

The Impact of Equity Capital on Manufacturing Sector Output in Nigeria

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Abstract—Despite the inflow of Equity capital to boost manufacturing sector output in Nigeria, the contribution of manufacturing sector output to gross domestic product has been low. It is against this backdrop that the study investigated the effect of FDI on manufacturing sector output in Nigeria. The study adopted the ARDL model on annual time series data from 1986 to 2022 analyse the relationship between equity capital and manufacturing sector output. The ADF unit root result revealed that Interest rate (INR) and Equity Capital (EC₁) are stationary at level while Manufacturing Sector output (MO), Reinvested Earning (RE) and Intra-Company Loans (ICL) became stationary at first difference. The result of the ARDL bound test showed that there is a long run relationship between Equity capital (EC) inflow (RE, INR and EC₁) and manufacturing sector output in Nigeria. The findings of the study further revealed that Equity capital inflow (RE, INR and EC₁) have significant effect on manufacturing sector output in Nigeria, this is judging by the probability value of less than 0.05% level of significance. Therefore, the study recommended that to promote access to equity capital, there is need for government at all level to encourage the development of Nigeria's capital market by providing manufacturing firms with access to equity capital, implement policies to attract foreign portfolio investors and encourage domestic investors to invest in the manufacturing sector.

Keywords— Equity Capital (EC), Manufacturing Sector output (MO), Reinvested Earning (RE), Intra-Company Loans (ICL), Nigeria

I. INTRODUCTION

Industrialization is widely acknowledged as a cornerstone of sustainable economic transformation, particularly in emerging economies where diversification from natural resource dependence remains a key policy objective. In Nigeria, the manufacturing sector plays a strategic role in fostering economic growth, employment generation, technology acquisition, and export expansion. However, despite several industrial policies and initiatives, the sector's performance has been

inconsistent and frequently underwhelming. According to the National Bureau of Statistics (2024), the manufacturing sector's contribution to Gross Domestic Product (GDP) has remained relatively stagnant, with capacity utilization averaging below global benchmarks. This performance reflects persistent structural bottlenecks, macroeconomic volatility, and significant financing constraints facing industrial firms.

Access to long-term finance is essential for firms to invest in plant and machinery, adopt new technologies, expand productive capacities, and sustain operations through economic cycles. Yet in Nigeria, firms predominantly depend on short-term bank credit, which is characterized by high interest rates, stringent collateral requirements, and limited tenors (Ajakaiye, Jerome, & Fakiyesi, 2023). These conditions constrain firms' ability to undertake productive investment and scale operations. Equity capital funds raised through the issuance of shares and retained earnings—offers an alternative source of long-term finance that can support investment, reduce reliance on expensive debt, and promote operational resilience. The theoretical foundations for the importance of equity financing in firm growth are grounded in classic capital structure theories: the Modigliani-Miller theorem highlights the role of financing choices in investment decisions under market imperfections (Modigliani & Miller, 1958), while the pecking order theory posits equity as a preferred option when internal funds and debt financing are insufficient or costly (Myers & Majluf, 1984).

Despite the theoretical benefits, the extent to which equity capital contributes to manufacturing output in Nigeria remains empirically ambiguous. On the one hand, studies on capital market development find that stronger capital markets are associated with broader

economic performance improvements. For example, Jatau, Ayodeji, Ikubor, and Alfa (2025) show that market capitalization a broad measure of equity market depth positively correlates with manufacturing sector output, suggesting that deeper financial markets may support industrial performance. On the other hand, analyses focusing specifically on manufacturing firms' use of equity financing have reported mixed results. Research by Uremadu and Pantaleon (2024) indicates that while capital market development exhibits positive associations with manufacturing growth, equity capital raised by firms has not had a statistically significant impact on output levels, largely because many manufacturing firms do not participate actively in the equity market. Similarly, the AKSU Journal of Administration and Corporate Governance (2024) highlights barriers such as high listing costs, regulatory complexities, and low investor participation that limit manufacturing firms' ability to leverage equity markets effectively.

The inconsistency in empirical findings underscores a critical gap in the literature: most existing studies either utilize broad capital market indicators (e.g., aggregate market capitalization) or combine equity with other financing sources without isolating the specific contribution of equity capital to industrial output. Furthermore, Nigeria's macroeconomic landscape has undergone significant shifts in the past five years, including exchange rate reforms, inflationary pressures, and renewed policy focus on diversification, which may alter the dynamics of equity financing and manufacturing performance (Olaniyi & Lawanson, 2023). Hence, updated empirical evidence is needed to clarify the role of equity capital in driving manufacturing output, particularly within the context of recent economic reforms.

This study addresses these gaps by empirically investigating the direct impact of equity capital on manufacturing sector output in Nigeria using recent data and rigorous econometric methods. By isolating equity financing as a distinct explanatory variable and examining its relationship with manufacturing output, the study provides insights that are critical for policymakers, industrial stakeholders, and financial market regulators seeking to enhance the contribution of manufacturing to national development. Despite the theoretical importance of long-term financing for industrial growth, Nigeria's

manufacturing sector continues to operate below optimal capacity, with investment constraints frequently cited as a primary challenge. While equity capital has the potential to provide stable long-term funding, empirical evidence on its direct impact on manufacturing output in Nigeria is inconclusive, with mixed results from prior studies. Moreover, existing analyses often do not distinguish equity capital from broader financial market measures or other financing sources, leaving a critical knowledge gap. Without clear empirical evidence on the role of equity financing, policymakers are constrained in crafting effective financial policies to support industrial expansion.

To address this gap, the study is guided by the following research questions; what is the impact of equity capital on manufacturing sector output in Nigeria, how does equity financing influence manufacturing productivity relative to other capital sources and what structural factors and market conditions mediate the relationship between equity capital and manufacturing output?. The primary objective of this study is to empirically examine the effect of equity capital on manufacturing sector output in Nigeria. Specific objectives include; examine the effect of equity capital on manufacturing sector output in Nigeria, compare the influence of equity financing with other capital sources on sectoral performance and identify key structural and institutional factors influencing the equity output relationship.

While prior research has explored the broader relationship between capital market development and manufacturing performance, few studies disaggregate equity capital as a unique determinant. Additionally, recent macroeconomic shifts necessitate updated analysis using recent data and methodologies. This study fills these gaps by isolating equity capital's influence and providing evidence that reflects Nigeria's contemporary economic environment, offering insights to guide industrial financing policy.

II. LITERATURE REVIEW

Theoretical Foundations

A string of literature exists on the forces that affect manufacturing sector output in Nigeria. However, the empirical results are mixed and still seem to be in the data. Some studies have analyzed manufacturing

sector output in a neoclassical framework whereas others have used a Comparative Advantage and Absolute Advantage for its modeling to theoretically explain the relationship between foreign direct investment and manufacturing sector output for an open economy like Nigeria by applying various approaches based on neoclassical model which is based on the assumption that each country is fully specialized in its home production, while the Capital market imperfections on the assumption that the exchange does not happen at the same time, there is always room for renegotiation.

This study adopted the Absolute advantage and the Internalization theory framework for its model as it best explains the intent of this work. The absolute advantage theory emphasizes the creating of good or service at a lower absolute cost per unit using a smaller number of inputs, or by a more efficient process. The theory is an economy's ability to produce a particular good or service at a lower opportunity cost than its trading partners. While the internalization theory tries to explain the growth of transnational companies and their motivations for achieving foreign direct investment. In the case of Nigeria, People learn their comparative advantages through wages. This drives people into those jobs that they are comparatively best at. If a skilled mathematician earns more money as an engineer than as a teacher, they and everyone they trade with are better off when they practice engineering.

The theory proves to be better and fit to Nigeria given the potential impact of manufacturing sector output on prices, investment, balance of payments, and interest rate, the issue of the determination of ideal manufacturing sector output between countries becomes imperative for the successful implementation of development programs, (Azam, 2001) argues that the objectives of manufacturing sector output policy are to increase output and stability in domestic prices. A necessary condition for the achievement of the above objectives is that the manufacturing sector output should be stable as possible. According to him, stability permits viability of the rate in response to changes in relative prices; inter-national terms of trade and development factors. The greater the diversity in people and their skills, the greater the opportunity for beneficial trade through comparative advantage

Conceptual Definitions

Manufacturing Sector Output

Otepola (2020) describes manufacturing sector output as a means of producing goods and services, generating employment, and creating income for economic agents. Adofu et al. (2015) define it as the production of goods for sale or use through the application of machinery, labor, tools, and chemical or biological processes. Manufacturing encompasses both traditional handicraft activities and advanced technological production. In modern economies, industrial development is largely driven by technological advancement and innovation in productive strategies.

Ayodele and Falokun (2003) explain industrialization as the transformation of an economy from a traditional, low-productivity system to a modern mass production system characterized by efficiency, automation, and the application of management techniques and technology. Olamide et al. (2014) argue that rapid and sustainable economic growth is primarily achieved through industrial capacity development, technological innovation, and enterprise growth rather than mere abundance of human or natural resources. Bennett et al. (2015) further emphasize that manufacturing output involves the use of modern equipment and technology to enhance welfare and improve living standards. Modern manufacturing processes therefore require strong managerial and entrepreneurial skills alongside technological innovation to promote large-scale productivity.

Huang, Teng, and Tsai (2010) define manufacturing sector output as the total output of all goods-producing facilities within a country, forming a subset of industrial output. Jalilian and Weiss (2002) describe it as the total production from factory-based industries within a given period. In Nigeria, manufacturing production averaged 8.43% between 2007 and 2015, peaking at 24.60% in the fourth quarter of 2013 and declining to -0.70% in the first quarter of 2015. Manufacturing output is considered essential for economic development, especially in developing countries facing balance of payments constraints. Görg and Greenaway (2004) note that manufacturing is a component of the broader industrial sector, which includes processing, quarrying, mining, and crafts.

Tsai and Huang (2007) define the manufacturing sector as part of the industrial sector that converts raw materials into finished or intermediate goods. The sector contributes significantly to employment generation, agricultural development, economic diversification, foreign exchange earnings, and skill development. It reduces dependence on foreign trade and promotes optimal resource utilization. Obichukwu (2013) views manufacturing output as the total production of an industry at the national level and considers it a key driver of sustainable growth and development in Nigeria despite its current performance challenges.

Equity Capital

Equity capital refers to the funds contributed by owners or shareholders to a business in exchange for ownership rights. It represents the residual interest in the company after all liabilities have been paid and is used to finance long-term investment and operations (Ross, Westerfield, Jaffe, & Jordan, 2022). Equity capital is the portion of financing raised by a firm through issuing shares (common or preferred), which provides permanent capital without fixed repayments but exposes investors to business risk and profit variability (Brealey, Myers, & Allen, 2020). From a capital structure standpoint, equity capital encompasses owners' funds that serve as a cushion against financial distress and influence the firm's cost of capital and risk profile. It includes retained earnings and proceeds from issuing equity securities (Titman & Martin, 2018).

Equity capital represents long-term investment resources mobilized by a company to expand productive capacity, acquire new technologies, and sustain growth. It is typically sourced from public equity markets, private investors, and reinvested profits (Baker & Martin, 2021). Equity capital constitutes capital raised via the primary market through initial and subsequent public offerings, as well as private placements. It reflects investor confidence, market depth, and the degree of corporate participation in formal capital markets (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2019). In emerging economies, equity capital is the long-term funds raised by firms from local and international investors that supports industrial investment, enhances competitiveness, and reduces dependency on bank-based credit (Nguyen & Ramachandran, 2022).

Equity capital for small and medium enterprises includes funds from owners, venture capitalists, angel investors, and equity crowdfunding, which are crucial for innovation, scaling operations, and reducing reliance on short-term debt (Beck & Demirgüç-Kunt, 2021). Equity capital is described as financing secured by entrepreneurs by exchanging ownership share for financial backing. Investors expect returns through dividends and equity value appreciation as the firm grows (Cumming, Johan, & Zhang, 2020).

2.1 Empirical Studies

Recent studies such as Ojo et al. (2023) and Sunday (2023) employed the Autoregressive Distributed Lag (ARDL) model and found evidence of both short-run and long-run relationships between FDI and industrial/manufacturing output in Nigeria. However, both studies reported a negative long-run effect of FDI on manufacturing or industrial growth, suggesting that increased FDI inflows have not translated into sustained industrial expansion. While short-run effects were sometimes positive, they were weak, indicating limited immediate benefits.

Similarly, Adejumo (2021) found a unidirectional causality running from FDI to manufacturing sector contribution to GDP, but the relationship was statistically insignificant. This implies that FDI inflows did not significantly drive manufacturing sector growth during the study period. In contrast, Rebecca, Abel, and Adediwura (2020) reported a positive but insignificant relationship between FDI and manufacturing output using the ARDL framework, while trade openness and gross fixed capital formation had negative effects.

Agbarakwe (2019) found that FDI had a positive but weak contribution to manufacturing output growth, with evidence of bidirectional causality between FDI and manufacturing output. Earlier studies such as Mounde (2017) also reported a long-run relationship and bidirectional causality between FDI and manufacturing output, suggesting mutual reinforcement effects.

However, other studies present mixed findings. Efiog, Ayuk, and Imong (2018) found unidirectional causality from manufacturing output fluctuations to FDI, implying that FDI inflows may respond to domestic production performance. Mbanasor and Obioma (2017) reported a negative

and insignificant effect of manufacturing output fluctuations on foreign private investment. Conversely, Chineze (2017) found that manufacturing output fluctuations positively and significantly influenced foreign private investment.

Studies focusing on macroeconomic determinants such as Achugamonu et al. (2017) and Ibrahim, Omar, and Ali (2017) revealed that inflation, external debt, and exchange rate-related variables significantly affect FDI inflows. Williams, Dare, and Sola (2018) showed that external reserves positively influenced manufacturing output during stable periods but had negative effects during financial crises. Ajinaja, Popoola, and Ogunlade (2017) found that GDP, manufacturing output fluctuations, and FDI positively influenced export performance in Nigeria.

III. METHODOLOGY

This study employs annual time-series data from 1986 to 2023 to investigate the impact of Equity Capital (EC) on Equity Manufacturing Output (MO) in Nigeria using Capital (EC), Reinvested Earnings (RE), and Intra-Company Loans (ICL), Interest Rate (INTr) and Exchange Rate (EXr) are included as control variables. The data were obtained from secondary sources, including the Central Bank of Nigeria (CBN) Statistical Bulletins (2016), National Bureau of Statistics (NBS) reports, and the World Bank Development Indicators. Specifically, data on EC, RE, and ICL were sourced from CBN and NBS publications; Manufacturing Output was obtained from NBS Annual Abstracts of Statistics and CBN publications; while Interest Rate and Exchange Rate data were compiled from CBN Statistical Bulletins and the World Bank database. All relevant variables were transformed into logarithmic form to improve stationarity and minimize heteroskedasticity in the econometric analysis.

This study adapts the model by Rebecca, Abel, and Michael (2023), which originally examined the impact of FDI, trade openness, gross fixed capital

$$\Delta MO_t = (\alpha^{MO} + \sum_{i=1}^K \beta_i^{MO} \Delta MO_{t-i} + \sum_{i=1}^K \gamma_i^{MO} \Delta EC_{t-i} + \sum_{i=1}^K \theta_i^{MO} \Delta RE_{t-i} + \sum_{i=1}^K \vartheta_i^{MO} \Delta ICL_{t-i} + \sum_{i=1}^K \pi_i^{MO} \Delta INTR_{t-i}) \quad (3.5)$$

formation, and inflation on manufacturing output. To specifically analyze the effect of FDI components on manufacturing output in Nigeria, the study disaggregates FDI into Equity Capital (EC), Reinvested Earnings (RE), and Intra-Company Loans (ICL).

Modifications to the original model include replacing consumer price index with interest rate (INTr) and trade openness/government capital expenditure with exchange rate (EXr) to improve robustness. The dependent variable is Manufacturing Output (MO), while the independent variables are EC, RE, ICL, EXr, and INTr. A compact functional form of the modified model is specified for empirical analysis. The study present a compact functional form of our model as follow:

MO = f (EC, RE, ICL) (3.1)

MO = f (EC, RE, ICL, EXR) (3.2)

Considering the fact that FDI of an economy is not determined by EXR alone, the inclusion of one important variable INTr is made so as to get a more realistic model: Hence, equations (1) and (2) is extended thus:

$$MO = f (EC, RE, ICL, INTr) \quad (3.3)$$

Where MO= Manufacturing sector output in Nigeria, EC= Equity Capital, RE= Reinvested earnings , ICL= Intra company loans, INR= Interest rate, Thus, the statistical form of the model is:

$$MO = \beta_0 - \beta_1 EC + \beta_2 RE + \beta_3 ICL + \beta_4 INR + e \quad (3.4)$$

Where: β_0 = the intercept for equations, $\beta_1 - \beta_5$ = the parameter estimate of the variables and e = the random variable or error term.

The study used ARDL model as it is most suitable to achieve the main objective of the study and for the purpose of clearness of approach. Since there is a level of interrelationship between the variables, the ARDL is more suitable as it captures the joint interdependency of the variables against each other. The specification of the ARDL model is given below:

ARDL technique is suitable in such situations because it does not require all variables to be integrated of the same order and performs well with

small or moderate sample sizes. The ARDL Bounds Testing approach is further employed to examine the existence of a long-run equilibrium relationship between financial development and electronic banking variables.

Moreover, the ARDL framework allows for the simultaneous estimation of short-run dynamics and long-run coefficients, providing richer insights into how electronic banking innovations influence financial development over time. The inclusion of

lagged dependent variables also captures adjustment dynamics, enabling the model to reflect how deviations from long-run equilibrium are corrected.

Based on theoretical expectations and prior empirical findings, the coefficients of electronic banking variables and macroeconomic controls are expected to be positive ($\beta_1 - \beta_7 > 0$), reflecting their anticipated role in enhancing financial access, efficiency, inclusion, and system stability.

IV. DATA PRESENTATION

Table 4.1: Result of the Descriptive Statistics

	MO	EC	RE	ICL	INR
Mean	158.5139	87.07556	64.15278	105.4528	17.55255
Median	130.5000	58.55000	28.35000	119.5000	17.69000
Maximum	382.1000	277.5000	254.5000	278.5000	31.65000
Minimum	43.60000	10.30000	2.100000	0.800000	8.431667
Std. Dev.	100.0366	77.58742	73.90205	87.33104	5.214314
Skewness	0.722128	0.980132	1.173444	0.406135	0.131623
Kurtosis	2.357950	2.821657	3.127050	2.130174	3.218873
Jarque-Bera	3.747151	5.811664	8.286032	2.124570	0.175805
Probability	0.153574	0.054703	0.015875	0.345665	0.915850
Sum	5706.500	3134.720	2309.500	3796.300	631.8917
Sum Sq. Dev.	350256.4	210693.3	191152.9	266934.9	951.6174
Observations	36	36	36	36	36

Source: *Author's Computation E-Views 9.0*

The results reveal that Intra-Company Loans (ICL) are the most significant contributor to Nigeria's manufacturing output (MO), followed by Equity Capital (EC) and Reinvested Earnings (RE). The mean MO is highest at 158.51, with ICL at 105.45, while median values are generally lower than the means, indicating positive skewness across all variables. This suggests that the data are concentrated on the right of the mean and responsive to FDI shocks. The manufacturing sector experienced substantial fluctuations over the study period, with MO ranging from 43.60 to 382.10, highlighting persistent volatility influenced by ICL, EC, and RE. Standard deviations further indicate that ICL (87.33) and EC (77.59) are the primary sources of variation, while other variables contribute relatively less.

The positive skewness observed across the variables indicates that most data points are above the mean,

reflecting episodic growth and responsiveness of the manufacturing sector to FDI inflows. In terms of kurtosis, MO, EC, and ICL are platykurtic, showing a wider spread from the mean, whereas RE and INR are leptokurtic, indicating higher concentration around the mean. The Jarque-Bera test confirmed that the variables are approximately normally distributed, as none were statistically significant at the 5% level.

Economically, the dominance of ICL suggests that foreign multinationals (e.g., Unilever, Nestlé, Dangote Group’s foreign partners) drive capital inflows through loans rather than fresh equity or reinvested profits. While this contributes positively to MO, it also exposes Nigeria’s manufacturing sector to risks from parent-company decisions, such as loan recalls during economic downturns, and creates potential debt repayment burdens on local firms. Despite these challenges, the high mean MO demonstrates the sector’s resilience, though episodic growth and fluctuations may deter long-term investment. Targeted policy interventions, including stable electricity supply, improved credit access, and investor-friendly reforms, could help sustain and amplify manufacturing output in Nigeria.

or stationarity test is use to ascertain whether or not the variables in the study are stationary or not from 1986-2021. The study explored various ways that would make the variables stationary in the case of non-stationarity otherwise the result will be spurious.

4.2 Unit Root Analysis and Interpretation of Result

The result in table 4.2 is from ADF Test, it is used to present or shows the unit root result. The unit root test

Table 4.2: Unit Root Test

Variables	ADF	5% Critical Level	Order of Integration
D(LNMO)	-3.113175	-2.954021	I (1)
(LNEC)	-5.335598	-2.948404	I (0)
D(LNRE)	-3.815474	-2.951125	I(1)
D(INR)	-5.404404	-3.552973	I (1)
(LNICL)	-3.809834	-2.948404	I (0)

Author’s Computation 2024.

The results from Table 4.2 indicate that Manufacturing Output (MO), Reinvested Earnings (RE), and Interest Rate (INTR) are non-stationary at level but become stationary after first differencing (I(1)), while Equity Capital (EC) and Intra-Company Loans (ICL) are stationary at level (I(0)). This was confirmed using the Augmented Dickey-Fuller (ADF) test at the 5% significance level. The mixed order of integration (I(0) and I(1)) suggests the potential existence of a long-run relationship among the variables, warranting the use of the Autoregressive Distributed Lag (ARDL) Bound Co-Integration Test. The ARDL approach is preferred because it accommodates variables integrated at

different orders and uses a single-equation setup, making it simple to implement and interpret.

4.3 ARDL Bounds Test and Interpretation of Result

In analyzing the effect of manufacturing sector output on foreign direct investment and establishing if there is a long-run relationship between manufacturing sector output and foreign direct investment in Nigeria. The ARDL co integration test seeks to address the respond to the hypothesis of the Null and Alternative in respect to the objectives of the study. The result is presented in Table 4.3

Table4.3: ARDL Bound Cointegration Test

ARDL Bounds Test		F-Statistic	Lower Bound I(0)	Upper Bound I(1)
		9.617109		
K	4	10%	2.2	3.09
		5%	2.58	3.49

	2.5%	2.88	3.87
	1%	3.29	4.37

Author's Computation 2024.

The results of the bounds test showed that the F-statistic value of 9.617109 is greater than the critical value of the lower bounds of 2.58 and upper bounds of 3.49, which implies that there is the existence of long run relationship at 5% level of significance. This means that the Null Hypothesis rejected, thereby accepting the alternative; thus, implying that there is

existence of long-run relationship between manufacturing sector output and foreign direct investment in Nigeria. Therefore, we employed both the Long-run and the short estimate to ascertain the relationship between the variables and the adjustment speed within the short run which is presented in table 4.4

Table 4.4: Short-Run and Long-Run ARDL Model (2,0,2,4,1)

Co-integrating Form/ Short-Run Estimate				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.005	0.093	-0.056	0.957
LNMO(-1)*	0.108	0.052	2.081	0.052
LNEC**	-0.138	0.047	-2.915	0.009
LNRE(-1)	0.039	0.010	3.724	0.002
LNICL(-1)	0.004	0.002	2.233	0.039
INR_IN_(-1)	-4.22E	9.21E	-0.458	0.652
D(LNMO(-1))	-0.490	0.202	-2.423	0.026
D(LNRE)	0.011	0.011	0.998	0.331
D(LNRE(-1))	-0.029	0.012	-2.551	0.020
Long Run Coefficients Estimate				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEC	1.274	0.226	5.622	0.000
LNRE	-0.357	0.141	-2.520	0.021
LNICL	-0.039	0.009	-4.229	0.000
INR_IN_	0.000	0.000	0.436	0.667
C	0.047	0.832	0.056	0.955

Author's Computation 2024

The ARDL results reveal a mixed short-run and long-run relationship between FDI components and Nigeria's manufacturing output (MO). In the short run, Equity Capital (EC) has a negative effect, while Reinvested Earnings (RE) and Intra-Company Loans (ICL) positively influence MO, with all variables statistically significant except for Interest Rate (INTr). This indicates that FDI components, if effectively utilized, can significantly impact manufacturing output in the short term.

In the long run, EC, RE, and ICL remain statistically significant, whereas INTr remains insignificant. Interestingly, RE and ICL exhibit a negative relationship with MO in the long run, while EC positively affects output. Quantitatively, a 1% increase in EC raises MO by 1.27%, whereas decreases in RE and ICL correspond to 0.35% and

0.03% increases in MO, respectively. These findings suggest that policy adjustments targeting EC, RE, and ICL could meaningfully influence manufacturing output, though inconsistent policy implementation by the Central Bank of Nigeria has limited their full potential. Overall, the results confirm a long-run relationship between FDI components and manufacturing sector output in Nigeria, consistent with theoretical expectations such as the purchasing power parity framework.

V. CONCLUSION AND RECOMMENDATIONS

This study examined the effect of Equity Capital (EC) on manufacturing sector output (MO) in Nigeria using Reinvested Earnings (RE), and Intra-Company Loans (ICL) as independent variables and relying on annual time-series data from 1986 to 2026. Empirical

results from the ARDL estimates reveal that Equity Capital (EC) variables significantly influence manufacturing output, although their effects differ across the short and long run. Specifically, Equity Capital positively affects MO, whereas Reinvested Earnings and Intra-Company Loans exhibit negative relationships in the long run, indicating that these instruments are not fully harnessed to maximize sectoral growth. In the short run, EC negatively affects MO, while RE and ICL positively influence output, highlighting the mixed dynamics of FDI impacts on manufacturing performance.

The findings underscore the importance of targeted policy interventions to fully leverage Equity Capital (EC) for manufacturing sector development. Accordingly, this study makes the following recommendations:

Enhance Access to Equity Capital: The government should encourage the development of Nigeria's capital market to provide manufacturing firms with greater access to equity capital. Policies should attract foreign portfolio investors, promote domestic investment, and support small and medium-sized enterprises (SMEs) through venture capital funds and business incubators. **Streamline Intra-Company Loan Regulations:** Regulatory requirements for ICLs should be simplified to facilitate capital flows within multinational corporations operating in Nigeria. Reducing bureaucratic hurdles and simplifying approval processes will encourage manufacturing firms to leverage intra-company loans as a key financing source.

Promote Reinvestment of Earnings: Tax incentives should be implemented to encourage manufacturing firms to reinvest profits into operations, research, and development (R&D). Programs to strengthen corporate governance and best practices in earnings reinvestment can enhance productivity and innovation. **Encourage Domestic Ownership and Investment:** Since EC, RE, and ICL positively impact manufacturing output, government policies should incentivize local ownership of equity capital, reinvestment of earnings, and use of intra-company loans to foster domestic manufacturing ventures. Such measures will strengthen the sector's resilience and reduce dependency on external funding.

This study contributes to knowledge in several ways. First, it empirically demonstrates the differential impact of FDI components on manufacturing output

in both the short and long run, providing insights into how capital inflows shape sectoral performance in Nigeria. Second, it identifies the significant role of EC, RE, ICL, and INTr in influencing manufacturing output, offering policymakers evidence to design targeted interventions.

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