilities (Monczka et al., 2015). Conversely, organisations that overlook the strategic potential of procurement may find themselves at a competitive disadvantage, unable to respond effectively to market changes or emerging threats.

Despite the growing recognition of procurement's strategic role, empirical studies that explicitly demonstrate the causal relationships between procurement strategies and organisational performance remain limited. This gap in the literature presents an opportunity to explore how different procurement strategies impact performance outcomes. By employing an explanatory research design and multiple regression analysis, this study aims to fill this gap, providing insights that can inform both academic discourse and practical applications in the field of procurement.

Objectives of the Study

The primary objective of this research is to investigate the influence of various procurement strategies on organisational performance. Specifically, the study seeks to:

1. Examine how different procurement strategies—such as strategic sourcing, supplier relationship management, and sustainable procurement—contribute to organisational performance metrics.
2. Identify which procurement strategies are most effective in driving performance outcomes.

By addressing these objectives, this research aims to contribute to the understanding of procurement as a strategic function and provide actionable recommendations for organisations seeking to leverage procurement for enhanced performance. Ultimately, the findings from this study will underscore the importance of strategic procurement in achieving organisational success in a rapidly changing business landscape.

Research Questions

1. How do procurement strategies influence organisational performance?
2. What specific procurement strategies yield the highest performance outcomes?

Literature Review

The literature on procurement strategies and organisational performance is rich and diverse, encompassing various theoretical frameworks and empirical studies that highlight the significance of procurement as a strategic function. This review synthesizes key concepts, theories, and findings relevant to understanding the influence of procurement strategies on organisational performance.

1. Theoretical Framework

Resource-Based View (RBV)

The Resource-Based View (RBV) serves as a foundational theory for understanding the relationship between procurement strategies and organisational performance. Proposed by Barney (1991), the RBV posits that unique resources and capabilities within an organisation can lead to sustained competitive advantages. In the context of procurement, effective strategies can be viewed as unique capabilities that enhance operational efficiency and effectiveness. For instance, strategic sourcing and supplier relationship management are considered critical resources that can differentiate organisations in competitive markets. This perspective encourages firms to leverage their procurement capabilities to achieve superior performance outcomes (Akkermans et al., 2003).

Transaction Cost Economics (TCE)

Transaction Cost Economics (TCE), introduced by Williamson (1979), provides another lens through which to examine procurement strategies. TCE emphasizes the importance of minimizing transaction costs associated with sourcing and supplier interactions. Organisations that adopt strategic procurement practices, such as long-term supplier relationships and collaborative sourcing, can reduce costs and uncertainties associated with market transactions. By effectively managing these transactions, organisations can enhance their operational performance, leading to improved efficiency and reduced costs (Cousins & Spekman, 2003).

2. Procurement Strategies

Strategic Sourcing

Strategic sourcing involves a comprehensive approach to procurement that aligns sourcing decisions with organisational goals. According to Monczka et al. (2015), strategic sourcing encompasses not only the selection of suppliers but also the development of long-term partnerships that foster collaboration and innovation. Empirical studies have shown that organisations that engage in strategic sourcing report improved performance metrics, including cost savings, quality enhancements, and increased responsiveness to market changes (Niranjan et al., 2018).

Supplier Relationship Management (SRM)

Supplier Relationship Management is another critical procurement strategy that focuses on building and maintaining positive relationships with suppliers. Research indicates that effective SRM can lead to enhanced communication, trust, and collaboration between organisations and their suppliers (Choi

& Wu, 2009). These relationships can result in better quality products, reduced lead times, and increased innovation, ultimately contributing to improved organisational performance.

Sustainable Procurement

Sustainable procurement practices, which consider environmental and social factors in procurement decisions, have gained prominence in recent years. According to Carter and Rogers (2008), sustainable procurement can enhance brand reputation, fulfill regulatory requirements, and drive innovation. Studies show that organisations that integrate sustainability into their procurement strategies often experience long-term benefits, including improved financial performance and enhanced stakeholder relationships (Giunipero et al., 2008).

3. Empirical Studies on Procurement and Performance

Empirical research has provided valuable insights into the relationship between procurement strategies and organisational performance. For instance, a study by Zsidisin et al. (2004) found that organisations employing strategic sourcing practices reported higher levels of operational efficiency and cost savings. Similarly, research by Tadelis (2002) demonstrated that organisations with strong supplier relationships experienced fewer disruptions and improved service levels, contributing to overall performance.

4. Gaps in the Literature

Despite the existing body of literature, there remains a need for further empirical studies that explicitly examine the causal relationships between procurement strategies and organisational performance. Much of the existing research focuses on correlations rather than causation, leaving a gap in understanding how specific procurement strategies directly influence performance metrics. This study aims to address this gap by employing multiple regression analysis to test the hypotheses regarding the impact of procurement strategies on organisational performance.

Methodology

The methodology section outlines the research design, sample selection, data collection methods, and data analysis techniques used in this study to investigate the influence of procurement strategies on organisational performance.

1. Research Design

This study employs an explanatory research design, which is specifically aimed at establishing causal relationships between variables. By focusing on how procurement strategies influence organisational performance, the study seeks to explain the mechanisms through which these strategies operate in a controlled environment. An explanatory design is suitable for this research as it allows for a deeper understanding of the relationships between the independent variables (procurement strategies) and the dependent variable (organisational performance).

2. Sample Selection

A purposive sampling method was employed to select organisations renowned for their effective procurement practices. This non-probability sampling technique was chosen because it allows the researcher to focus on entities that are most likely to provide relevant and rich data concerning the research topic. The sample consisted of 100 procurement professionals from various industries, including manufacturing, retail, and services. The inclusion criteria for participants were:

Experience: Participants needed to have at least three years of experience in procurement or supply chain management.

Position: Participants were required to hold positions that involved decision-making in procurement strategies, such as procurement managers, supply chain directors, or senior buyers.

3. Data Collection

Data were collected through a structured questionnaire designed to capture information on procurement strategies and organisational performance. The questionnaire consisted of two main sections:

1. Procurement Strategies: This section assessed various procurement strategies employed by respondents, including strategic sourcing, supplier relationship management, and sustainable procurement practices. Respondents rated their organisations' use of these strategies on a Likert scale ranging from 1 (not at all) to 5 (very high).

2. Organisational Performance: This section measured performance outcomes, including cost efficiency, quality of goods and services, and overall operational effectiveness. Participants rated their organisations' performance on similar Likert scales, allowing for quantitative analysis.

The questionnaire was pre-tested with a small group of procurement professionals to ensure clarity and relevance of the items. Feedback was incorporated to refine the final instrument.

4. Data Analysis

Data analysis was conducted using multiple regression analysis, a statistical technique that allows for the examination of the relationship between multiple independent variables (procurement strategies) and a single dependent variable (organisational performance). The steps involved in the analysis were as follows:

1. Descriptive Statistics Table

Variable	Mean	Standard Deviation
Strategic Sourcing	4.12	0.78
Supplier Relationship Management	3.85	0.82
Sustainable Procurement Practices	3.45	0.91
Organisational Performance	4.00	0.85

Explanation:
- Mean: This represents the average score given by respondents for each variable on a Likert scale. For instance, a mean of 4.12 for "Strategic Sourcing" indicates that respondents generally rated their organisation's use of this strategy quite highly.
- Standard Deviation: This indicates the variability of responses around the mean. A lower standard deviation suggests that responses were closely clustered around the mean, while a higher standard deviation indicates greater variability. For example, "Sustainable Procurement Practices" has a mean of 3.45 with a standard deviation of 0.91, suggesting more variability in how organisations adopt sustainable practices.

2. Correlation Analysis Table

Variables	**Strategic Sourcing**	**Supplier Relationship Management**	**Sustainable Procurement Practices**	**Organizational Performance**
Strategic Sourcing	1.00	0.60**	0.45**	0.70**
Supplier Relationship Management	0.60**	1.00	0.50**	0.65**
Sustainable Procurement Practices	0.45**	0.50**	1.00	0.55**
Organisational Performance	0.70**	0.65**	0.55**	1.00

Explanation:
- Each cell shows the correlation coefficient between pairs of variables. A value close to 1 indicates a strong positive correlation, while a value close to -1 indicates a strong negative correlation. A value around 0 suggests no correlation.
- The asterisks (**) signify that all correlations are statistically significant at the 0.01 level, indicating a high level of confidence in the observed relationships.
- For example, "Organisational Performance" has the highest correlation with "Strategic Sourcing" (0.70), suggesting that organisations employing effective strategic sourcing are likely to perform better overall.

3. Model Summary Table

Statistic	**Value**
R	0.82
R^2	0.67
Adjusted R^2	0.65
F-statistic	34.56
p-value (F-statistic)	< 0.001

Explanation:
- R: The correlation coefficient indicates the strength of the relationship between the procurement strategies and organisational performance. This value (0.82) indicates a strong positive correlation between the procurement strategies and organisational performance. It shows that as the independent variables increase, the dependent variable is likely to increase as well.
.
- R^2: This is the coefficient of determination, indicating that 67% of the variance in organisational performance can be explained by the procurement strategies included in the model. The coefficient of determination (0.67) suggests that 67% of the variance in organisational performance can be explained by the three procurement strategies included in the regression model. This indicates a

strong explanatory power of the model. This is a substantial amount, suggesting the model has predictive power.

- Adjusted R^2: This adjusts R^2 for the number of predictors in the model, providing a more accurate estimate of the explained variance when multiple predictors are included. An adjusted R^2 of 0.65 still indicates a strong model. This value (0.65) adjusts R^2 for the number of predictors in the model, providing a more accurate measure of how well the model generalizes to the population. An adjusted R^2 of 0.65 still indicates a strong model fit, suggesting that the predictors are relevant and meaningful.

- F-statistic: This assesses the overall significance of the regression model. A high F-value (34.56) with a p-value of less than 0.001 indicates that at least one of the independent variables significantly predicts organisational performance. The F-statistic (34.56) assesses the overall significance of the regression model. A high F-value indicates that at least one of the independent variables significantly predicts the dependent variable.

- p-value (F-statistic): The p-value associated with the F-statistic (< 0.001) indicates that the model is statistically significant. This means that the likelihood of observing such a strong relationship due to random chance is extremely low, confirming that the procurement strategies have a significant impact on organisational performance.

This table and its accompanying explanations provide a clear summary of the regression model's effectiveness in predicting how procurement strategies influence organisational performance.

4. Coefficients Table

Variables	Unstandardized Coefficient	Standardized Coefficient	t-value	p-value
Strategic Sourcing	1.20	-	3.45	< 0.001
Supplier Relationship Management	0.45	0.40	5.20	< 0.001
Sustainable Procurement Practices	0.38	0.35	4.50	< 0.001
Organisational Performance	0.25	0.20	2.80	0.006

Explanation:

- Unstandardized Coefficient (β): This indicates the actual change in organisational performance for a one-unit change in the predictor, holding all other variables constant. For example, a coefficient of 0.45 for "Strategic Sourcing" means that for each unit increase in this strategy's implementation, there is a corresponding increase of 0.45 units in organisational performance.

- Standardized Coefficient (β): This allows for comparison between variables measured on different scales. Higher values indicate a greater impact on the dependent variable. Here, "Strategic Sourcing" (0.40) has the most substantial standardized effect, followed by "Supplier Relationship Management" (0.35).

- t-value: This tests the null hypothesis that the coefficient is equal to zero (no effect). Higher absolute values indicate a stronger effect. For example, the t-value of 5.20 for "Strategic Sourcing" suggests a significant effect.
- p-value: This tests the statistical significance of each coefficient. A p-value less than 0.05 indicates that the predictor significantly influences organisational performance. All three procurement strategies have p-values less than 0.001 or 0.006, confirming their significant contributions.

Together, these tables provide a comprehensive overview of the data and the results of the regression analysis. They illustrate the strong relationships between procurement strategies and organisational performance, highlighting the importance of strategic sourcing, supplier relationship management, and sustainable procurement practices. The statistical significance of these findings underscores the need for organisations to prioritize these strategies to enhance their performance outcomes.

5. Ethical Considerations

Throughout the research process, ethical considerations were paramount. Participants were informed about the purpose of the study, and their informed consent was obtained prior to data collection. Confidentiality was assured, with all responses anonymized to protect participants' identities and organisational information.

The methodology adopted in this study was designed to rigorously investigate the influence of procurement strategies on organisational performance. By employing an explanatory research design and multiple regression analysis, the study aims to provide valuable insights into how specific procurement practices can enhance organisational effectiveness. This approach not only strengthens the validity of the findings but also contributes to the broader understanding of procurement's strategic role in driving organisational success.

Conclusion

The study highlights the critical role of procurement strategies in influencing organisational performance. Strategic sourcing and supplier relationship management emerged as significant contributors to improved performance metrics. Sustainable procurement practices, while important, showed a comparatively moderate impact.

Recommendations

1. Invest in Training: Organisations should invest in training procurement professionals to enhance strategic sourcing capabilities.
2. Foster Supplier Relationships: Building strong relationships with suppliers can lead to better collaboration and performance outcomes.
3. Embrace Sustainable Practices: Integrating sustainability into procurement strategies can enhance brand reputation and long-term performance.

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MARKET VARIABLES AND STOCK RETURNS OF QUOTED INDUSTRIAL GOODS MANUFACTURING FIRMS IN NIGERIA

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Abstract
This study examined the effect of market variables and stock market return of quoted industrial goods manufacturing firms in Nigeria. Multiple linear regression analysis methods, using panel data model to determine the relationship between the dependent variable and the explanatory variables. Stock market return was modeled as the function of earnings per share, dividend yield, market capitalization and price to book value ratio. Secondary data were collected for all variables for a period of ten years (2013 to 2022) and were obtained from the Nigerian Exchange fact book, Published annual financial reports of listed companies in Nigeria and the Nigerian Stock Market annual reports. Correlation and regression methods were used to carry out the inferential analysis. Statistical t-test and F- test were used to test the significance of explanatory variables on dependent variable. The study found that 94.8 percent of changes in stock returns of the quoted industrial goods manufacturing firms in Nigeria are described by independent variables. The remaining percent is determined by the residual. The overall result shows fitness of the model with F-statistic and a p-value of 19.66493 and 0.0000 respectively. The study further found that the model is statistically significant based on the value of f-statistic and probability. The regression coefficient proved that market capitalization ratio has positive and significant effect on stock return of the quoted commercial banks, dividend yield has positive and significant effect on stock return of the quoted commercial banks, earnings per share has positive but no significant effect on stock return of the quoted industrial goods manufacturing firms while price to book value have positive and no significant effect on stock market return. The study concludes that market variables have moderate explanatory effect on stock market returns of the quoted industrial goods manufacturing firms. It recommends that internal policies should geared toward managing the market variables to enhance stock market returns of the quoted industrial goods manufacturing firms in Nigeria.

Keywords: ***Market Variables, Stock Market Returns, Industrial Goods Manufacturing Firms, Nigeria***

Introduction

A well-developed financial system is an important pre-requisite for a developed economy. Stock markets enable firms to raise capital by issuing shares and also create an environment where those shares can be traded. Thus, stock market plays a pivotal role in firms' expansion and turns economic growth. In the literature, because of the importance of stock markets to the real economy, the smooth and risk-free operation of the stock market has attracted significant attention. In the empirical capital market research literature, there is a long history about the determinants of stock performance. The literature suggests that different variables are potentially important in explaining the variations in stock performance in different economies at different times and aspects. Policymakers, however, want to learn about the behaviour of the stock market and, more importantly, discover how the behaviour of the stock market is moved in response to the change of different factors. Factors that play a significant role in affecting stock price behaviour are from different segments like economic variables, financial market variables, variables from behavioural finance, and so on. Stock return is very important as it is the main objective of investment in ordinary shares. Investors, both existing and potential ones regard return as the fundamental reason for investing in a particular firm. Stock return can be in form of capital appreciation/depreciation (as obtained in the Nigerian stock exchange) plus dividend received if any. Stock prices are important metrics of measuring stock market returns. Therefore, the value attached to them matters a lot to both existing and prospective investors in the stock market. There are several factors in stock prices determination in the stock market. These factors ranges from accounting and no accounting information. Returns are the returns or gain that the investors generate out of the stock market. The most common way of generating stock market return is through trading in the secondary market.

Market variables serve as a predictor of stock market returns since it gives highlight to the likely future returns. Examples of accounting fundamentals are leverage ratio, profitability, market capitalization. According to Aldin, Dehnari, and Hajighasemi (2012) investors aim at maximizing their yield and they are very eager to predict the firm stock returns in which they invest. They expect to receive dividend and/or capital gain from investing in the equity market. Stock market returns are subject to market risks. They are not homogeneous and may change from investor-to-investor depending on the amount of risk one is prepared to take and the quality of his Stock market analysis. This implies that the more investment one has, the higher the amount of risk one assumed and hence the higher the expected stock market returns. Stock returns can vary because they depend on movements in stock prices, which are in turn dependent on several factors. These factors can be either internal or external. The internal factors are firm size, debt/equity financing, and MBV ratio, dividend per share, firm age, P/E ratio, and EPS. Others include firm's riskiness, premium growth, interest coverage, loss ratio, profitability and dividend yield (Kazeem, 2015; Anderson, 2016). The external factors include interest rate, money supply, oil prices, GDP, inflation rate, foreign reserve, and output production (Maku & Atanda, 2010; Gatuhi, Gekara & Muturi, 2015).

Factors that determine stock market return remain controversial among scholars. Sharpe (1964), Lintner (1965) and Black et al. (1972) developed the Capital Asset Pricing Model (CAPM). The random walk theory, that claimed the stock prices to follow a random evolution over time, was questioned by the CAPM, which related the average return to the stock's systematic risk. In securities field, this CAPM is used to explain the investment return of a stock on the appropriate theoretically way through combination systematic risk factor with expected return of the market and the expected return of a theoretical risk-free investment return. Black et al. (1972) used both methods of panel data regression and cross-section data regression to estimate the connection between stock return and systematic risk by CAPM. They found those economic hypotheses are consistent with the results by a test of capital market equilibrium. It means the systematic risk factor can be a key variable that influences the stock return. Besides, they also found the possibility of other factors affecting the stock return. Fama and Macbeth (1973) found that stock returns and systematic risk has a linear relationship in the NYST during the period from Jan 1926 to Jun 1968, whereas Fama and French (1998) found that systematic risk has a weak relation with stock returns and that stock returns has no connection with firm size during the period 1941 to 1990. Furthermore, other researchers claimed that the effect of systematic risk is non-existent, since when systematic risk is used as the only explanatory variable in explaining stock return there is only a very weak relationship with stock returns. The studies of Uwubanmwen and Obayagbona (2012), Bala and Idris (2015), and Kazeem (2015), the study periods by these researchers can be termed not too due to many reforms and does not capture some reforms in the Nigeria financial market such as the introduction of new corporate governance codes, adoption of IFRSs, changes in Central Bank of Nigeria (CBN) monetary policy and rise in public debt profile rates have taken place that might make earlier findings ineffectual. From the above this study examined the effect of market variables on stock market return of quoted industrial goods manufacturing firms in Nigeria.

Literature Review

Stock Returns Stock return is defined as the capital gain or loss as a result of investing in stock portfolio (Jones, 2000). The return of securities in the stock market may differ because of different factors affecting securities such as differences in structure and managerial capacity of different firms, different sectors in which they operate, the state of the economy, government policies, as well as internal corporate policies, themselves (Oludoyi, 2003). Firms are generally free to select the level of stock return (dividend) they wish to pay to holders of ordinary shares. When investors buy a stock or a bond, their return comes in two forms: a dividend or interest payment and a capital gain or capital loss (Brealey, Myers, & Mmarcus, 2009). People invest in shares in order to earn dividend or to earn capital growth in the value of the shares or both (Alexander & Britton, 1999). The return on an investment is measured as total gain or loss experience on behalf of its owners over a given period of time. It is commonly stated as a change in the asset's value (capital gain or loss) plus any cash distributions (dividend or interest payments) expressed as a percentage of the beginning of period investment value. Investors in the market are expected to be rational when investing in other to avoid loss. They must always aim at maximizing expected return of their portfolio, subject to acceptable level of risk. Rational means that they react quickly and objectively to new information in order to seek for the best profit of their investment (Gitman & Zutter, 2012).

Dividend Yield

Dividend yield refers to the yield a company pays out to its shareholders in the form of dividends. It is a financial ratio that indicates how much a company pays out as dividends each year relative to its share price. The average of the actual dividend over the last twelve months and the consensus projected dividend for the next twelve months, all divided by the average share price over the past twelve months. The dividend yield calculation excludes special dividends. If no consensus forecasts are available then the dividend yield is calculated using the total dividend from the last financial year. According to Osaze (2007) dividend yield is the return that an investor expects to earn from the profits distributed as dividends annually to investors. Share, Alexander & Bailey, (1999) saw dividend yield as the current actualized dividend paid on a share of common stock, expressed as a percentage of the current market price of the corporation's common stock. A high dividend yield is usually preferred by -investors, although a high yield might mean that the company is distributing most of its profits because it has no opportunities for investment in further growth. This might jeopardize future dividends and consequently reduce them. The return to an investor comes in two forms; dividend yield and capital appreciation. Brealey, Myers and Allen (2008), a high dividend yield may indicate that investors are demanding a relatively high rate of return or that they are not expecting rapid dividend growth with consequent capital gain. Dividend yield is calculated by taking the amount of dividends paid per share over the course of the year and dividing by the stock's price. Thus, dividend yield is express as: Dividend yield = Dividend per share Stock price (Brealey, Myers & Allen, 2008).

Price Earning

Price to earnings ratio (P/E) measures how much investors are willing to pay per dollar of reported profit (Brigham & Houston, 2010). Shen (2000) mentioned there is a negative relationship between price to earnings ratio and stock returns from year 1970 to year 2000 in S&P 500 Index since very high price to earnings ratios have usually followed by poor stock returns, Khan (2009) found that the stock returns are statistically insignificant with PEE ratios. Mirfakhr et al., (2011) studied the relationship between financial variables and stock price through Fuzzy regression in Iran Khodro Company (Accepted in Tehran Stock Exchange) during the years 1998 to 2007. They used the variables of earnings per share (EPS), dividends per share (DPS) and the ratio of price to earnings as financial variables. The research findings shower that there is a significant and positive relationship between earnings per share (EPS) and stock price, but the relationship between cash dividend per share (DPS) and the ratio of price to earnings (P/E) with stock prices negative and significant. Guler, Mustafa, and Kemal (2008) conducted study in Turkey as "The prediction of stock returns Lasing financial ratios of price-to-earnings, dividend yield, and the ratio of market value to book value in emerging markets and concluded that investors in emerging markets could potentially predict market returns for a one year period specifically by using the ratio of market value to book value and dividend yield at a high confidence level. On the other hand, it was noted that earnings-price ratio will play a small role in predicting stock returns.

The price earnings ratio is a valuation measure that divides the company's share price by its pre-abnormal earnings per share. On the Main View for each company and also in the price sensitive measures section, we calculate the price earning (P/E) ratio as the closing share price at the last trading day divided by the pre-abnormal earnings per share for the last full financial year. In the annual financials ratio analysis section, the price earning (P/E) ratio is calculated as the closing share price on the last day of the company's financial year divided by the pre-abnormal earnings per share. In the interim financials ratio analysis section, the price earning (P/E) ratio is calculated as the closing share price at balance date divided by two times the pre-abnormal earnings per share for the half year period.

Earnings Yield

Earning yield is the return that an investor expects to earn on his investment and it is express as the proportion of, earnings per share to stock price per share. The earnings yield is a way to measure returns, and it helps investors evaluate whether those returns commensurate with an investment’s risk. It is important to note that earnings yield does not always represent cash available to the investor, because companies may choose to reinvest earnings rather than pay dividends to shareholders. Unlike the dividend yield, earnings yield is not dependent on management's capital allocation decisions. The ratio indicates the value of common stock as it shows the true return on investments whether the profits are fully distributed as dividend or not. Obviously, the higher the earnings yield, the more attractive the investment would be to the investor (Osaze 2007). This approach makes it easier to value a business. The most common starting point for the valuation process is calculating a financial ratio known as earnings yield.

Earning yield being the return that an investor expects to earn on his investment can demonstrate the efficiency of market that has an important role in emerging markets because it plays as a risk factor in relation with stock return. Moreover, earnings yield (BY) has positive relation with stock returns in Malaysia's stock market as an important emerging market (Lau, Lee Mclnish, 2002). Kohi and Toko (2010) analysed the prediction of stock returns using financial ratios in Japan. They found that the two ratios of price to earnings and dividend yield have greater power to predict stock returns. They also calculated monthly returns and examined the behaviour of the price to earnings ratio using Robert Shiler's Test. They observed that this ratio shows a totally different behaviour than dividend yield. Besides, it was noted that the predictive power of the ratio of price to earnings is less than the stock return predictability using dividend yield.

Market-to-Book Value Ratio

Roll (1995) displays the same leaning in Indonesia where the results showed/revealed that high Market-to-Book stocks (growth) earns inferior returns than low ratio of Market-to-Book (value) stocks, though the variation linking the two classes (growth and value) is not statistically or materially significant. However, investors would also be concerned on the impact of external variables on stock returns. The study can also be updated and using the capital market in Nigeria. The coefficient of determination from the above study was low. This study will bridge some gaps if more variables (external and internal) are added. Loughran (1997) assesses the seasonality effect of Market-to-Book ratio between 1963 and 1995. The study reveals that high market/book value (growth) stocks have lower returns in January than low market/book (value) stocks. The study explains that if we exclude January from the sample, cross-sectional difference in market returns cannot be elucidated by Market-to-Book and size for three largest size quintiles. This according to him explains or accounts for 90% and more of total market capitalization, from 1963 – 1995.

Dhatt Kim and Mukherji (1999) used the Russell 2000 index which is the measure of how well small-size stocks perform in the USA. The study investigates explanatory variables of sales-to-price, book-to-market, market value of equity and debt-equity from 1982 to 1992 for nonfinancial companies quoted on the Korea Stock Exchange (KSE) using multiple regression models. The study obtains data as compiled by the PACAP Research Center, United States of America (U.S.A). They argue that the investing community tends to earn stock returns that are higher as they engage in the purchase of value stocks, that is, stocks with low ratios of Market/Book value. The study finds that price-to-sales ratio has more predictive power than ratio of market-to-book value for small-size firms' stocks. Gonence and Karan (2003) assembled and sum up reasons why high Market to Book (growth) stocks earn lower stock returns than low Market to Book (value) stocks as follows: that by using the overreaction hypothesis, "investing community reacts excessively to stock performance and given that the overreaction allocate unreasonably high values to strong firms that have low B/M (high Market-to-Book) and unreasonably low values to weak firms that have high B/M (low Market-to-Book). When the overreaction is addressed, strong/big firms have low returns on the stock market and weak/small firms have high returns on the average.

Price-to-Earnings Ratio

Panu, Peng, and Dennis (2007) explored the link between firm characteristics and stock return. The study investigates the impact of the following independent variables on stock return – market to book value ratio, size, and price to earnings ratio. The findings indicate that price to earnings ratio and stock return has positive relationship. The study concludes that market to book value ratio has more predictive ability for stock returns. However, the firm level characteristics and macroeconomic factors are not combined in the study. This implies that the contribution of the two in relationship to the effect of the other on stock returns of a firm is ignored. Considering the role macroeconomic factors play in promoting growth, ensuring price stability, stabilizing long-term interest rates and the real exchange rates as well as preventing financial crises, the importance of combining these macroeconomic factors with firm attributes in one study is too big to be ignored.

Debt-to-Equity ratio

Leverage as a proxy of financial risk is expected to be related with expected stock returns. The financial risk is mostly reflected in firm financial leverage. Tradeoff theory posit that large firms can easily penetrate capital market to long term debt since they have lower bankruptcy cost. Large firms use debt financing option to take advantage of tax shield. Thus, positive relationship is expected. On the contrary view, Wajid et al. (2013) opined that high levered firms are regarded as more risky for investment because, they have a high chance of falling onto the trap of bankruptcy, as such, potential investors do avoid investing in such kind of firms. Consequently the demand for its share will fall and hence affect the stock price as well as stock returns. Hence negative effect will be expected. Bhandari (1988) in his study found a positive relationship between financial leverage and stock returns. While Welch and Ivo (2004) conducted a research on relationship between capital structure and stock returns by examining the US listed firms for the period 1960-2000, and found that stock returns was negatively correlated to debt-equity ratio when firms were inactive and did not reschedule their debt ratios in period of stock prices increase or decrease.

Khan, Naz, Khan, Khan and Ahmad (2013) studied the impact of capital structure and financial performance on stock returns of Pakistan textile industry. Using OLS method, the result revealed that D/E ratio and EPS affect stock returns positively. They believed that the positive trend predicted is because majority of the firms are family-owned and the directors run the in the interest of majority shareholders instead of stakeholders. Chambers, Sezgin and karaaslan (2013) investigated the effect of capital structure and the beta coefficient on stock returns of listed manufacturing industry. The study used three periods: the whole period from 1994 to 2010, the sub-period from 1994 to 2002 and the sub-period from 2003 to 2010. Panel regression analysis is used in which total debt to market value (TD/MV) and beta ratio are found to have statistical significant effect on both nominal and real stock returns in all the three periods. The TD/MV ratio is also found to be statistically significant but with a negative effect on both nominal and real stock returns in the 1994 to 2002 sub-period but in the 1994 to 2010 period only real stock return that is statistically significant. But, Tudor (2006), in his study, financial leverage measured as total debt to total equity was found to be positively impacting stock returns. Though, the statistical significance is the second highest after Bhandari (1998) in his study of the relationship between stock returns and the expected leverage ratio during the period 1949 to 1979. Significant positive association between leverage and stock returns of the firms was observed and the relationship is higher in manufacturing firms and in January. He stressed that the leverage ratio is a much stronger variable in explaining stock returns compared to beta.

Earnings per Share (EPS)

The success or failure of management decision can be evaluated only in the light of the impact of corporate stock prices (Remi, 2005). He further explains that a firm stock price has direct purview in the managerial efficiency which is one of the signals of firm performances. One of the components of this firm performance is earning per share (EPS). Earning is the first or probably the most important criterion for judging the performance of equity securities. The mention of earning per share (EPS) immediately comes to mind closely related terms like net profit, profitability, and outstanding common shares.

A firm's profitability takes on additional meaning when the number of shares outstanding is taken into consideration. Earnings per share (EPS) together with its changes from period to period, is an important measure of an entity's profitability. The presentation of earnings per share on the face of the income statement is required for enterprises whose ordinary shares or potential ordinary shares are publicly traded and by enterprises that are in the process of issuing shares or potential ordinary shares in the public securities market (Valix & peralta, 2009). Once a company's earnings become attractive, the equity share will have more and more demand which will result to increase in market value of the equity (Bhatt, Pushpa & Sumangala, 2012).

The amount of profit generated by a firm may also determine the amount to be paid as dividend. A loss making firm is very unlikely to pay dividend. Earnings per share (EPS) shows the amount of profit after tax and preference dividend (but before extra- ordinary items) attributable to each ordinary share issued and ranking for dividend during the financial period (Igden, 2009). Earnings per share (EPS) is of more important to common stockholders particularly because it is calculated by dividing the net profit (after deducting preferred dividends) by the outstanding number of shares of common stock (Alhabeeb, 2012). Share, Alexander and Bailey, (1999) sees earnings per share as a corporation's accounting earnings divided by the number of its common shares outstanding.

Market Efficiency Theory

Efficient-market hypothesis (EMH) asserts that financial market is "informationally efficient". There are three major forms of the hypothesis: "weak", "semi-strong", and "strong". Weak EMH claims that prices on traded assets (for example, stock bonds, or property) already reflect all past publicly available information. Semi-strong EMH states that prices reflect all publicly available information and that prices instantly change to reflect new public information. Strong EMH additionally claims that prices instantly reflect even hidden or "insider" information. Efficient market theory implies that market will react quickly to new information. Thus, it is important to know when the accounting report first became publicly known. The accounting report is informative only if it provides data not previously known by the market. Stock market thrives on information. This is because information plays an essential role in reducing the investors' challenges in the capital market. Information is important to investors in helping them evaluate investment opportunities to decide how to allocate their savings. In addition, it is also important because it enables investors to monitor whether their resources have been used wisely by managers. Markets where information is irregular give opportunities for investors who are more informed to take advantage of those who are less informed, and make it more expensive for investors to buy or sell a security without affecting its price.

Information Perspective

Informational perspective measures the usefulness of accounting to individual users without much emphasis on the precise structure of the relation between accounting data and firm value (Bernard, 1995). Most of the studies on information perspective assume that information content or usefulness can be determined by observing stock market reactions to specific accounting information items (Ball and Brown, 1968, Benston, 1967 and Anderson, 1975). These studies further assert that the degree of usefulness can be measured by the extent of volume or price change following release of the information.

Until the last few years, the information perspective has dominated financial accounting theory and practice. The information perspective relies on a single-person decision theory, where it is the responsibility of an investor to predict future firm performance and make investment decisions. It also depends on efficient securities market theory, where the market can interpret information from any source (Beaver, 1973). In this theory, it is Accountant's role to supply useful financial statement information to assist investors. Ball and Brown (1968) study is the first to document statistically a share price response to reported net income and their methodology is still employed today. The emphasis of information perspective is on contemporary associations between accounting earnings (or book value) and market returns or prices. In particular, it investigates capital market reactions to public disclosures such as earnings announcements, other firm-specific news and economy-wide macroeconomic news. This is synonymous with information content school.

Empirical Review

Ibanichuka and Alasin (2018) examined audit reports and value relevance of accounting information in Nigeria quoted commercial banks. Data was sourced from financial statement of Commercial Banks. Two multiple regressions were formulated to investigate the effect of audit reports and audit characteristics on stock prices of the commercial banks. The data analysis technique employed is the multiple regression model based on Statistical Package for Social Sciences version (22.0). The Durbin Watson statistics show the presence of multiple serial autocorrelation. The result shows collinearity that corresponds with the Eigen value condition index and variance constants are less than the required number, while the variance inflation factors indicate the absence of auto-correlation. The result from model I found that all the audit report variables have positive impact on value relevance while model II found that audit compensation, audit familiarity and corporate governance have positive effect and audit independence, joint audit and audit size have negative effect on stock prices. The study concludes that the independent variables have significant relationship value relevance of accounting information of Nigeria quoted commercial banks.

Hung**,** Ha **and** Binh **(2018)** examined the impact of accounting information on financial statements to the stock price of energy enterprises listed on Vietnam's stock market. By using the OLS regression model and quantile regression model, the author studies the influence of factors such as return on assets (Roa) capital structure (LV), enterprise size (size), current ratio (CR), and accounts receivable turnover (turnover) to stock prices. Data from this study were collected from 44 energy enterprises during 2006-2016. The results show that Roa, enterprise size (size), current ratio (CR), and accounts receivable turnover (turnover) are positively correlated with the stock price, with an explanation level of 48.47%. Capital structure (LV) does not affect stock prices. Based on the research results, the authors propose some recommendations for investors and enterprises and suggest other research directions as well as adding new factors to the stock price.

Malhotra and Tandon (2013) found that in those factors, financial accounting information is the main that most investors usually considered in making investment decisions as to whether to invest in a company shares or not . Investors usually rely on financial accounting information to assist them with stock selection. This study carried out an investigation into the relationship between net book value per share and equity share investment in listed companies in Nigeria with a view to providing relevant information that will aid investors' equity share investment decisions. Goddy (2010) claimed that the investors in Nigeria have suffered untold hardship due to lack of regular and reliable accounting information from the listed companies on Nigerian Stock Exchange. In order to provide empirical accounting information that will assists investors in making investment decisions, this study examined the relationship between net book value per share and equity share investment in the listed companies in Nigeria. In this research, the average volume (Units) of equity share outstanding in the companies is taken as dependent variable and accounting information variable net book value per share is the independent variable. However, the ability of accounting information to affect investors' equity share investment decision has been questioned. Almumani (2014) studied determinants of Equity Share Prices of the Listed Banks in Amman Stock Exchange shows that, there is a positive correlation between the independent net book value per share (correlation coefficient =.81)) and dependent variable equity share investment and it is also significant at 1% probability level.

Dissa-Bandara and Samarakoon (2002) tested the market response information contents in dividend announcement and found that the market reacted positively to the information but the response took time. Furthermore Dissa Bandara (2001) tested the market response to the dividend announcement and found that the market responded positively to the announcement of dividend increase and negatively to dividend decrease. Other empirical research done by Ramesh and Nimalathasan (2011), Gunasekara (2004) on market reactions on bonus issue and results reveal that the market reacts negatively and positively to the issue of bonus. Therefore the need for further research on the efficiency and responsiveness of the market in the region to information disclosures has become very imperative. Graham, King, and Bailes (2000) examined value relevance of book value per share and current residual income in Indonesia, Malaysia, Phillippine, South Korea, Thaiwan and Thailand. They find that coefficients of these variables are statistically significant for all the countries. The explanatory power of the model ranges from 24% in Thailand to 90% in Philippines. Olugbenga and Atanda (2014) explored the function al relationship between earnings, book values, dividends, cash flow and equity share investment decisions in Nigeria. They found that accounting information, earnings, book values, dividends, cash flow from operations, has a direct/positive relationship with equity share investment decisions in Nigeria. They argued that earnings, book values, dividends, cash flow from operations, are statistically significant in explaining variations in equity share investors' behaviours at 5% level of significance. Furthermore, they analyzed empirically the relationship between book values and equity share investment decision and from the results concluded that accounting information on book values has a positive relationship with equity share investment decisions in Nigeria. the above studies failed to the effect of market variables on stock market return of quoted industrial goods manufacturing firms in Nigeria.

Methodology

This study used quasi experimental research design approach for the data analysis. This approach combines theoretical consideration (a prior criterion) with the empirical observation and extract maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables. The sample size was limited to the 15 quoted industrial goods manufacturing firms that are reporting to the Nigerian Stock Exchange. The reason for the sample size is for easy source and reliability of required data from the annual reports submitted to the exchange. Secondary data were collected from publication of Stock Exchange Fact Book and annual reports and financial statement of the quoted industrial goods manufacturing firms.

Data Analysis Method

The method of data analysis to be used in this study was the panel data multiple linear regressions using Ordinary Least Square (OLS) method. This approach, which is a quantitative technique, includes tables and the test of the hypotheses formulated by using ordinary least square regression analysis at 5% level of significance. To arrive at a result that will not lead to spurious regressions, the study will test for stationarity at different levels in the variables making up the model. Other tests that will be carried out on the model include test of Normality, Durbin Watson Test of serial correlation, test of heteroskedasticity and test of model specification so as to achieve the objectives of our study as well as answer the research question and hypotheses. Moreover, in order to undertake a statistical evaluation of our analytical model, so as to determine the reliability of the results obtained and the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test will be employed.

Model Specification

The study adopts the panel data method of data analyses which involve the fixed effect, the random effect and the Hausman Test.

Pooled Effect Model

$$SMR_{it} = \beta_0 + \beta_1 MKTR + \beta_2 DY + \beta_3 EPS + \beta_4 PBV + U. \quad (1)$$

Fixed Effects

The fixed effects focus on whether there are differences by using a fixed intercept for each of the different cross-sectional structures. If we assume that the dummy variable for a conglomerate company is 1 or 0, then D_i, which is the dummy variable for firm i, can be expressed as:

$$D_i = \begin{cases} l, & i-1 \\ 0, & otherwise \end{cases} \quad D_2 = \begin{cases} l, & i-2 \\ 0, & otherwise \end{cases} \quad \ldots D_N = \begin{cases} l, & i-1 \\ 0, & otherwise \end{cases}. \quad (2)$$

The regression of total samples can be expressed as:[1]

$$Y_{it} = \sum_{i=1}^{N} \beta_{oi} D_i + \beta_i D_s + \beta_2 D_{ma} + \beta_3 s_1 + \beta_{oi} D_4 s_2 + \varepsilon_{it} \quad (3)$$

The dummy variables are expressed as follows: if $j = i$, then $Di = 1$; otherwise $Di = 0$.[2]

To further investigate the fraud effect, Adebayo (2012) analyzed whether the independent variables affect the dependent variable, this regress the effect of the independent variables on the dependent variables.

$$SMR_{it} = \beta_0 + \beta_1 MKTR + \beta_2 DY + \beta_3 EPS + \beta_4 PBV + U. \quad (4)$$

Because the fixed effects account for both cross-sectional and time-series data, the increased covariance caused by individual-firms differences is eliminated, thereby increasing estimation-result efficiency.

Random Effects

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

$$SMR_{it} = \beta_0 + \beta_1 MKTR + \beta_2 DY + \beta_3 EPS + \beta_4 PBV + U. \quad (5)$$

$$SMR_{it} = \sum_{j=1}^{N} \beta_0 + \beta_1 MKTR + \beta_2 DY + \beta_3 EPS + \beta_4 PBV + UT \tag{6}$$

If this is represented with random variables, then $\beta_{oj} = \overline{\beta}_0 + \mu_j$, which indicates that the difference occurs randomly, and the expectation value of β_{oi} *is* $\overline{\beta}_0{}^5$. (7)

SMR = Stock return of the industrial goods manufacturing firms
MKTR = Market capitalization ratio
DY = Dividend Yield
EPS = Earnings per share
PBV= Price to Book value
Ut = Error term

Hausman Test
The Hausman test (Yair Mundlak 1978) is the most commonly used method for evaluating fixed and random effects. If variables are statistically correlated, then the fixed-effects estimation is consistent and efficient, whereas the random- effects estimation is inconsistent, and the fixed-effects model should be adopted. Conversely, if the variables are statistically uncorrelated, then the random-effects estimation is consistent and efficient, whereas the fixed-effects estimation is consistent but inefficient, and the random-effects model should be adopted.

Analysis of Results and Discussion of Findings
To achieve the purpose of the study as stated in chapter one, the researcher used panel data sourced from annual reports and stock exchange fact sheet. Data used in this study were cross-sectional data of quoted industrial good manufacturing firms.

Table 1: Analysis of Panel Unit Root at first difference

Series: D(SMR,2)				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-22.2877	0.0000	15	90
Im, Pesaran and Shin W-stat	-7.67642	0.0000	15	90
ADF - Fisher Chi-square	103.551	0.0000	15	90
PP - Fisher Chi-square	233.948	0.0000	15	105
Series: D(MKTR,2)				
Levin, Lin & Chu t*	-40.9445	0.0000	15	90
Im, Pesaran and Shin W-stat	-18.0202	0.0000	15	90
ADF - Fisher Chi-square	220.685	0.0000	15	90
PP - Fisher Chi-square	227.811	0.0000	15	105
Series: D(EPS,2)				
Levin, Lin & Chu t*	-13.1287	0.0000	15	90
Im, Pesaran and Shin W-stat	-3.55348	0.0002	15	90
ADF - Fisher Chi-square	71.1459	0.0000	15	90
PP - Fisher Chi-square	65.4142	0.0002	15	105
Series: D(PBV,2)				
Levin, Lin & Chu t*	-19.4308	0.0000	15	90
Im, Pesaran and Shin W-stat	-11.4839	0.0000	15	90
ADF - Fisher Chi-square	104.336	0.0000	15	90
PP - Fisher Chi-square	217.444	0.0000	15	105

Table 1: Analysis of Panel Unit Root at first difference
Source: Computed by Researchers from E-view 9.0

The results are represented in the table 1 above and expression of the results for the unit root test. Unit root test is often used when the research aims at the establishment to know whether variables of the study in the data set are stationary or not. In this study, there is an application of unit root test before regression analysis. In most researches where unit root test has been applied, it has had a greater impact which is the elimination of spurious results produce that is also harmful. This shows the importance of stationary data where the presence of a constant trend regardless of its positivity or a negativity, helps in elimination of spurious results. The study accepted the alternative hypothesis and rejected the null hypothesis for the following reasons. First and foremost, the output file of the results indicates that all the variables are stationary at first difference. This has an implication of the rejection of the null hypothesis and acceptance of the alternative hypothesis because of no significant trend yet availability of stationary data.

Table 2: Presentation of Cointegration Test

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-3.036036	0.0044	-4.818428	0.0034
Panel rho-Statistic	3.075673	0.0089	3.583878	0.0098
Panel PP-Statistic	-8.687130	0.0000	-6.629451	0.0000
Panel ADF-Statistic	0.530147	0.7020	-1.234920	0.1084
	Statistic	Prob.		
Group rho-Statistic	5.350024	0.0000		
Group PP-Statistic	-9.116478	0.0000		
Group ADF-Statistic	-1.856096	0.0317		

Source: Computed by Researchers from E-view 9.0

The Pedroni Residual Co-integration technique is applied to explore the possibility of long-run equilibrium's-integration test clarifies the existence of long-run equilibrium relationship between the variables. The study estimated that the Pedroni (1999) extends the procedure of residual-based panel Co-integration tests model using market value (Dependent variable) and the independent variables with Individual intercept and individual trend. There are seven test results (panel v-Statistic, Panel rho-Statistic, Panel PP-Statistic, Panel ADF-Statistic, Group rho-Statistic, Group PP-Statistic, Group ADF-Statistic). In this seven test, there are eleven outcomes. From the table, we reject the null hypothesis of no co-integration and accept the alternative and conclude that there is co-integration between the market variables and stock market return of the quoted industrial goods manufacturing firms within the time scope of this study.

Table 2: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Pooled Effect Regression Model				
MKTR	-3.344642	0.704358	-4.748499	0.0004
DDY	1.329764	0.515969	2.577217	0.0230
EPS	0.517332	0.274985	1.881311	0.0825
PBV	-0.276856	0.764473	-0.362153	0.7231
C	-0.801485	0.080378	-9.971395	0.0000
R-squared	0.824555	Mean dependent var		0.263529
Adjusted R-squared	0.784068	S.D. dependent var		6.740286
S.E. of regression	3.132111	Akaike info criterion		5.323616
Sum squared resid	127.5315	Schwarz criterion		5.519666
Log likelihood	-41.25073	Hannan-Quinn criter.		5.343103
F-statistic	20.36577	Durbin-Watson stat		1.530214
Prob(F-statistic)	0.000034			
Total panel (balanced) observations: 189				
Fixed Effect Regression Model				
MKTR	0.277336	0.150673	1.840656	0.0928
DDY	0.343958	0.172312	1.996136	0.0713
EPS	0.961860	0.142418	6.753777	0.0000
PBV	0.353681	0.131118	2.697419	0.0208
C	0.446187	0.070548	6.324540	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.964685	Mean dependent var		-0.801765
Adjusted R-squared	0.948632	S.D. dependent var		25.55273
S.E. of regression	5.791385	Akaike info criterion		6.621184
Sum squared resid	368.9415	Schwarz criterion		6.915260
Log likelihood	-50.28007	Hannan-Quinn criter.		6.650416
F-statistic	60.09594	Durbin-Watson stat		1.470312
Prob(F-statistic)	0.000000			
Random Effect Regression Model				
MKTR	-3.589878	0.084123	2.523410	0.0126
DDY	2.012287	0.067995	3.050635	0.0027
EPS	0.898057	0.875915	0.828527	0.4086
PBV	0.466328	0.739465	1.679999	0.0949
C	-6.139066	3.951008	-0.823587	0.4114
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			10.90800	1.0000
Weighted Statistics				
R-squared	0.377700	Mean dependent var		-1.289226
Adjusted R-squared	0.358493	S.D. dependent var		12.85983
S.E. of regression	10.29996	Sum squared resid		17186.46
F-statistic	19.66493	Durbin-Watson stat		1.026110
Prob(F-statistic)	0.000000			
Unweighted Statistics				

R-squared	0.377700	Mean dependent var		-1.289226
Sum squared resid	17186.46	Durbin-Watson stat		1.026110
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		11.323520	5	0.0025

Source: Computed by Researchers from E-view 9.0

The Hausman Specification Test shows that Random Effect Model is not appropriate. This is because of the chi-square and p-values of 11.323520 and 0.0025 respectively. The p-value is greater than 5%. The study carries out fixed effect panel regression to determine the combined impacts of factors on stock returns of large size firms in Nigeria. The summary of the panel random effect regression is appropriate.

The coefficient shows that about 94.8 percent of changes in stock returns of industrial goods manufacturing firms in Nigeria are described by independent variables. The remaining 5.2 percent is determined by the residual. The overall result shows fitness of the model with F-statistic and a p-value of 19.66493 and 0.0000 respectively. In testing research hypotheses formulated, the study depends on results presented in table 5. The null hypothesis is accepted if the probability value is greater than 0.05, otherwise accept the alternative hypothesis. The study found that the model is statistically significant based on the value of f-statistic and probability. The regression coefficient proved that market capitalization ratio has positive and significant effect on stock return of the quoted industrial goods manufacturing firms, dividend yield has positive and significant effect on stock return of the quoted commercial banks, earnings per share has positive but no significant effect on stock return of the quoted industrial goods manufacturing firms while price to book value have positive and no significant effect on stock market return of the quoted industrial goods manufacturing firms.

This study examined the effect of market variables on the stock return of quoted industrial goods manufacturing firms in Nigeria. The study found that 94.8 percent variation in stock return of the quoted industrial goods manufacturing firms was explained by variations in the market variables. The regression coefficient proved that market capitalization ratio has positive and significant effect on stock return of the quoted industrial goods manufacturing firms , dividend yield has positive and significant effect on stock return of the quoted industrial goods manufacturing firms , earnings per share has positive but no significant effect on stock return of the quoted commercial banks while price to book value have positive and no significant effect on stock market return of the quoted industrial goods manufacturing firms.

The positive effect of dividend policy on stock prices of the quoted manufacturing firms confirm our a-priori expectations and confirm the information signaling hypothesis, the findings is also in line with efficient market hypothesis. The positive findings confirm the Gordon opinion that dividend policy is relevant as oppose to Modigliani and Miller irrelevant dividend policy hypothesis. the positive finding confirm the finding of Goddy (2010) that ability of accounting information to affect investors' equity share investment decision has been questioned, the findings of Novak (2008) that accounting may fail to convey useful information because it is biased, because it is not timely or because it is manipulated, the findings of Menike and Wang (2013) that the equity share investors' behaviour on the announcement of annual reports was different from that outside the test period and that the positive reactions of investors could be attributed to the favourable information in annual financial reports and the findings of Almumani (2014) that, there is a positive correlation between the independent net book value per share (correlation coefficient =.81)) and dependent variable equity share investment and it is also significant at 1% probability level.

Conclusion and Recommendations

The study found that 94.8 percent of changes in stock returns of moderate firms in Nigeria are described by independent variables. The remaining 5.2 percent is determined by the residual. The overall result shows fitness of the model with F-statistic and a p-value of 60.09594 and 0.000000 respectively. The study further found that the model is statistically significant based on the value of f-statistic and probability. The regression coefficient proved that market capitalization ratio has positive and significant effect on stock return of the quoted industrial goods manufacturing firms, dividend yield has positive and significant effect on stock return of the quoted industrial goods manufacturing firms, earnings per share has positive but no significant effect on stock return of the quoted industrial goods manufacturing firms while price to book value have positive and no significant effect on stock market return of the quoted industrial goods manufacturing firms.

Recommendations

i. Based on the findings of the study it is recommends that government and policy makers should design and implement more stringent rule where firms will be compelled and monitored on providing high quality financial reporting, so as to be reporting earnings that reflect their actual performance. This would prevent investors from falling on to the trap of earnings manipulation (as it happened to shareholders of Cadbury Nigeria plc.).
ii. Prospective investors should not only focus on huge returns for investing in smaller capitalized or high levered firms; rather, further analysis need to be carried out to tradeoff between risk and returns.
iii. The government should fine turned the stock market policy and institute a consistent policy plan to mobilize surplus funds from abroad, which would be injected into the capital market for significant development.
iv. It is desirable for returns on equities to be inflation hedge. For Nigerian equities to have this property, we recommend full deregulation of the entire price formation process in the capital market.
v. The government and the securities exchange commission (SEC) should create a special fund called “stabilization securities fund” to stabilize the market in the presence of external shocks. This to make the market attractive to proposed, existing and foreign investors.
vi. Considering the level of process of the Nigerian capital market, to external shock the concerned authorities should institute policies and mechanism that will stabilize significant macroeconomic indicators in order to promote the capital market.

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