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IMPACT OF MARKET CAPITALIZATION ON MANUFACTURING OUTPUT IN NIGERIA

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Abstract

This study examined the impact of market capitalization on manufacturing output in Nigeria over the period 1981–2023, using annual time-series data. Employing the autoregressive distributed lag (ARDL) model, the findings reveal that market capitalization (MCP), the number of deals (NDL), and foreign direct investment (FDI) have significant positive impacts on manufacturing output in the long run. Conversely, inflation is found to have a detrimental effect on manufacturing output. In the short run, lagged market capitalization and the number of deals exhibit positive influences, underscoring the dynamic role of the capital market in fostering industrial performance. The study concludes that market capitalization holds substantial potential for boosting Nigeria's manufacturing sector. To harness this potential, the study recommends expanding the capital market by encouraging firm listings, enhancing transparency through improved corporate governance, and strengthening regulatory frameworks to bolster investor confidence. These measures are pivotal for positioning the capital market as a cornerstone of Nigeria's industrial growth and economic development.

Keywords: **A**utoregressive distributed lag model, market capitalization, manufacturing output

JEL Classification Codes: E44, G19, L60.

1.0 Introduction

The role of market capitalization in the economic growth process is well documented in economic literature. This is against the backdrop that market capitalization is instrumental in signaling the ups and downs in the capital market. These ups and downs result from changes in the prices of stocks traded in the market Uremadu *et al* (2019). Hence, rising market capitalization is a signal that the market is booming, indicating that stock brokers can sell the stocks at profits, while low market capitalization is a signal that the market is not booming and indicates that stock brokers cannot sell the stocks at profits (World Bank, 2021). Hence, market capitalization measures a company's market value is determined by multiplying its current stock price by the total number of shares outstanding. (Shiller, 2015).

Globally, market capitalization has been increasing since the 1990s, reaching a record high of 25% in 2019 and 30% in 2021 (PwC, 2021 Mckinsey & Company, 2020). The increase was driven by features such as the rise in corporate profits and the expansion of capital markets, especially in emerging economies. However, the occurrence of the financial crisis (2001-2009) affected global market capitalization, leading to a drop in global market capitalization in 2014 (Shiller, 2015 & International Monetary Fund, 2022). In Nigeria, market capitalization has improved significantly over the years, especially during periods of economic growth, which increases investors' confidence in the economy. For example, in 2000, the Nigerian stock market experienced a significant boom, driven by reforms in the banking sector and an influx of foreign direct investment. Hence, market capitalization grew significantly during this period Uremadu *et al* (2019).

The correlation between market capitalization and manufacturing output is complex and interdependent. A strong, healthy stock market can provide the necessary capital for manufacturers to grow and increase output, while robust manufacturing output can contribute to higher valuations and market capitalization. However, this relationship is influenced by various factors, including economic cycles, investor sentiment, technological advancements, and government policies Gideon *et al* (2019).

Market capitalization, foreign direct investment (FDI), inflation rates and the number of deals are crucial in influencing manufacturing output. Foreign direct investment enhances manufacturing by providing capital and expertise, boosting market capitalization through increased company value and investor confidence. High inflation harms manufacturing and reduces market capitalization, while low inflation supports economic stability and growth. Several deals reflect economic activity, and more transactions indicate higher business confidence, driving up stock prices and manufacturing demand. Conversely, fewer deals signal economic slowdown, negatively affecting both market capitalization and manufacturing output. Thus, these factors collectively shape Nigeria's economic landscape.

This research addresses the major challenges impacting Nigeria's manufacturing output, including economic fluctuations, low capital market liquidity and regulatory issues. High inflation rates have undermined economic stability, while the role of foreign direct investment (FDI) in boosting manufacturing output needs thorough examination. Investor confidence, influenced by transparency and corporate governance, is crucial for market

capitalization. By analysing these factors, the study aims to identify strategies to enhance the capital market's contribution to Nigeria's industrial growth, ultimately improving economic stability and fostering a more robust manufacturing sector.

In light of the above, the study is divided into five sections, starting with the introduction. Section Two explores the conceptual, theoretical and empirical literature, while Section Three details the methodology employed in the research. Section Four presents the results and discussion of findings, and Section Five summarizes the key findings and recommendations.

2.0 Literature Review

2.1 Conceptual Literature

Manufacturing Output

Evbuomwan *et al.* (2021) defined manufacturing output as the total volume of goods produced by the manufacturing sector. It is a crucial economic indicator reflecting industrial health and economic performance. It can be measured by physical quantity, value, or index numbers like the industrial production index (IPI). Manufacturing output is a key indicator of economic health, representing the level of production activity in a country's manufacturing sector. It is often tracked to assess the growth or contraction of industrial production Aras and Odebode (2019). Manufacturing output is the total production volume of manufactured goods, which includes everything from consumer goods to capital goods, produced within a given time frame by factories, plants, and industries Ubesie and Ude (2019).

Market Capitalization

Sule *et al.* (2023) defined market capitalization as the aggregate value of a company's outstanding shares of stock. This is determined by multiplying the current market price of a single share by the total number of outstanding shares. This metric provides investors with an understanding of the company's size and value. For instance, if a company has 50 million shares outstanding and each share is priced at ₦50, the market capitalization would be ₦2.5 billion. Gideon *et al.* (2019) observe market capitalization to serve as a measure of a company's size in the stock market and its impact on market indices. Companies with larger market capitalization typically have a greater influence on these indices. Ikeobi (2020) sees market capitalization as reflecting the public's perception of a company's worth, based on the value assigned to its shares by the stock market. It can fluctuate daily depending on the stock's performance.

2.2 Theoretical Literature

Ross's Signalling Corporate Theory of Finance

Ross's theory of signalling, formulated by Stephen Ross in 1977, explains how

companies convey information to investors through their financial decisions, particularly in the context of capital structure. The core idea is that managers have better information about the firm's prospects than outside investors, and they use financial decisions (like issuing debt or equity) to signal this information to the market.

Ross's signalling theory assumes that managers have more information about the firm's value than investors, who act rationally based on costly and credible signals, such as issuing debt, which only high-quality firms can afford. Critics argue the theory oversimplifies market dynamics, and focuses too narrowly on specific signals. In terms of market capitalization's impact on manufacturing output, theory suggests that higher market capitalization signals strong firm performance and stability, attracting investment and boosting manufacturing capacity. This increased investor confidence influences funding decisions and strategic planning, ultimately enhancing manufacturing output and innovation.

In the context of this research, Ross's theory suggests that market capitalization functions as a signal of a firm's financial health, investment opportunities, and management quality. High market capitalization indicates that a firm is stable, capable of generating future cash flows, and well-managed, which attracts more investment. This inflow of capital enables firms to invest in manufacturing processes, leading to increased output.

2.3 Empirical Literature

The relationship between the market capitalization on manufacturing output has been the focus of extensive empirical research, revealing diverse and, at times, contrasting findings. For instance, Onyebuchi (2023) analysed the capital market's effect on manufacturing sector output in Nigeria from 1990 to 2021 using Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM). The results revealed a positive impact of market capitalization on manufacturing sector output.

In a related study, Ikeobi (2023) investigated the role of the Nigerian capital market in financing industrial production between 2008 and 2020, employing the Ordinary Least Squares (OLS) technique. The results indicated that market capitalization positively and significantly impacts industrial output. However, corporate bonds had a negative yet insignificant influence, while stocks exhibited a significant negative effect, suggesting inefficiencies in the deployment of stock market instruments for industrial financing. Similarly, Awe (2022) analysed the relationship between stock market performance and industrial growth in Nigeria

from 1985 to 2020 using a Vector Autoregressive (VAR) model. The findings revealed that stock market performance significantly influenced industrial growth, underscoring the potential of the capital market as a catalyst for industrialization.

Ugwoke (2022) explored the impact of inflation on manufacturing sector output in Nigeria using time series data and Autoregressive Distributed Lag (ARDL) bound test approach. These findings revealed that inflation rate negatively affects manufacturing sector output. Ikubor and Osadume (2021) examined the overview of the Nigerian capital market sustainable development and economic growth in Nigeria covering the period 1981 to 2020. Secondary time series data was used to analysed using descriptive statistics and Autoregressive Distributed Lag (ARDL) model. Their findings reveal that apart from the treasury bill instrument that showed a significant relationship with economic growth, other variables such as market capitalization and total new issues are inversely and insignificantly related to economic growth of Nigeria.

Evbuomwan et al. (2021) employed the Autoregressive Distributed Lag (ARDL) model to investigate the factors influencing industrial production in Nigeria over the period 1981–2020. Their findings demonstrated that, in the short run, manufacturing capacity utilization and commercial bank lending positively affected manufacturing output, whereas inflation and exchange rates had adverse impacts. In the long run, capital investment, financial availability, and energy consumption were identified as critical drivers of manufacturing output. From a corporate perspective, Ikeobi (2020) analysed the influence of the capital market on the performance of listed industrial firms in Nigeria from 2003 to 2014. Using panel data and OLS estimation, the study concluded that, while the Nigerian capital market possesses the capacity to mobilize funds for industrial development, firms did not effectively leverage this potential during the study period. Extending this analysis, Taiwo et al. (2020) utilized an Error Correction Model (ECM) to examine the capital market's impact on the manufacturing sector from 1990 to 2019. Their results highlighted a significant long-term positive effect of market capitalization and the total number of deals on manufacturing output. Conversely, the value of new issues negatively impacted manufacturing performance. The authors emphasized that despite the potential for growth, challenges such as low market capitalization, limited liquidity, and poor fund management persist.

On a broader scale, Agbo et al. (2020) investigated stock market development and

manufacturing sector performance from 1986 to 2019 using a Structural Vector Autoregressive (SVAR) model. Their findings underscored the positive impact of stock market development indicators on manufacturing output in both the short and long term, emphasizing the importance of efficient capital markets in enabling long-term investment. Additionally, Egbuche and Nzotta (2020) investigated the impact of stock market on manufacturing sector output in Nigeria from 1981 to 2018. The study utilized a unit root test to check the stationarity of the variables, co-integration approach to determine the long-term equilibrium relationship between the variables and Error Correction Model to assess the speed of adjustment. They employed the Ordinary Least Square (OLS) method for analysis. The results indicated that the stock market has a significantly positive effect on the performance of the manufacturing sector output.

Adding to this discourse, Bank-Ola et al. (2020) analysed the impact of foreign direct investment on manifesting output in Nigeria from 1986 to 2018. They utilized Autoregressive Distributed Lag (ARDL) model with time series data. The analysis revealed that foreign direct investment positively influences the country's manufacturing output. Similarly, Eze et al. (2019) studied the effect of foreign direct investment on the growth of manufacturing sector output in Nigeria from 1970 to 2016. The study found a long-term relationship between foreign direct investment and manufacturing sector output growth. The Granger causality results indicated a unidirectional causality from foreign direct investment to manufacturing sector output. Notably, Takon and Nkamare (2019) investigated the impact of foreign direct investment on the growth of the manufacturing sector in Nigeria. They used Ordinary Least Square (OLS) method with multiple regression statistical techniques. The analysis showed that foreign direct investment, interest rates and inflation have significant relationship with value-added output of the manufacturing sector.

Gideon et al. (2019) examined the interplay between market capitalization, bank lending, and manufacturing output from 1986 to 2016 using cointegration and vector error correction models (VECM). They identified a long-term equilibrium relationship among these variables. Notably, bank credit inversely affected manufacturing output, while market capitalization, real GDP, and interest rates positively influenced it.

Furthermore, Ubesie and Ude (2019) and Uremadu et al. (2019) offered further insights into the capital market's role. The study employed ARDL bounds testing to show that

market capitalization, listed equities, and the all-share index significantly influence manufacturing productivity in the long term. On the other hand, Uremadu et. al. (2019) used a VECM framework to reveal mixed impacts of stock market indicators, with market capitalization negatively affecting industrial productivity, while the value of shares traded and the all-share index had positive but insignificant effects.

Despite extensive research on market capitalization and manufacturing output, gaps remain. Existing studies often lack recent data and comprehensive control variables. They also overlook Nigeria's unique economic context and the dynamic role of capital markets. This study addresses these gaps by using up-to-date data, a broad set of variables and providing targeted policy recommendations to enhance Nigeria's industrial growth through capital market development.

3.0 Methodology

3.1 Model Specification

This research is grounded in the model developed by Ross (1977), who formulated a function on corporate finance. The function is defined as:

$$M_t = \rho Y_{t-1} + U_t \quad (3.1)$$

Where M measures the output of manufacturing at period t while Y is a vector of other variable input at period t to the manufacturing output function. Ross's model focused on corporate finance at both micro and macro levels. In this study, using the theoretical grounds of Ross Signalling theory, Y is replaced with market capitalization (MCP), where M_t is retained but re-written as MAN. Hence, the simple model of this study is given as:

$$MAN = \beta 0 + \beta_1 MCP + u_t \quad (3.2)$$

Where, MAN = Manufacturing output; MCP = Market capitalization; β_0 = Intercept; β_1 = Scope parameters and u_t = Error term. However, in other to account for other factors affecting MAN, aside from MCP, the model is rewritten to capture foreign direct investment, number of deals, and inflation rate. This is in line with Onyebuchi (2023). Therefore, model (1) is re-specified as;

$$MAN = \beta_0 + \beta_1 MCP + \beta_2 FDI + \beta_3 NDL + \beta_4 INF + \mu_t \quad (3.3)$$

Where: β_0 is the intercept of the relationship in the model, β_1-β_4 are the coefficients of each of the independent variables, MCAP is market capitalization, FDI is foreign direct investment, INF is the inflation rate, and NDL number of deals. However, the equation is a multiple regression model that can be estimated using ordinary least square (OLS). Unfortunately, the ordinary least square method of estimation is built upon several unrealistic assumptions (Gujarati, 2009). To

circumvent this limitation, the equation (3.3) was estimated using the Autoregressive Distribution Lag model (ARDL). The choice of the Autoregressive Distribution Lag model (ARDL) was the case that it does not discriminate against the order of integration variables, this implies that the Autoregressive Distribution Lag model (ARDL) can be used whether the variable is mixed of I(0) and I(1), as long as none of the variables is I(2). Therefore, the Autoregressive Distribution Lag model (ARDL) of this study is specified as:

$$MAN_t = \beta_0 + \beta_1 \sum_{i=0}^{n} MAN_{t-i} + \beta_2 \sum_{i=0}^{n} MCP_{t-i} + \beta_3 \sum_{i=0}^{n} FDI_{t-I} + \beta_4 \sum_{i=0}^{n} Ndl_{t-i} + \beta_5 \sum_{i=0}^{n} INF_{t-i} + u_t \quad (3.4)$$

However, equation (3.4) is a long-run Autoregressive Distribution Lag model (ARDL) of the impact of market capitalization on manufacturing output. The short-run model is specified by including the error correction term (ECM_t) in the model and taking the first difference of each of the variables in equation (4). Hence, the short-run Autoregressive Distribution Lag model (ARDL) is given as:

$$\Delta MAN_t = \beta_0 + \beta_1 \sum_{i=0}^{n} \Delta MAN_{t-i} + \beta 2 \sum_{i=0}^{n} \Delta MCP_{t-i} + \beta_3 \sum_{i=0}^{n} \Delta FDI_{t-I} + \beta_4 \sum_{i=0}^{n} \Delta Ndl_{t-i} + \beta_5 \sum_{i=0}^{n} \Delta INF_{t-i} + aECM_t + u_t \quad (3.5)$$

Where a = Coefficient of adjustment

Table 3.1: Types and Sources of Data Collection

Variable Name	Measurement	Source
Manufacturing output (MAN)	Manufacturing value added (% of GDP)	World Bank (2023)
Market capitalization (MCP)	Total annual market capitalization on the Nigerian Stock Exchange (₦'' Billion)	Central Bank Statistical Bulletin (2023)
Foreign direct investment (FDI)	Foreign direct investment, net inflows (Bop, Current US$)	World Bank (2023)
Number of deals (NDL)	Transactions at the Nigerian Stock Exchange	Central Bank Statistical Bulletin (2023)
Inflation rate (INF)	Inflation, GDP deflator (Annual %)	World Bank (2023)

Note: This data spanned from 1981 to 2023.

4.0. Data Presentation and Interpretation of Results

4.1 Result and Discussions of Findings

Table 4.1: Result of Summary Descriptive Statistics

	MAN	MCP	FDI	NDL	INF
Mean	14.327	9347.4	2.400	12.361	20.954
Median	13.933	764.9	1.350	13.021	11.119
Maximum	21.098	52318.9	8.840	15.078	219.00
Minimum	6.553	5.0	-1.900	9.212	0.686
Std. Dev.	4.918	14171.4	2.540	1.887	33.940
Skewness	-0.033	1.733	1.185	-0.239	4.870
Kurtosis	1.473	5.231	3.287	1.497	28.457
JB	4.187	30.439	10.223	4.462	1331.1
Prob.	0.123	0.000	0.006	0.107	0.000
Sum	616.07	4019	1.030	531.5	901.0
Sum Sq. Dev.	1016.116	8.430	2.710	149.5	48381.3
Obs.	43	43	43	43	43

Source: Researchers computation using E-views 9

Table 4.1 presents the summary statistics for the five variables: MAN, MCP, FDI, NDL, and INF. The descriptive statistics provide insights into the characteristics of the dataset. Manufacturing output (MAN) has a mean of 14.327 and a median of 13.933, suggesting a near-normal distribution with low skewness (-0.033). Market capitalization (MCP) has the highest variability (std. Dev. = 14171.4) due to its wide range (5.000 to 52318.9), and it is positively skewed (1.733), indicating a few very large values. Foreign direct investment (FDI) has a mean of 2.400, with moderate skewness (1.185) and a significant kurtosis of 3.287, implying a leptokurtic distribution. (NDL) shows low variability (std. Dev. = 1.887) and a slight negative skewness (-0.239). Inflation (INF) is highly skewed (4.870) and exhibits extreme kurtosis (28.457), reflecting significant outliers. The Jarque-Bera test indicates normality for MAN and NDL but rejects it for MCP, FDI, and INF due to their p-values being below 0.05. The sample includes 43 observations.

Table 4.2: Result of Stationarity

Variables	ADF@Levels	ADF@1ST Difference	Remarks.
MAN	**0.491**	**7.914**	**1(1)**
MCP	**0.825**	6.283	1(1)
FDI		1.218	7.835 1(1)
NDL		0.859	5.729 1(1)
INF		14.301	16.404 1(0)
5% Critical level =		3.523623	

Source: Researchers computation using E-views 9

To ensure the reliability of this econometric analysis, it is crucial to test the stationarity of the time series data. Non-stationary data can lead to spurious regression results. Therefore, the Augmented Dickey-Fuller (ADF) test is used to check for stationarity of the variables at both levels and the first difference. The 5% critical value of -3.523623 is greater than the MAN value at levels and first difference. It is also greater than MCP, FDI, and NDL values at levels and first difference. INF was found to be significant at levels.

Table 4.3: Result of ARDL Bound Test of Cointegration

Test Statistics	Value	Significance	1(0)	1(1)
F-Statistics	16.07625	10%	2.45	3.52
K	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Source: Researchers computation using E-views 9

To assess the long-run relationships among the variables in our model, we performed the ARDL Bound Test for cointegration. This test helps determine whether there is a stable, long-term relationship among the variables when they are integrated into different orders. The results of the Bound Test strongly suggest the presence of a long-run cointegrating relationship among the variables in our model. The calculated F-statistic (16.07625) is significantly higher than the upper bound critical values at all conventional significance levels, implying a stable long-term relationship among the variables, despite short-run fluctuations.

Table 4.4: Result for Order of Lag Selection Criteria

LAG	Log1	LR	FPE	AIC	SC	HQ
0	-1643.797	NA	4.37e+29	82.43983	82.65094	82.51617
1	-1484.651	270.5471	5.41e+26	75.73257	76.99923*	76.19055
2	-1451.844	47.56994*	3.89e+26*	75.34222	77.66443	76.18186*
3	-1425.399	31.73407	4.26e+26	75.26997*	78.64773	76.49126

Indicates lag order selected by the criterion

Source: Researchers computation using E-views 9

According to the lag selection criteria outlined in Table 4.4, lag 2 was chosen for estimating the ARDL model. An over-fitted model was preferred over an under-fitted one to minimize the risk of mis-specifying the error term.

Table 4.5: Result for Estimation of Long Run Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MCP	5.170	0.239	2.165861	0.0367
FDI	-0.357	0.151	-2.370545	0.0229
NDL	-2.336966	0.258506	-9.040264	0.0000
INF	-0.003237	0.007610	-0.425371	0.6730

Source: Researchers computation using E-views 9

The long-run results suggest that market capitalization, foreign direct investment and number of deals have statistically significant relationships with the dependent variable. However, the relationship between inflation and the dependent variable is not statistically significant.

Table 4.6: Short Run Results (ECM)

Variable	Coefficient	Std. Error	T-Statistic	Prob.
D(MAN(-1))	-0.122836	0.181986	-0.674971	0.5049
D(MCP)	0.297	8.521	0.348019	0.7303
D(MCP(-1))	0.000174	7.67E-05	2.272738	0.0304
D(FDI)	-0.120	1.780	-0.676365	0.5040
D(FDI(-1))	1.541	1.800	0.085871	0.9321
D(NDL)	-1.306924	0.613650	-2.129754	0.0415
D(NDL(-1))	0.155974	0.715556	0.217976	0.8289
D(INF)	-0.006716	0.016985	-0.395447	0.6953
D(INF(-1))	-0.004654	0.006099	-0.762946	0.4515
C	-0.297050	0.254127	-1.168905	0.2516
$ECM_t(-1)$	-0.509091	0.179446	-2.837022	0.0081
R-Squared	**0.469788**	**Adjusted R-Squared**		**0.293051**
F-**Statistic**	2.658119	**Durbin-Watson Statistic**		2.037347

Source: Researchers computation using E-views 9

The short run results suggest that the lagged change in market capitalization and the change in number of deals have statistically significant impacts on the dependent variable. The error correction term indicates that the model corrects for deviations from long-run equilibrium. The insignificant variables suggest that their short-term impacts are not statistically significant.

Table 4.7: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey		
F-Statistic	0.716178	Square(10) 0.8282
Prob.F(10,30)	0.7028	
Obs*R-Squared	7.901478	
Prob.Chi-Squared(10)	0.6385	
Scaled Explained SS	5.843417	
Prob.Chi		

Source: Researchers computation using E-views 9

The p-values associated with all three statistics (F-statistics, Obs**R-squared, and Scaled Explained SS) are all greater than 0.05. Therefore, based on these results, we do not have enough evidence to reject the null hypothesis of homoskedasticity. This implies that the residuals of the regression model are homoscedastic, meaning that their variance is constant across observations. This is generally a good outcome because it means that one of the assumptions of the classical linear regression model, which is homoskedasticity (constant variance of errors), holds. In summary, the absence of significant heteroskedasticity is a positive result for this regression model's validity and reliability.

Table 4.8: Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test			
F-Statistic	0.313526	Prob.F(2,28)	0.7334
Obs*R-Squared	0.898072	Prob.Chi-squared(2)	0.6382

Source: Researchers computation using E-views 9

Based on these results, the null hypothesis of no serial correlation cannot be rejected, as both p-values are greater than the typical significance level of 0.05. This suggests there is no significant evidence of serial correlation in the residuals of the regression model. In other words, the results suggest that the model is well-specified, and the residuals are randomly distributed, which is a key assumption in linear regression analysis.

Table 4.9: Ramsey Reset Test

	Value	Df	Probability
T-Statistic	0.205975	37	0.8379
F-Statistic	0.042426	(1,37)	0.8379

Source: Researchers computation using E-views 9

The Ramsey reset test indicates that there is no evidence of specification error in the regression model (p-value= 0.8379 greater than 0.05). This suggests that the model is properly specified, and the results can be interpreted with confidence.

Stability Tests

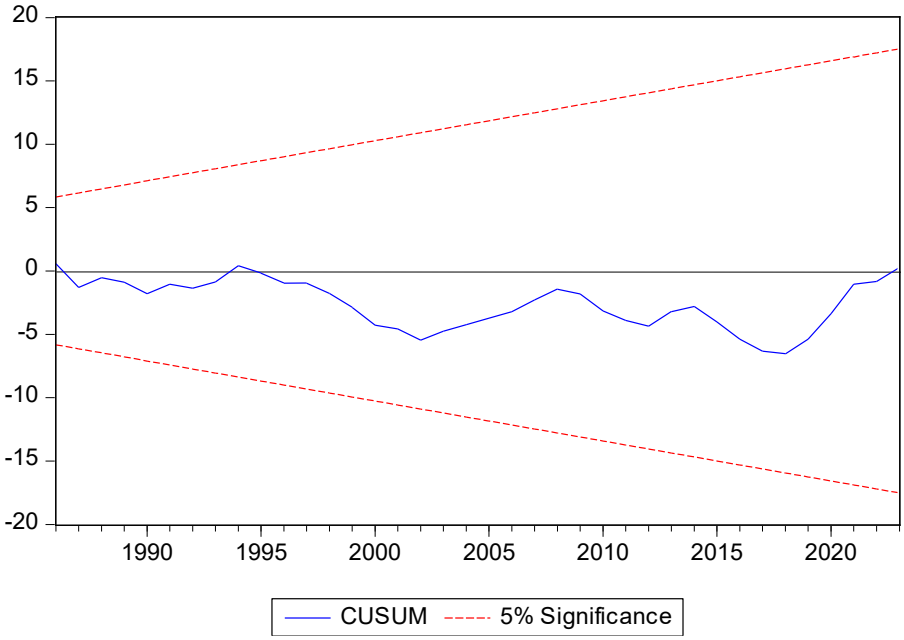


Figure 4.1: CUSUM Plot of Stability

Source: Researchers computation using E-views 9

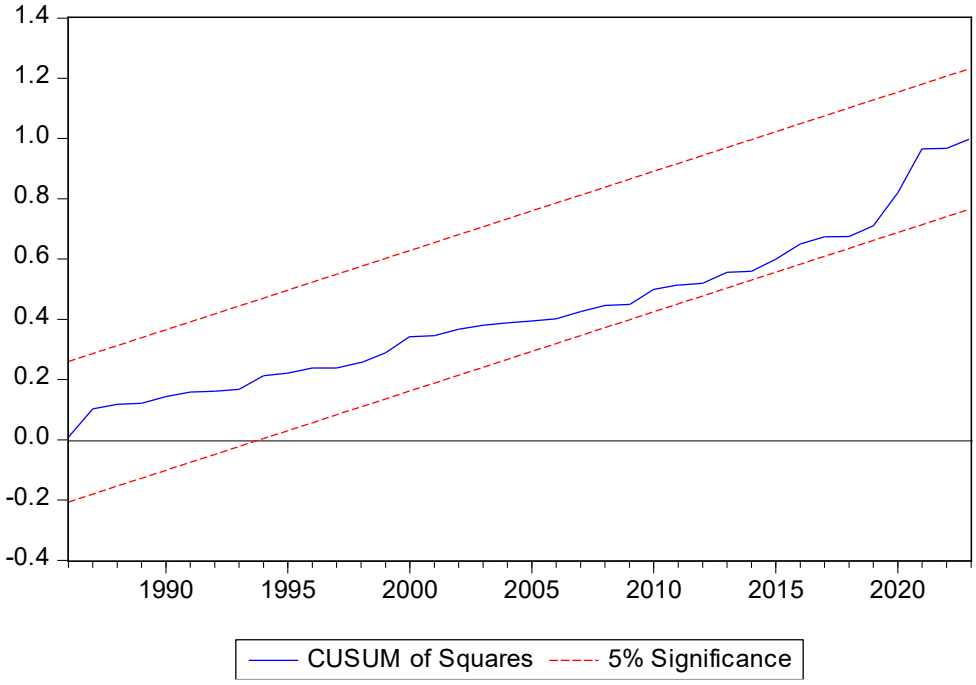


Figure 4.2: CUSUM of Squares Plot of Stability

Source: Researchers computation using E-views 9

The CUSUM and CUSUM of Squares test graph assesses the stability of the regression coefficients over time. Since the CUSUM and CUSUM of Squares line stay within the boundaries, it indicates that the model's coefficients are stable over the tested period.

4.2. Discussion of Findings

Tables 4.5 and 4.6 present the long-run and short-run results of Autoregressive Distributed Lag model (ARDL), respectively, highlighting the impact of various factors on manufacturing output (MAN). In the long-run, Market Capitalization (MCP) exhibits a positive and significant effect on MAN, with a one per cent increase in MCP resulting in an approximately 5.170% increase in MAN. This result is consistent with prior expectations, indicating that booming capital market, as reflected by rising MCP, enhances the assets of the market and accelerates manufacturing output in the country. This finding aligns with the findings of Ikeobi (2023) but contradicts the results from Ikeobi (2020).

Conversely, foreign direct investment (FDI) had a negative impact on MAN, where a one per cent increase in FDI reduces MAN by about 0.357%. This statistically significant result adheres to a priori expectations and suggests that foreign investors tend to repatriate profits to their home countries rather than reinvesting in Nigeria, negatively affecting manufacturing output. This finding contrasts with the conclusions of Eze, Nnaji and Nkalu (2019).

Additionally, Inflation (INF) negatively influenced MAN by about 0.003% The negative impact of INF can be attributed to uncontrolled inflation, which leads to higher prices of goods, thereby hindering manufacturing output. This result is consistent with Ugwoke (2022). Moreover, number of deals positively impacts MAN, corroborating the findings of Uremadu, Onyele, and Ariwa (2019).

In the Short run, the results in Table 4.6 revealed a mixed relationship between the independent variable and MAN. The lagged value of manufacturing output D(MAN(-1)) shows a negative but insignificant impact, indicating that past changes in manufacturing output do not significantly influence the current output. However, the lagged value of Market Capitalization D(MCP(-1))has a positive and significant impacts manufacturing output at a 5% level (p= 0.0304), suggesting that past market capitalization changes are relevant in the short run.

Number of deals D(NDL) negatively and significantly affects MAN (p = 0.0415), highlighting the importance of labour dynamics play a key role. The ECM term (ECMt(-1) is negative and significant (p = 0.0081), confirming the model's ability to correct disequilibrium in the short run.

In summary, the long-run results underscore the positive role of market capitalization in boosting manufacturing output, while foreign direct investment and inflation negatively impact it. The short-run results indicate that past changes in market capitalization

positively influence manufacturing output, while labour dynamics play a critical role in the short-run adjustments.

5.0 Conclusion and Recommendations

This study revealed the significant impact of market capitalization on manufacturing output in Nigeria between 1981 and 2023. Long-run analysis revealed that market capitalization (MCP), foreign direct investment (FDI) and number of deals (NDL) positively influence manufacturing output while inflation (INF) has a detrimental effect. Short-run analysis shows that prior changes in market capitalization (D(MCP(-)) and number of deals (D(NDL)) significantly affect manufacturing output. The error correction mechanism indicates a strong adjustment process towards equilibrium after short-term disturbances. These results highlight the pivotal role of capital markets and macroeconomic stability in industrial growth.

This research reveals that a robust capital market plays a crucial role in facilitating greater manufacturing output by providing necessary financial resources and fostering investor confidence. Foreign direct investment also has a positive impact, highlighting its importance in augmenting domestic manufacturing capabilities. However, inflation has an adverse effect, emphasizing the need for stable macroeconomic conditions to support industrial growth. To leverage these findings, policymakers should focus on enhancing capital markets, promoting foreign direct investment and maintaining macroeconomic stability through inflation control. This can be achieved by implementing policies that encourage more company listings, improve transparency and strengthen regulatory frameworks.

Additionally, investment strategies should prioritize long-term investments in the capital market and provide support for small and medium-sized enterprises to access capital markets. By implementing these measures, Nigeria can enhance the role of the capital market in its industrial and economic development, ensuring sustainable growth and increased manufacturing output.

Recommendations

1. Enhance capital markets through deeper listings and stronger regulations.
2. Promote foreign direct investment with incentives.
3. Maintain macroeconomic stability through inflation control.
4. Encourage long-term investment in the capital market.
5. Support small and medium enterprises access to capital markets.
6. Boost industrial growth through capital market development.

7. Foster economic resilience with a robust manufacturing sector.

Adopting these measures can enhance the capital markets' contribution to Nigeria's industrial and economic growth.

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