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CAPITAL MARKET: IT'S EFFICACY ON NIGERIAN INDUSTRIAL GROWTH

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ABSTRACT

This study examined the impact of capital market on industrial growth in Nigeria, using time series data for the period 1986-2018. The co-integration and error correction model was employed for the empirical analysis and the selected variables were found to be co-integrated, suggesting that significant long run relationship prevailed among the variables of study. The empirical result of the error correction model revealed that Market Capitalization (MCAP) and All Share Index (ASI)exert positive and significant influence on industrial growth in Nigeria while Value of Transactions (VTS) exert negative and significant influence on industrial growth in Nigeria during the period of study. The significant influence of MCAP and ASI on Industry Growth indicates that they are strong capital market indices which are capable of accelerating industrial growth in Nigeria, if efficiently administered. The study therefore recommended that the Value of Transactions (VTS) should be increased in the capital market through the sale of alternative investment securities such as derivatives, convertibles, futures, swaps and options. Also, government should restore investors' confidence in the market by ensuring regulatory authorities portray efficiency, transparency, fair trading transactions and deal on in the stock market so as to drive the growth of the industrial sector in the country. Above all, tax holiday and other incentives should be given by the government to encourage foreign and local companies to list in the Nigerian Stock Exchange.

KEYWORDS: *Market Capitalization, All Share Index, Value of Transactions, Industry Value Added, Nigeria*

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1. INTRODUCTION

The role of capital market for business, industrial and economic growth of a country has been recognized by researchers, academics, investors, economists and policy makers around the globe. Capital market is a segment of the financial in which long term financial instrument with maturity in excess of one year are transacted (Ekiran, 1999). Capital market can be described as an aggregate of institution and mechanism through which long term funds are mobilized for investment purposes. It is a network of financial institution and infrastructures that interact to mobilize and allocate long term funds for the economy.

Capital market is a prime tool that drives the economy on the path to growth and development. It is the strong hub for long term investment and capital formation. In Nigeria, capital market provides government and listed companies opportunities to raise long-term capital to meet their need for long term project and expansion in business. The market also provides portfolio diversification which allows investors to maximize returns on theirs and reduce risks. With the provision of equity capital, the market reduces the over reliance of corporate sector on short term financing for long term projects and also provide opportunities for government to finance projects aimed at providing essential amenities in the country .

In Nigeria, empirical evidence from previous studies have shown that capital efficacy- industrial growth nexus has not been well researched. To the best of the researchers knowledge, studies carried out by Owolabi and Adegbite (2012); Shaibu, Osemwengie and Oseme (2014); Ifionu and Omojefe (2013); Okpoto (2015); Obiakor (2016), Ologunwa and Sadibo (2016); Taiwo, Adedayo and Evawere (2016); Odo, Anoke, Onyeisi and Chukwu (2017) and Ugbogbo and Aisien (2019) all examined capital market in relation to economic growth,with exception to Ibi, Joshua, Eja, and Olatunbosun (2015) and Owui (2019) that examines the impact of capital market (industrial loan, equity, market capitalization) on industrial sector development in Nigeria using industrial production index as proxy for industrial growth. Therefore, this paper bridges the gap by regressing Industry Value Added (IVA) variable against the explanatory variables. The IVA is found to be an International standard for capturing the manufacturing sector, mining, construction as well electrical operations in the economy (World Bank, 2018; OECD, 2018).

The objective of this study is to empirically examine the efficacy of capital market indices on industrial growth in Nigerian economy for the period 1986-2018 using co-integration analysis and error correction estimation model. Specifically the study aims to:

i) Ascertain the influence of market capitalization on industry value added in Nigeria.
ii) Investigate the nature of relationship between value of transactions and industry value added in Nigeria.
iii) Determine the nature of relationship between all shares index and industry value added in Nigeria.

The rest of the study is structured as follows: Section two reviews the literature relating to capital market and industrial growth. Section three presents the methodology and model specification. Section four discusses the empirical results while section five presents the concluding remarks and recommendations.

2.1 CONCEPTUAL ISSUES

Capital market is a market where buyers and sellers meet to exchange a unique intrinsic commodity - shares, stocks, bonds- for the purpose of raising long-term capital for the modernization and expansion of projects by companies, governments, and allied parastatals (Obiakor, 2016). According to Ajayi and Odetayo (2001), capital is a market for sales and purchases of medium and long term securities. Osasze (2007) asserts that capital market is a segment of the financial system that accommodates certain institutions for the creation, custodianship, distribution and exchange of financial assets and management of long term liabilities and gross fixed capital formation. The participants in the capital market are brokers and dealers, issuing houses registrars, trustees and portfolio managers, investment advisors and securities exchanges that supervise the operations of the market.

Capital market is expected to have depth and breadth, price continuity and liquidity and above all to operate freely from all impediment .It channels savings and investment between suppliers of capital such as retail investors and institutional investors, users of capital like businesses, government and individuals. Capital market activities are segmented into primary and secondary market. The primary market is the market where new securities are traded while secondary market is the market where existing securities are traded. The secondary market provides opportunity for owners of shares or bonds to sell their holding quickly, thus assuring them high level of liquidity, which also enhance the effectiveness of the primary market. The capital market encourages the inflow of foreign capital

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when foreign companies or investors invest in domestic securities. It also provides a means of allocating the nation's real and financial resources between various industries and companies (Osaze, 2007) .On the contrary, industrial growth represent a deliberate and sustained application and combination of suitable technology, management and other resources to move an economy from a traditional low level of production to a more unformatted and efficient system of mass production of goods and services (Owui, 2019).

2.2 THEORETICAL FRAMEWORK

a) Efficient Market Hypothesis (EMH)

The efficient Market Hypothesis (EMH) which was developed by Fama (1965) is an academic concept which provides a framework for examining the efficiency of the capital market. The theory states that an efficient market is one in which security prices adjust rapidly to the infusion of new information and that current stock prices fully reflect all relevant and available information about the affected security at any given time. Fama classified the efficient market hypothesis into the weak –form, semi-strong form and strong-form market efficiency, each depending on the nature of information available to each participant test of efficiency.

The weak-form of market efficiency postulates that current stock prices fully reflect all information implied by its historical sequences of prices, such that investors cannot use the knowledge of historical pricing trends to predict future price of the asset nor consistently beat the market to earn superior high return or profit. The semi-strong form of market efficiency proposes that current stock prices correctly reflect all publicly available information about the firm issuing the security, implying that no investor can use fundamental analysis of the securities to earn abnormal profit or above average returns in the market. The strong-form of market efficiency theorizes that current stock prices reflect all publicly and private information about the securities such that those who have access to privileged information or what might be considered insider information cannot use such information to earn superior returns or high profit in the market.

b) Random Walk Theory

This is a financial theory popularized by Malkiel in 1973 in which the successive price movement of stocks in the market are assumed to be serially independent of each other and knowledge of the historical price of a security cannot be reliably used to predict the size or direction of future price movement using fundamental or technical analysis. The theory holds that stock prices fluctuate randomly about their intrinsic value and that current stock prices fully reflect all available information about a security so much that an investor cannot outperform the market consistently. The protagonists of this approach advocate a buy and hold strategy as oppose to an attempt to beat the market, hence, the random walk hypothesis is a special case of the more general efficient market hypothesis (Fisher and Jordan, 1995; Owui, 2019).

c) Fundamental analysis

This is an evaluation technique that was championed by Graham and Dodd in 1934 in which the authors argue that the intrinsic value or true worth of a security is estimated from a thorough analysis of underlying factors related to the economy, industry and company specify variables that affect the security. The theory posits that every security at any point in time has an intrinsic or true value, which is reflected in its market price and in principle, should be equal to the discounted value of all present value of dividends and future earnings or streams of income to that security. The fundamentalists believe that stock price movements can be explained and predicted in terms of the expectation of the investing public in regards to future dividends, earnings, growth rates and investment opportunities (Philippatos, 1973). The fundamentalists assume that current observable market price of a security differs from its intrinsic value; hence investors seek to profit from the market by trading on mispriced assets.

d) Technical Analysis

This is an analytical approach that eschews the basic notion of intrinsic values for securities. The protagonists of this approach assert that psychological and other factors like investors emotion significantly determine the behavior of stock prices in the market. They argue that stock prices are determined by the forces of demand and supply in the market place and future prices of securities are observable, chartable and follow identifiable, self sustaining and recurrent pattern which constitute the basis for formulating profitable trading rules in the market. In fact users of this approach rely on market patterns to provide signals for timing market transactions to maximum advantage (Okafor, 1983; Osuala, 2011; Ogbulu, 2016).

2.3 EMPIRICAL REVIEW

Kolapo and Adaramola (2012) examine the impact of the Nigerian capital market on its economic growth using annual as a proxy for economic growth

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and considered Market Capitalization (MCAP), Total New Issues (TNI), Value of Transactions (VLT), and Total Listed Equities and Government Stocks (LEGS) as proxies for capital market variables. Applying Johansen co-integration and Granger causality tests, results show that the Nigerian capital market and economic growth are co-integrated, implying that a significant long –run relationship exist between the study variables. The causality test results evidenced a bi-directional causality between GDP and the value of transactions (VLT) and uni-directional causality between Market capitalization and GDP and not vice versa. Besides there is no causation between GDP and total new issues (TNI) as well as GDP and LEGS. The study recommends that regulatory authorities should initiate policies that would encourage more companies to access the market and also to be more proactive in their surveillance role in order to check sharp practices which undermine market integrity and erode investors' confidence.

Victor, et al (2013) examines whether the growth of the Nigerian capital market has any significant impact on the growth and development of the industrial sector as well as the economy as a whole. The study examines the relationships between capital market and the industrial sector, such as the proportion of manufacturing sector in total market capitalization, or the relationship between GDP and market capitalization, manufacturing index, new issues, market access to credit, trading values etc. so as to determine the types of influence exerted on the industrial sector by the capital market. The review of available literature indicates that the capital market is a common feature in any modern economy and is reported to promote the growth and development of the real sector in our case there are indication of positive links between the stock market and industrial sector development but the impact has been severely limited by adverse economic environment such as poor economic infrastructures, bureaucratic bottlenecks corruption and poor corporate governance, regulatory and supervisory frameworks. To improve the situation the paper suggests the removal of stringent factors which impedes capital market development such as Improvement of the financial systems infrastructures and the general economic infrastructure. Besides, sound economic policies should be instituted to stabilize the economy and improve the savings and investment culture

By adopting multivariate co-integration and error correction model, Yadirichukwu and Chigbu (2014) investigate the impact of capital market on economic growth using secondary data covering 1985 - 2012. The study reveals that New Issues and Value of Transactions exert positive and significant relationship with GDP while market capitalization and Total listing exert insignificant and negative relationship with GDP. The study recommends that relevant regulatory agencies should focus on enhancing efficiency and transparency of market to improve investor's confidence.

Ibi, Joshua, Eja and Olatunbosun (2015) examined the relationship between capital market and industrial sector development in Nigeria, utilizing annual time series data covering the period from 1980 to 2012. The study employed econometric techniques such as the unit root test, co-integration test, granger causality test and the error correction mechanism (ECM) in estimating relevant relationships among the variables. The results of the co-integration test showed the prevalence of significant long run equilibrium relationship among the variables. The results of the granger causality test confirmed that there is a bi-directional relationship between industrial output and market capitalization and between industrial output and number of deals, but a unidirectional causality running from industrial sector development to value of transaction. The results of the short run dynamics revealed that capital market has positive and significant impact on industrial output in Nigeria via market capitalization and number of deals. On the other hand, value of transaction has negative and significant impact on industrial output in Nigeria during the period of the study. The results further showed that real gross domestic product has a positive and significant impact on industrial output in Nigeria, while exchange rate and gross domestic investment have negative and significant relationship with industrial output in Nigeria. The study recommends that the government should implement appropriate reform policies that aim at ensuring efficiency in the operations of the Nigerian stock market. Besides is the need to reduce the cost of raising capital by firms and other bureaucratic delays which could limit the use of capital market as veritable source of raising funds for investment in Nigeria.

Okpoto (2015) by applying the Augmented Dickey Fuller unit root test, the Johansen co-integration and Error correction mechanism (ECM) technique examines the impact of capital market on economic growth in Nigeria over the period 1980-2013. The study used Gross Domestic Product (GDP) as proxy for economic growth and considered market capitalization (MCAP), total holdings of development stock (TDS) and total value of transaction (TVT) as proxies for capital market variables. The results showed that all the variables became stationary at first difference and that capital market and economic growth are co-integrated,

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implying that a significant long-run relationship exist between the variables. The Error correction mechanism test results reveal that increase in the activities of Nigerian capital market with specific emphasis on total value of transaction (TVT) significantly boost output in the country while the coefficient of MCAP and TDS were not.. The study recommends that regulatory authority should initiate policies that would encourage more companies to access the market and also be more proactive in their surveillance role in order to monitor sharp practices which undermine market integrity and investors' confidence.

Obiakor (2016) explored the nexus between capital market and economic growth in Nigeria, using time series covering 1985-2015. Economic growth variable was proxied by gross domestic product (GDP) while capital market indices were proxied by Market capitalization (MCAP), Value of transactions (VTS) and All-Shares Index (ASI). Results confirmed that market indices had heterogeneous effects on the growth of the economy but on aggregate, capital market development significantly induced growth of the economy during the study period. The paper concludes that capital market development spurs economic growth, and hence recommend for sustained development of the capital market.

In yet another study, Ologunwa and Sadibo (2016) adopting a structural dynamic model examine the relationship between capital market development and economic growth in Nigeria for the period 1986 to 2014. The study found that capital market ratio and turnover ratio exert positive and significant effect on economic growth in Nigeria and that stock markets affect economic growth through savings mobilization. The researchers assert that large, liquid and efficient stocks markets ease savings mobilization, hence recommends that the stock market should be kept in a manner to attract foreign investors into the country.

Taiwo, Adedayo and Evawere (2016) evaluate the contribution of capital market to the growth of Nigeria's economy. Using Vector Error Correction techniques on annual time series data spanning from 1981 to 2014, the result reveals that market capitalization rate, total value of listed securities, labor force participation rate, accumulated savings and capital formation are significantly determine economic growth in Nigeria. The study recommends that capital market environment should be enabled to promote and encourage investment opportunities for both local and international investors, since the stock market operates in a macroeconomic environment.

Ugbogbo and Aisien (2019) by employing co-integration and error correction model examined the impact of capital market development on economic growth using time series data for the period 1981-2016. The result of the co-integration test indicates that the variables are co-integrated, implying that significant long run relationship prevailed among them. The empirical result revealed that capital market development has significant and positive impact on economic growth in Nigeria both in the short run and in the long run. The study above all recommends that government should inject in to the market and to implement appropriate reform to ensure a reliable and efficient stock market trading in Nigeria.

Owui (2019) examines the impact of capital market indicators (industrial loan, equity, market capitalization) on industrial sector financing in Nigeria using data obtained from Central Bank statistical Bulletin and Nigerian stock Exchange fact book .The study relied on ordinary least squares of multiple regression statistical technique and found that industrial loan and market capitalization have significant and positive impact on the growth of industrial sector financing in Nigeria but did not find any significant impact between equity and the growth of industrial sector financing in Nigeria. The study recommend that Market capitalization should be looked into so as to improve on current share price and total number of stocks and that percentage ratio should be properly monitored during company's investment. Finally government should properly guide the activities of companies that are quoted on the nation's stock exchange.

From the reviewed empirical works, it is evident that capital market positively influences economic activities in Nigeria. Although most authors anchored their research on the influence of capital market on economic growth as captured in the studies by Ologunwa and Sadibo (2016); Taiwo, Adedayo and Evawere (2016); Ugbogbo and Aisien (2019), Owui (2019) examines the impact of capital market indicators (industrial loan, equity, market capitalization) on industrial sector financing in Nigeria, using industrial production index as a proxy for industrial growth. This therefore creates a gap in literature, necessitating Industry Value Added (IVA) variable to be employed against the explanatory variables. The IVA is found to be an International standard for capturing the manufacturing sector, mining, construction as well as electrical operations in the economy (World Bank, 2018; OECD, 2018).Consequently, this study is undertaken to examine the impact of capital market on Nigerian industrial growth.

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3. MATERIALS AND METHODS

This paper hinges on hypothetic deductive ex-post facto research design as it relied on annual time series data set over the period 1986-2018 to analyze the efficacy of capital market indices on industrial growth in Nigeria .The absolute values of the annual data on a Industrial growth the dependent variable and proxy for Industry Value Added (IVA) was regressed on Market Capitalization (MCAP), Value of Transactions (VTS) and all Share Index (ASI) the independent variables and proxies for capital market indices. The time series data sets for the study were drawn from Central Bank of Nigeria Statistical Bulletin and International Standard Industrial Classification by World Bank. Industry value added (IVA) is used in this study to measure the value of industrial growth in Nigeria since IVA gives the annual increase in industrial production which includes manufacturing, mining, energy & public utilities, and construction . The study relied on Co-integration and Error Correction Model (ECM) technique to achieve its objective. The unit root test is also conducted in the study to ascertain the time series properties of all the variables as well as to avoid spurious result. The choice of these statistical tools is prompted by the desire of the researchers to ensure that the time series data sets are free from spurious result and also to addresses the issue of integrating short-run dynamic with long-run equilibrium.

To empirically analyze the efficacy of capital market on industrial growth in Nigeria within the study period, the model for this study is specified in line with of Okpoto (2015); Ibi, Joshua, Eja and Olatunbosun,2015; Obiakor (2016) and Owui (2019). The functional notation of this model is implicitly specified as follows:

IVA = F (MCAP, VTS, ASI)
…….. (1)
Where;
IVA = Industry, Value Added
MCAP = Market capitalization
TVS = Total Value of Transactions
ASI = All Share Index
By linearizing the model from its functional form is given as:

$IVA = \alpha_0 + \alpha_1 MCAP + \alpha_2 VTS + \alpha_3 ASI + e$ …….…. (2)

Where;
α_0 = Régression constant
$\alpha_1 - \alpha_3$ = Regression coefficient
e = Stochastic error term
$\alpha_1, \alpha_2, \alpha_3 > 0$

4. RESULTS AND DISCUSSION

4.1 Unit Root Tests

The unit root test was conducted in the study to ascertain the statationarity of the variables using the Augmented Dickey-Fuller (ADF) test. The result of the unit root test is shown in table 1 below:

Table 1: ADF Stationarity (Unit Root) Test Result

Variable	ADF test statistic	Critical Value			Order of Integration	Prob.
		1%	5%	10%		
IVA	-4.379353	-4.284580	-3.562882	-3.215267	I(1)	0.0080
MCAP	-5.220093	-4.323979	-3.580623	-3.225334	I(1)	0.0012
VTS	-5.847430	-4.323979	-3.580623	-3.225334	I(1)	0.0003
ASI	-5.613148	-4.296729	-3.568379	-3.218382	1(1)	0.0004

Source: E-view (Version 10) Output on 1986 to 2018 Data

N/B: Critical Values at 5% is Considered Significant

The ADF Unit root result in table 1 shows that all the variables became stationary at first difference given that the ADF statistic value for each of the variables is greater than the critical values in absolute terms and at various level of significance (1%,5% and 10%) respectively. On the basis of this result we proceed to estimate the presence or other wise of long-run relationship among the variables using Johansen co-integration test.

4.2 Co-integration Test

Having established that the variables are integrated at order one 1 (1), we tested for the existence of long run relationship among the variables using the Johansen multivariate co-integration analysis based on trace test and maximum eigenvalue test. The result of the co-integration test is presented in table 2 below:

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Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

Table 2: Johansen Co-integration Test Result

Date: 11/04/19 Time: 11:13
Sample (adjusted): 1989 2018
Included observations: 30 after adjustments
Trend assumption: Linear deterministic trend
Series: D(IVA) D(MCAP) D(VTS) D(ASI)
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value
None *	0.834876	88.54064	47.85613
At most 1 *	0.545850	34.50888	29.79707
At most 2	0.284166	10.82902	15.49471
At most 3	0.026309	0.799827	3.841466

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: *E-view (Version 10) Output on 1986 to 2018 Data*

From table 2, the result of the Johansen's co-integration analysis based on trace statistics shows two co-integrating equations which imply that the variables are co-integrated and that significant long-run relationship exists between the various indicators of capital market and industrial growth in Nigeria. We therefore reject the null hypothesis of no co-integration and proceed to determine the adjustment for the discrepancies between the long-run and short-run interaction of the times series using error correction estimation mechanism.

4.3 Error Correction Mechanism

The error correction mechanism (ECM) is used in this study to determine the speed or rate at which the dependent variable will adjust to changes in the independent variables. The error correction mechanism result is therefore presented in table 3 below:

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Table 3: Error Correction Estimate Output for the Model

Dependent Variable: D(IVA)
Estimation Method: Least Squares
Date: 11/04/19 Time: 11:21
Sample (adjusted): 1989 2018
Included observations: 30 after adjustments

Variables	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-0.119213	0.02163	-5.51266	0.0000
D(MCAP)	0.437613	0.20516	2.13303	0.0355
D(VTS)	-1.035026	0.39547	-2.61724	0.0103
D(ASI)	0.136221	0.04229	3.22138	0.0017
Constant	-54.99115	175.384	-0.31355	0.7545

R-Squared	0.784857	**Log likelihood**	-245.0518
Adj. R^2	0.740035	**Akaike Info Criterion**	16.73678
Sum Sq. resid	21858605	**Schwarz Criterion**	17.01702
S. E. equation	954.3454	**Mean dependent Var**	49.77113
F-Statistic	17.51074	**S.D. dependent Var**	1871.753
Prob(F-stat)	0.000022	**Durbin-Watson stat**	1.552794

Source: E-view (Version 10) Output on 1986 to 2018 Data

From the ECM result presented in table 3 above, the coefficient of – 0.119213 show that the error correction term is correctly signed and significant, implying that the discrepancies between the short-run and long-run equilibrium can be corrected each year by the tone or speed of 11.9 percent. The F- statistics with the p-value of 0.000022 shows that the regression is statistically significant and the model has a good fit The coefficient of determination of 0.784857 shows that about 78.5 percent of the total variation in Industrial growth as proxied by Industry `Value Added (IVA) is jointly explained by the variation in capital market variables within the study period while the remaining 21.5 percent variation is attributed to other factors not included in the model. This implies that capital market indices exhibited high power in explaining the variations in the growth of Nigerian industrial sector.

Analysis of the short- run estimates showed that both Market Capitalization (MCAP) and All Share Index (ASI) have positive and significant relationship with Industry growth in Nigeria within the study period to the extent that a one percent increase in MCAP and ASI will all things being equal increase the growth of industrial sector in Nigeria by 0.44 and 0.14 percent respectively. The implication of the result is that MCAP and ASI are important capital market indices that drive the growth of industrial activities in Nigeria, thereby spurring economic growth and development in terms of employment generation and improvement in standard of living. This finding agrees with a priori expectation and therefore supports the empirical submission of Ebi, Joshua, Eja and Olutunbosun (2015) and Owui (2019) that capital market variables have positive and significant relationship with industrial growth in Nigeria. On a contrary expectation, the Value of Transactions (VTS) showed a significant and negative relationship with industrial growth in Nigeria to the extent that a one percent increases in VTS will lead to a decrease in industrial growth with about 1.04 percent during the study period. The results imply that the value of transaction (VTS) has not been efficiently utilized for the growth of industrial output in Nigeria during the study period This finding is consistent with previous study by Ibi, Joshua, Eja and Olatunbosun (2015); Owui (2019) where the value of transactions (VTS) had negative and significant impact on industrial output in Nigeria during the evaluation period.

5. CONCLUSION AND RECOMMENDATIONS

This paper set out to empirically examine the efficacy of capital market indices such as market capitalization (MCAP), Value of transaction (VTS) and

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all share index (ASI)on industry value added (IVA) in Nigeria f or the period 1986-2018.The study adopted the Augmented Dickey- Fuller (ADF) unit root test, co-integration analysis and error correction model estimation techniques. The results of the unit root test reveal that all the variables achieved stationarity at first difference at the order of 1(1). The co-integration test showed that the variables are co-integrated, implying that significant long-run relationship exist between the study variables. From the ECM result, market capitalization (MCAP) and all share index (ASI) prove to have positive and significant relationship with industrial growth in Nigeria while the value of transaction (VTS) has a negative and significant relationship with industrial growth during the study period. The implication of the result is that MCAP and VTS are important capital market indices that drive industrial growth and development in Nigeria. Based on the above results, the study recommends that the value of transactions in the capital market should be increased through the sale of alternative investment securities such as derivatives, convertibles, futures, swaps and options. Government should restore investors' confidence in the market by ensuring regulatory portray efficiency, transparency, fair trading transactions dealings in the market which has the capacity to drive the growth of industrial sector in Nigeria. Also, considerable attention should be given to market capitalization and all share index so as to improve current share price and total number of stocks .Besides, foreign and local companies should be encouraged to list in the Nigerian stock exchange through the provision of tax holiday, reduction in transaction cost and other incentives.

Contribution of study

In attempt to examine the efficacy of capital market on industrial growth in Nigeria, the Industry Value Added (IVA) variable was employed as a proxy for industrial growth in Nigeria in relation to the explanatory variables (Market Capitalization, Value of Transactions and All Share Index). The IVA is an International standard for capturing the manufacturing sector, mining, construction and electrical operations in the economy (World Bank, 2018; OECD, 2018). Hence, the activities of the manufacturing, mining, construction and power sectors have greatly been promoted by the operations of the capital market especially, market capitalization and all share index in Nigeria.

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Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

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APPENDIX

Appendix 1: Data of Employed Variables

Year	IVA N' B	MCAP N' B	VTS N' B	ASI N' B
1986	18.78027	6.8	0.4979	163.8
1987	37.14856	8.2	0.3824	190.9
1988	44.21466	10	0.8503	233.6
1989	94.51812	12.8	0.6103	325.3
1990	121.12000	16.3	0.2254	513.8
1991	142.82500	23.1	0.2421	783
1992	282.27000	31.2	0.4917	1107.6
1993	291.92600	47.5	0.8044	1543.8
1994	295.68300	66.3	0.9859	2205
1995	889.58400	180.4	1.8388	5092.2
1996	1311.27000	285.8	6.9796	6992.1
1997	1236.73000	281.9	10.3305	6440.5
1998	908.93300	262.6	13.5711	5672.7
1999	1209.19000	300	14.072	5266.4
2000	2392.12000	472.3	28.1531	8111
2001	1931.23000	662.5	57.6838	10963.1
2002	2109.53000	764.9	59.4067	12137.7
2003	3119.01000	1359.3	120.4026	20128.94
2004	4802.99000	2112.5	225.82	23844.5
2005	6340.06000	2900.06	262.9358	24085.8
2006	7781.69000	5120.9	470.2534	33189.3
2007	8397.62000	13181.69	1076.02	57990.2

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EPRA International Journal of Research and Development (IJRD)
Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

2008	10078.80000	9562.97	1679.144	31450.78
2009	8480.91000	7030.84	685.7173	20827.17
2010	13826.40000	9918.21	799.911	24770.52
2011	17853.10000	10275.34	638.9257	20730.63
2012	19587.70000	14800.94	808.9942	28078.81
2013	20853.80000	19077.42	2350.876	41329.19
2014	22213.00000	16875.1	1338.601	34657.15
2015	19188.60000	17003.39	978.0471	28642.25
2016	18641.20000	16185.73	620.018	26874.62
2017	18969.10000	21128.9	1078.492	38243.19
2018	20469.30000	21904.04	1284.976	31430.5

Source: *CBN Statistical Bulletin, 2018 and World Bank Report, 2018.*

Appendix 2: Error Correction Model Results

Vector Error Correction Estimates
Date: 11/04/19 Time: 11:21
Sample (adjusted): 1989 2018
Included observations: 30 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
D(IVA(-1))	1.000000
D(MCAP(-1))	3.374341 (1.14899) [2.93679]
D(VTS(-1))	-25.10214 (5.79187) [-4.33403]
D(ASI(-1))	1.534275 (0.25896) [5.92471]
C	-4050.674

Error Correction:	D(IVA,2)	D(MCAP,2)	D(VTS,2)	D(ASI,2)
CointEq1	-0.119213 (0.02163) [-5.51266]	-0.128190 (0.05922) [-2.16460]	-0.003850 (0.01039) [-0.37052]	-0.706635 (0.22175) [-3.18660]
D(IVA(-1),2)	-0.290788 (0.10110) [-2.87611]	0.191125 (0.27688) [0.69029]	0.000184 (0.04859) [0.00379]	0.279116 (1.03675) [0.26922]

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EPRA International Journal of Research and Development (IJRD)
Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

D(MCAP(-1),2)	0.437613	-0.415978	0.216377	0.143757
	(0.20516)	(0.56183)	(0.09859)	(2.10377)
	[2.13303]	[-0.74039]	[2.19475]	[0.06833]
D(VTS(-1),2)	-1.035026	-2.619392	-0.925075	-7.988183
	(0.39547)	(1.08299)	(0.19004)	(4.05520)
	[-2.61724]	[-2.41868]	[-4.86784]	[-1.96986]
D(ASI(-1),2)	0.136221	0.228190	-0.013560	0.512918
	(0.04229)	(0.11580)	(0.02032)	(0.43362)
	[3.22138]	[1.97051]	[-0.66730]	[1.18288]
C	-54.99115	46.10227	-9.510337	-326.8713
	(175.384)	(480.292)	(84.2797)	(1798.43)
	[-0.31355]	[0.09599]	[-0.11284]	[-0.18175]
R-squared	0.784857	0.497344	0.632079	0.508239
Adj. R-squared	0.740035	0.392624	0.555429	0.405788
Sum sq. resids	21858605	1.64E+08	5047629.	2.30E+09
S.E. equation	954.3454	2613.486	458.6043	9786.104
F-statistic	17.51074	4.749277	8.246281	4.960832
Log likelihood	-245.0518	-275.2742	-223.0666	-314.8826
Akaike AIC	16.73678	18.75161	15.27111	21.39217
Schwarz SC	17.01702	19.03185	15.55135	21.67241
Mean dependent	49.77113	25.77800	6.867203	-228.5130
S.D. dependent	1871.753	3353.447	687.8084	12695.19

Determinant resid covariance (dof adj.)	2.62E+24
Determinant resid covariance	1.07E+24
Log likelihood	-1000.257
Akaike information criterion	68.55046
Schwarz criterion	69.85825
Number of coefficients	28

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EPRA International Journal of Research and Development (IJRD)
Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

System: ECMPROB
Estimation Method: Least Squares
Date: 11/04/19 Time: 11:22
Sample: 1989 2018
Included observations: 30
Total system (balanced) observations 120

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.119213	0.021625	-5.512658	0.0000
C(2)	-0.290788	0.101105	-2.876108	0.0050
C(3)	0.437613	0.205160	2.133027	0.0355
C(4)	-1.035026	0.395465	-2.617237	0.0103
C(5)	0.136221	0.042287	3.221376	0.0017
C(6)	-54.99115	175.3842	-0.313547	0.7545
C(7)	-0.128190	0.059221	-2.164597	0.0329
C(8)	0.191125	0.276877	0.690288	0.4917
C(9)	-0.415978	0.561834	-0.740392	0.4609
C(10)	-2.619392	1.082986	-2.418676	0.0175
C(11)	0.228190	0.115802	1.970510	0.0517
C(12)	46.10227	480.2917	0.095988	0.9237
C(13)	-0.003850	0.010392	-0.370519	0.7118
C(14)	0.000184	0.048585	0.003787	0.9970
C(15)	0.216377	0.098588	2.194753	0.0306
C(16)	-0.925075	0.190038	-4.867841	0.0000
C(17)	-0.013560	0.020321	-0.667296	0.5062
C(18)	-9.510337	84.27968	-0.112843	0.9104
C(19)	-0.706635	0.221752	-3.186601	0.0019
C(20)	0.279116	1.036755	0.269221	0.7883
C(21)	0.143757	2.103769	0.068333	0.9457
C(22)	-7.988183	4.055201	-1.969861	0.0517
C(23)	0.512918	0.433618	1.182880	0.2398
C(24)	-326.8713	1798.435	-0.181753	0.8562
Determinant residual covariance		1.07E+24		

Equation: D(IVA,2) = C(1)*(D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746) + C(2)*D(IVA(-1),2) + C(3)*D(MCAP(-1),2) + C(4) *D(VTS(-1),2) + C(5)*D(ASI(-1),2) + C(6)
Observations: 30

R-squared	0.784857	Mean dependent var	49.77113
Adjusted R-squared	0.740035	S.D. dependent var	1871.753
S.E. of regression	954.3455	Sum squared resid	21858606
Durbin-Watson stat	1.552794		

Equation: D(MCAP,2) = C(7)*(D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746) + C(8)*D(IVA(-1),2) + C(9)*D(MCAP(-1),2) + C(10)

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Volume: 5 | Issue: 5 | May 2020 - Peer Reviewed Journal

*D(VTS(-1),2) + C(11)*D(ASI(-1),2) + C(12)
Observations: 30

R-squared	0.497344	Mean dependent var	25.77800
Adjusted R-squared	0.392624	S.D. dependent var	3353.448
S.E. of regression	2613.487	Sum squared resid	1.64E+08
Durbin-Watson stat	2.001874		

Equation: D(VTS,2) = C(13)*(D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746) + C(14)*D(IVA(-1),2) + C(15)*D(MCAP(-1),2) + C(16) *D(VTS(-1),2) + C(17)*D(ASI(-1),2) + C(18)
Observations: 30

R-squared	0.632079	Mean dependent var	6.867203
Adjusted R-squared	0.555429	S.D. dependent var	687.8083
S.E. of regression	458.6042	Sum squared resid	5047629.
Durbin-Watson stat	2.224347		

Equation: D(ASI,2) = C(19)*(D(IVA(-1)) + 3.37434129827*D(MCAP(-1)) - 25.1021446812*D(VTS(-1)) + 1.53427533761*D(ASI(-1)) - 4050.67428746) + C(20)*D(IVA(-1),2) + C(21)*D(MCAP(-1),2) + C(22) *D(VTS(-1),2) + C(23)*D(ASI(-1),2) + C(24)
Observations: 30

R-squared	0.508239	Mean dependent var	-228.5130
Adjusted R-squared	0.405788	S.D. dependent var	12695.19
S.E. of regression	9786.104	Sum squared resid	2.30E+09
Durbin-Watson stat	2.033866		