THE ANALYSIS OF THE IMPACT OF CAPITAL MARKET OPERATION ON INDUSTRIAL GROWTH IN NIGERIA

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ABSTRACT

This study examined the effects of capital market operation on industrial growth in Nigeria from 1981 to 2015. Secondary data were sourced from Central Bank of Nigeria (CBN) Statistical Bulletins from 1981 to 2015. Multiple regressions analysis and Pearson product moment correlation were employed to examine the relationship, and the effect of independent variables (market capitalization, Market volume, exchange rate, and All-Share index) and dependent variable (INDGRT). Findings reveals that there is a positive effect of Market capitalization on industrial growth, and economic growth (β = .0762594; .3638583; $p \leq 0.05$) in Nigeria. All share index (ASI) has negative significant effect on industrial growth (β = -.0197857; $p \leq 0.05$) and economic growth (β = -.2413219; $p \leq 0.05$) in Nigeria. Also, exchange rate (EXCHNG) has negative significant effect on industrial growth (β =--.124867; $p \leq 0.05$). It is concluded that there is a positive significant impact of capital market on industrial and economic growth in Nigeria. Exchange rate has negative effect on industrial growth in Nigeria. It is now recommended that government should find all means to reduce exchange rate in Nigeria so that the cost of raw materials imported by industrial sector is reduced so that it will ultimately enhance their performance. Government should also increase the liquidity of capital market in order to quench the financial thirst of the industrial sector in Nigeria.

Keywords: Capital Market; Industrial growth; Economic growth; Exchange rate; Nigeria

INTRODUCTION

Background to the study

Governments and industry raise long-term capital for financing and expanding new projects through capital market in Nigeria. If capital resources are not provided to those economic areas, especially industries where demand is growing and which are capable of increasing production and productivity, the rate of expansion of the economy often suffers. A unique benefit of the stock market to corporate entities is provision of long-term, debt financing and non-debt financial capital. Through the issuance of equity securities, companies acquire perpetual capital for development. In fact, the provision of equity capital in the market enables companies to avoid over-reliance on debt financing which ultimately improving corporate debt-to-equity ratio. Capital formation, however, can only be achieved through conscious efforts at savings mobilization and accumulation **of** resources by both the public and private sectors of an economy. Financial markets generally provide avenue for savings of various tenors that are made available for utilization by various economic agents. The capital market, which is a major

section of financial markets, has been identified as an institution which contributes to the socio-economic growth and development of emerging and developed economies. This is made possible through some of the vital roles it play such as channeling resources, promoting reforms to modernize the financial intermediation capacity sector to link deficit to the surplus sector of the economy, mobilization and allocation of savings among competitive uses which are critical to local investment (Alile, 1984). Capital market also channels capital or long-term resources to firms with relatively high and increasing productivity, thus enhancing industrial expansion and growth.

The scarcity of long-term capital has caused a great challenge to industrial development in Nigeria. But capital market is the driver of any economy to growth and development which is embedded with industrialization because it is essential for the long-term growth capital formation. It is crucial in the mobilization of savings and channeling of such savings to profitable self-liquidating investment. The liquidity of a stock market relates to the degree of access, which investors have in buying, and selling of stocks in such a market. The more liquid a stock market is, the more investors will be interested in trading in the market. The lack *of* adequate number of investors in the Nigerian stock market is a reflection of problem of illiquidity in the market (Usman and Adegbite 2012)). With this assertion, this study examines the extent at which Nigeria capital market has contributed immensely to industrial development in Nigeria.

Objectives of the study

(i) To examine the effects of capital market operation on industrial growth in Nigeria.
(ii) To evaluate the impact of capital market on economic growth in Nigeria.
(iii) To determine the relationship between Capital market, Industrial and Economic growth in Nigeria

LITERATURE REVIEW

Capital market, Industrial Development, and Economic growth in Nigeria

The Nigeria capital market is sub-divided into primary and secondary markets. New securities are issued in the primary market and companies issuing these securities receive the proceeds for the sale. The secondary market provides a forum for the sale of existing securities by one investor to another investor. Thus, the efficient functioning of the market paves way for the primary market by making investors more willing to purchase new securities in anticipation of selling such in the secondary market. These securities are the major instrument used to raise funds at the capital market. Capital market according to Akingboungbe (1996) is a market where medium to long-term finance can be raised.). Ekezie (2002) asserted that capital market is the market for dealings (that is, Lending and Borrowing) in longer-term loan-able funds. The development of the capital market and apparently the stock market provides opportunities for greater funds mobilization, improved efficiency in resource allocation and provision of relevant information for appraisal (Inanga and Emenuga, 1997).

Mbat (2001) describes capital market as a forum through which long-term funds are made available by the surplus to the deficit economic units. It must, however be noted that although all the surplus economic units have access to the capital market, not all the deficit economic units have the same easy access to it. The restriction on the part of the borrowers is meant to enforce the security of the fund provided by the lenders. In order to ensure that lenders are not subjected to undue risk,

borrowers in the capital market need to satisfy certain basic requirement. Companies can finance their operations by raising funds through issuing equity (ownership) or debenture bond. Securities are structured to mature in period of years from the medium to the long-term of usually between five and twenty-five years. Capital market offers access to a variety of financial instruments that enable economic agents to pool, price and exchange risk. It encourages savings in financial form. This is very essential for government and other institutions in need of longterm funds and for suppliers of long-term funds (Nwankwo, 1991).

Industrialization has been paid optimum attention to and various development economists have described it to be the prime mover of the economy and potent factor in the development process. Industrialization enhances rapid growth in developing countries such as Nigeria. Industrialization is the system of production that has arisen from the steady development study and use of scientific knowledge. It is based on the division of labour and on specialization and uses mechanical, chemical and power aids in production. All viable, efficient and effective industries must be listed in Nigerian capital market, and their performance can also be measured through the capital market. According to Adewuyi and Olowokere (2011) Capital market has a great impact on the development of Nigeria economy; it promotes an efficient and provides opportunities for investment diversification. The improved delivery and settlement processes has reflected positively on the liquidity of the capital market, as well as put the Nigerian stock market on the same pedestal with some of the leading international stock exchanges. The automation of the clearing, depository and settlement system and the transition to Automated Trading System (ATS) have enhance the opportunity for price discovery in our market and raised overall market efficiency. In the same vein, automation has made our capital market truly international and emerging market, giving the nation a strong and dynamic capital market, which can be relied upon by foreign investors for efficient portfolio management. Moreover, industrialisation is very germane to the development of any nation most especially the underdeveloped ones. Manufacturing activity can only flourish in a good investment climate with the following features in place :physical infrastructure ,financial markets and creation of the enabling environment for investment and determine the opportunities and incentives for firms to invest productively, create job and expand business (Malik,Teal and Baptist 2004). Well-functioning financial markets are an important ingredient for promoting economic growth. Developed financial markets allow access of firms to new markets, and help to promote greater competition, innovation and productivity in the economy. Even when faced with profitable investment opportunities, many firms lack the resources to exploit these. With financial markets unwilling to lend, investment decisions of firms become more dependent on internally generated cash flow or resources from family, friends and the informal sector (Malik,Teal and Baptist 2004).

METHODOLOGY

Method of data collection

Secondary data was used in this study. The relevant data were sourced from the Central Bank of Nigeria (CBN) statistical Bulletin from 1981 to 2015. The variables for which data were sourced include: industrial growth, Market capitalisation, All-Share index, market volume, Exchange rate, and Gross Domestic Product from 1981 to 2015.

Method of Data Analysis

Regression analysis technique was used to measure the effect of independent variables (Market capitalisation, All-Share index, Market volume and Exchange rate) on dependent variable (Industrial growth). While Pearson product moment correlation was used to measure the relationship between a dependent variable (Industrial growth) and independent variables (Market capitalisation, All-Share index, Market volume and Exchange rate).

Model specification

Two models were employed in this study. The first model examined the effects of the capital market on Industrial growth in Nigeria. Industrial growth was the explained variable while the explanatory variables are market capitalization, real exchange rate, and All-Share index. The second model examined the effects of the capital market on Economic growth in Nigeria. Gross Domestic Product (GDP) was the explained variable while the explanatory variables are market capitalisation, All-Share index, and market volume.

Model 1

The functional form on which our econometric model is based is given as;

$$INDGRT = f(z1, z2, z3, z4, \mu) \quad (1)$$

Where M is Manufacturing index = dependent variable, $z1 - z4$ are independent variables or macro-economic factors and F represents the functional notation.

This can be specifically stated as;

$$INDGRT = ao + a1ASI + a2\ MCAP + a3MVOLM + a4EXCHNG + \mu \quad (2)$$

$$LOGINDGRT = ao + a1LOGASI + a2\ LOGMCAP + a3LOGMVOLM + a4LOGEXCHNG + \mu \quad (3)$$

Model 2

Where P is economic growth or GDP = dependent variable, $z1 - z4$ are independent variables or macro-economic factors and F represents the functional notation. This can be specifically stated as;

$$GDP = ao + a1ASI + a2MVOLM + a3MCAP + \mu \quad (4)$$

$$LOGGDP = ao + a1LOGASI + a2\ LOGMCAP + a3LOGMVOLM + a4LOGEXCHNG + \mu \quad (5)$$

$$r = \frac{n\Sigma wc.sf - \Sigma wc\Sigma sf}{\sqrt{\left(n\Sigma wc^2\right) - \left(\Sigma wc\right)^2}\ .\ \sqrt{\left(n\Sigma sf^2\right) - \left(\Sigma sf\right)^2}} \quad (6)$$

where as

n = no of observations

r = Coefficient of correlation showing the degree of relationship between the dependent variable and independent variables.

GDP – Gross Domestic Product
MCAP – Market Capitalisation
ASI – All Share Index
MVOLM – Market Volume
INDGRT – Industrial Growth
EXCHNG – Exchange rate

RESULTS AND DISCUSSION

Table 1: Descriptive Analysis of the significance of components of Capital Market on Industrial Growth in Nigeria

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
INDGRT	36	134.8935	21.21988	83.4	178.1
ASI	36	11308.49	14136.89	100	57990.22
MCAP	36	1766378	3472717	4025.7	1.33e+07
MVOLM	36	233096.3	571468.3	136.2	2379143
EXCHNG	36	54.3022	58.10888	.5464	150.3

Source: Researchers' computation (2017) using STATA Version 12

The descriptive statistics of the analysis presented in Table 1 above shows that industrial growth (INDGRT) as the dependent variable which had a mean value of 134.8935 with a standard deviation of 21.21988, it had a maximum value of 178.1 and a minimum value of 83.4. All share index (ASI) had a mean of 11308.49 and standard deviation of 14136.89 with positive maximum and minimum value of 57990.22 and 100 respectively, which signifies that for every 1% increase in All share index (ASI), industrial growth (INDGRT) increases by to 1.13%, this implies that there is a positive relationship between All share index (ASI) and industrial growth (INDGRT). Market capitalization (MCAP) , Market volume (MVOLM) and Exchange rate (EXCHNG) have the mean values of 1766378, 233096.3, and 54.3022 respectively with standard deviations of 3472717, 571468.3, and 58.10888 with positive maximum values of 1.33e+07, 2379143 and 150.3 with positive minimum values of 4025.7, 136.2 and .5464. This implies that for every 1% increase in Market capitalization (MCAP), Market volume (MVOLM) and Exchange rate (EXCHNG) there will be an increase in industrial growth (INDGRT) in Nigeria. It can be deduced from the analysis that there is a positive relationship between the dependent variables and the independent variables. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted that is there is a positive significant relationship between capital market and industrial growth in Nigeria.

Table 2: The Effects of the Capital Market on Industrial Growth in Nigeria

Dependent variable	Independent variables	Coefficient	Standard Error	T	P>|t	[95%Conf. interval]
LOGINDGRT	LOGASI	-.0197857	.0562136	-0.35	0.728	-.1363655 .0967942
	LOGMCAP	.0762594	.0626003	1.22	0.236	-.0535657 .2060845
	LOGMVOLM	-.0945176	.0278911	-3.39	0.003	-.1523601 -.036675
	LOGEXCHNG	-.124867	.0361361	-3.46	0.002	-.0499254 .1998086
	constant	4.594139	.2575266	17.84	0.000	4.060062 5.128216

R-squared = 0.7183	Adj R-squared = 0.6671	Prob > F = 0.0000	F(4, 22) = 14.03
			Root MSE = .09205

Source: Researchers' computation (2017) using STATA Version 12

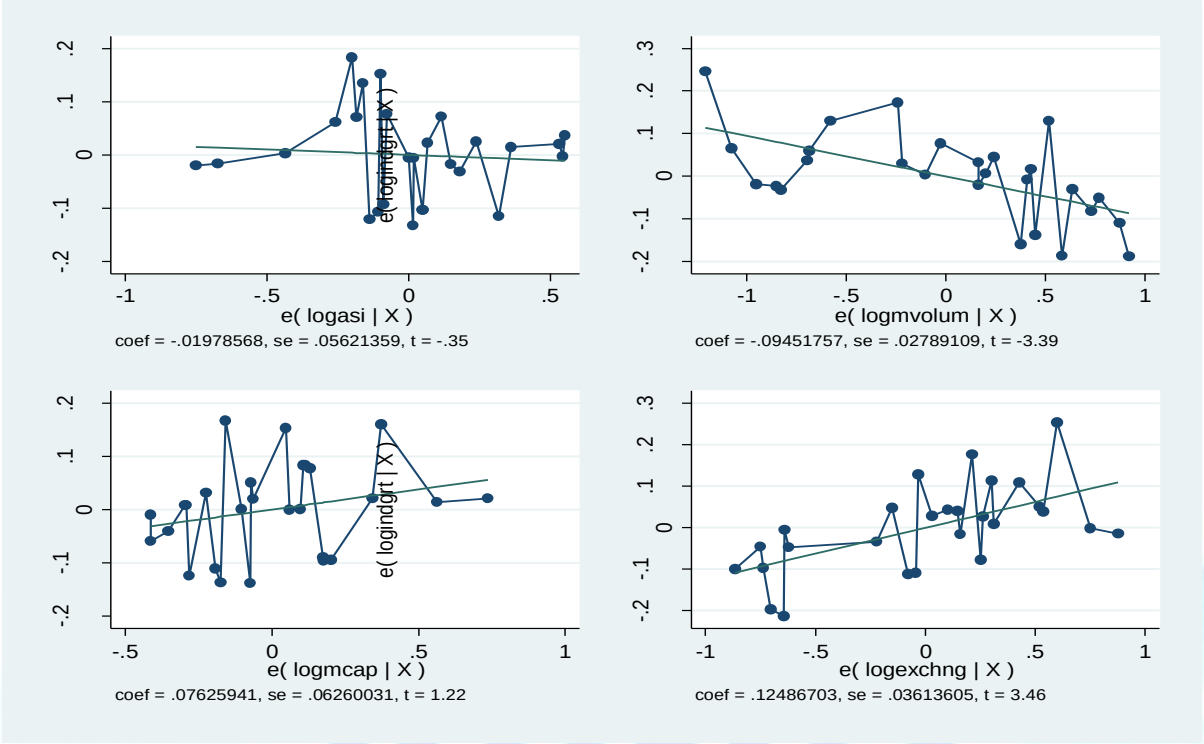

Figure 1 : The regression plots of the Effects of the Capital Market on Industrial Growth in Nigeria

Table 2 shows the effect of capital market on Industrial growth in Nigeria, 1% increase in all share index (ASI) reduces industrial growth (INDGRT) by 0.19%, this shows that there is a negative insignificant effect of All share index (ASI) on industrial growth. Also, 1% increase in Market capitalization (MCAP) increases industrial growth by 0.076%, this shows that there is positive significant effect of Market capitalization (MCAP) on industrial growth. More so, 1% increase in Market volume (MVOLM) reduces industrial growth (INDGRT) by 0.09%, this shows that there is a negative significant effect of market volume (MVOLM) on industrial growth. In the same vein, 1% increase in Exchange rate (EXCHNG) reduces industrial growth by 0.12%, this indicates that there is a negative significant effect of Exchange rate (EXCHNG) on industrial growth.

The R^2 coefficient is 0.7183 (71.8%) which is the coefficient of determination indicates that the explanatory variables (All share index , Market capitalization, Market volume and Exchange rate) accounted for 71.8% of the variation that influence industrial growth, but the remaining 28.2% are for stochastic error. Given the adjusted R^2 as 0.6671 (66.7%), it predicts the independence variables incorporated into this model were able to determine the effect of capital market performance on Industrial growth (INDGRT) to 71.96%. It is also indicates that capital market performance accounted for 66.7% of the variation in the influence on Industrial growth (INDGRT).

Table 3: The Effects of the Capital Market on Economic growth in Nigeria

Dependent variable	Independent variables	Coefficient	Standard Error	T	P>|t	[95%Conf. interval]
LOGGDP	*LOGASI*	-.2413219	.0544618	-4.43	0.000	-.3542689 -.128375
	LOGMVOLM	-.0471487	.0270219	-1.74	0.095	-.1031888 .0088913
	LOGMCAP	.3638583	.0606495	6.00	0.000	.2380789 .4896377
	LOGEXCHNG	.0655152	.03501	1.87	0.075	-.007091 .1381214
	constant	10.44979	.2495014	41.88	0.000	9.93236 10.96723

R-squared = 0.9640	Adj R-squared = 0.9575	Prob > F = 0.0000	F(4, 22) = 147.42
			Root MSE = .08918

Source: Researchers' computation (2017) using STATA Version 12

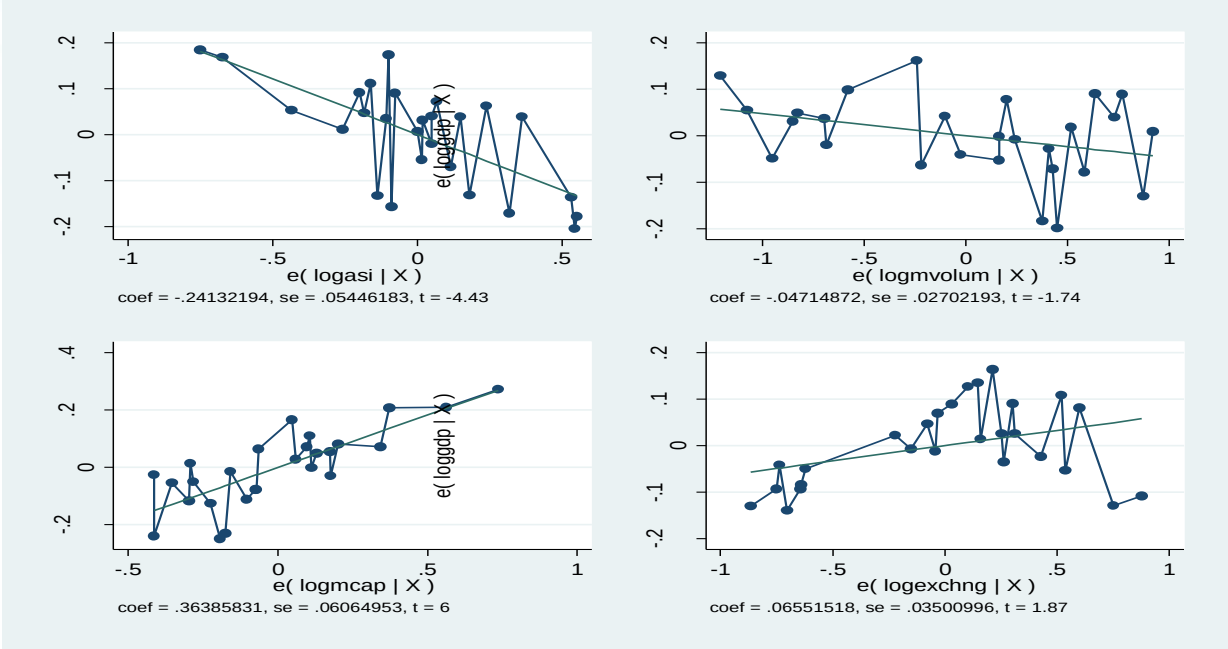

Figure 2: The regression plots of the Effects of the Capital Market on Economic Growth in Nigeria

Table 3 shows the effect of capital market on economic growth in Nigeria, 1% increase in All share index (LOGASI) reduces LOGGDP by 0.24%, this shows that there is a negative significant effect of All share index (LOGASI) on Economic growth (LOGGDP). Also, 1% increases in Market volume (LOGMVOLM) reduces LOGGDP by 0.04%. This specifies that there is an inverse effect of Market volume on Economic

growth (LOGGDP). Conversely, 1% increase in Market capitalization (LOGMCAP) increases LOGGDP by 0.36%, this advocates that there is a positive significant effect of Market capitalization (LOGMCAP) on Economic growth (LOGGDP) in Nigeria. More so, 1% increase in Exchange rate (LOGEXCHNG) increases GDP by 0.06%, this shows that there is a positive insignificant effect of exchange rate on Economic growth (LOGGDP).

Given the R^2 which is the coefficient of determination as **66.4**% with high value of Adjusted R^2 as 65.8%, it indicates that the independent variables incorporated into this model were able to determine the effect of capital market on economic growth in Nigeria to 65.8%. The F Probability statistic (Prob > F = 0.0000) also confirms the significant of this model.

Table 4: Relationship between Capital market, Industrial Development, and Economic growth in Nigeria

	INDGRT	GDP	AIS	MVOLUM	MCAP	EXCHNG
LOGGDP	1.0000					
LOGINDGRT	0.3899*	1.0000				
LOGAIS	0.9067*	0.4029*	1.0000			
LOGMVOLUM	0.9363*	0.2305	0.9132*	1.0000		
LOGMCAP	0.9471*	0.4132*	0.9733*	0.9647*	1.0000	
LoGEXCHNG	0.8389*	0.6244*	0.9511*	0.8301*	0.9241*	1.0000

****. Correlation is significant at the 0.01 level (2-tailed)*. Correlation is significant at the 0.05 level (2-tailed). Source: Researchers' computation (2017) using STATA Version 12**

Table 4 shows the relationship between Capital market, Industrial and Economic growth in Nigeria. The result in table 4 shows that industrial growth (INDGRT) has positive significant relationship with Economic growth (GDP) with the value 0.3899*,* this implies that an increase in industrial growth (INDGRT) leads to increase in Economic growth (GDP) in Nigeria. All share index (ASI) also has positive significant relationship with Economic growth in Nigeria with the value of 0.9067*. This also indicates that an increase in All share index brings increase in Economic growth (GDP) in Nigeria. Also, Market Volume (MVOLUM) has positive and significant correlation with Economic growth (0.9363*) in Nigeria. This result implies that an increase in Market Volume also leads to increase in Economic growth (GDP) in Nigeria. In the same vein, Market capitalisation also has positive significant relationship with Economic growth (0.9471*) in Nigeria. In addition, Exchange rate also has positive significant relationship with Economic growth (0.8389*) in Nigeria. The table also revealed that all the predictor variables have a positive significant relationship with economic growth in Nigeria.

More so, from table 4, All share index (ASI) also has positive relationship with industrial growth (INDGRT) in Nigeria with the value of 0.4029*. This also indicates that an increase in All – share index increases industrial growth (INDGRT) in Nigeria. Also, Market Volume (MVOLUM) has positive correlation with industrial growth (0.2305) in Nigeria. This result implies that an increase in Market Volume also increases industrial growth (INDGRT) in Nigeria. In the same vein, Market capitalisation also has positive significant relationship with industrial growth (0.4132*) in Nigeria. In addition, Exchange

rate also has positive relationship with industrial growth (0.6244*) in Nigeria. All the predictor variables have a positive significant relationship with industrial growth (INDGRT) in Nigeria with the exception of Market volume.

Summary and Conclusion

This study examined the extent at which Nigeria capital market has contributed immensely to industrial growth in Nigeria, and also investigated the effects of capital market operation on Economic growth in Nigeria from 1981 to 2015. The study used multiple regression analysis technique to estimate the empirical models of the study. However, the results showed that there is a positive effect Market capitalization on industrial growth. All share index (ASI) and market volume also have negative significant on industrial growth in Nigeria. Also, exchange rate (EXCHNG) has negative significant effect on industrial growth. In addition, Market capitalization also has positive significant effect on economic growth in Nigeria. Market volume impacted economic growth negatively.

Based on the findings, it is concluded that there is a positive significant effect of capital market on industrial and economic growth in Nigeria. Exchange rate has negative significant effect on industrial growth in Nigeria. It is now recommended that government should find all means to reduce exchange rate in Nigeria so that the cost of raw material imported by industrial sector will be reduced which will ultimately enhance the profitability and performance of industrial sector in Nigeria. Also, Government should increase the liquidity of capital market in order to quench the financial thirst of the industrial sector in Nigeria.

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