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Foreign Direct Investment and Growth of the Manufacturing Sector: Does Absorptive Capacity Matter?

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Abstract: Despite inconsistent empirical findings, the economic argument surrounding the growth impact of foreign direct investment (FDI) on host communities continues to be one of the most heated discussions among scholars. Current attempts to address the observed discrepancy in results center on nation-specific traits and sectoral importance, this study evaluated the contribution of absorptive capacity to the relationship between FDI and the expansion of Nigeria's manufacturing sector. The main goal of the research is to ascertain how significant host country-specific features are in the relationship between FDI and growth. While the Autoregressive Distributed Lag (ARDL) bound test approach was used for estimation, the analysis is based on the Augmented Solow production function. Findings revealed that: (i) FDI significantly exerts negative impacts on growth of the manufacturing sector, (ii) result provided support for the importance of absorptive capacity and government regulatory quality in determination of both the nature and magnitude of growth-impact of FDI in the manufacturing sector.

Keywords: FDI, Absorptive Capacity, Government regulatory quality, Growth of Manufacturing Sector, ARDL model, Nigeria.

JEL Codes: C22, F23, F43

1. INTRODUCTION

Economic argument on the growth-impact of Foreign Direct Investment (FDI) on host communities has been an age-long debate. In theory, it is widely believed and strongly argued that rather than negative external affects, FDI

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provide positive externalities and is the main driver of economic growth. However, empirical findings in support of this argument are mixed, therefore do not provide reliable definite policy direction. For instance, while a good number of studies provided evidence in support of FDI as strong catalyst and engine of growth (Caves 1974; Kokko, 1994; Nair-Reichert and Weinhold, 2001; Yao and Wei, 2007; Pegkas, 2015; Emako *et al*., 2022; Wondimu, 2023), some other studies provided evidence in support of negative external effects instead (Haddad and Harrison, 1993; Aitken and Harrison, 1999; Bornschier, Chase-Dunn, and Robinson, 1978; Fry, 1993; Ikpe and Nteegah 2014). There are equally studies that failed to find any evidence that FDI stimulates or retard growth (Carbonell and Werner, 2018; Ikpe, 2019; Ozili, 2025). This has left views of scholars on the subject matter polarized and resolutions still not reached thus, living open an existing literature gap. While further evidence is being provided in support of either of the above, some other studies went further by providing information regarding the channels through which FDI exerts positive/negative effects on host communities in developing countries. In the context of this, some studies for instance provided evidence of positive effects in terms of technological and knowledge spillovers and enhance firm productivity (Zhou, Li and Tse, 2002; Blomstrom and Kokko, 1998). Some other studies explained this effect in terms of source of employment in host communities (Lipsey, Sjoholm, and Sun, 2013), and some explained this with respect to causal effect of FDI on export (Zhang and Song, 2002; Vogiatzoglou and Thi, 2016).

These notwithstanding, analysts are still of the opinion that FDI plays vital role in stimulating growth and development as evidence are bound in many countries. Solution lies in understanding the economic environment that could serve as requirement for harnessing the benefits of FDI. This has been buttressed by Zhang (2001) who traced perceived doubt on the positive growth-impact of FDI to unfavourable country-specific conditions. One of these country-specific conditions has been explained in terms of lack of absorptive capacity. This explains why empirical evidence of positive effect of FDI on growth is largest among developed countries (Carbonell and Werner, 2018). Another factor which is linked to the former is the issue of sectoral presence/ concentration of FDI among the various sub-sectors of the industrial sector. The often talked about spillover benefits of FDI both at the micro and

macro levels differ across sectors and countries, since all sectors and countries do not have equal potential for absorbing foreign technology (Alfaro, 2003; Hirschman, 1958). Furthermore, Alfaro (2003) emphasized that FDI into different sectors of the economy (primary, manufacturing and services) exert different effects on growth; the support of this is evident in recent studies (see Emako *et al*, 2022). Therefore, it is noteworthy that the effect of FDI on growth will largely depend on sectoral concentration, absorptive capacity of host community and quality of inward FDI. Empirical Evidence situate positive growth-effect of FDI on manufacturing (Alvarez, 2003), given the fact that manufacturing sector has potential for spillovers and linkages with other sectors of the industrial sector. By this, manufacturing output serves as a vehicle for the transfer of positive externalities from FDI to other sectors through forward and backward linkages. Currently, there is a dearth of investigation that explored the role of absorptive capacity in FDI-growth relationship either within the manufacturing sector or the wider economy. Secondly, there is need to also examine the effect of government regulation as a variable which has a direct bearing on the environment on which economic activity takes place to determine outcomes (see Afolabi, 2019; Ikpe *et al*, 2025).

In Nigeria like most African countries, it has not been possible to fully harness the benefits of FDI despite being the third largest FDI recipient economy in Africa, because most inward FDI are rooted in the primary sector. The real sector (particularly the manufacturing sector) has remained unattractive to foreign multinational firms due to unhealthy business climates. For instance, Nigeria's ranking in World Bank's ease of doing business index has deteriorated over the years; from 131th out of 185 countries in 2013, Nigeria was subsequently ranked 170th in 2015, 169th in 2016 and 187th in 2017 out of 189 countries (World Bank, 2018). Recent statistics show that with a general score of 56.9, ease of doing business in Nigeria in the 2020 is ranked 131th out of 190 countries (Statista, 2023). Notable specific factors responsible for Nigeria's poor ranking includes lack of access to long term funds, infrastructural deficit, insecurity, policy summersault, lack of business confidence, and lack of access to credits, high cost of starting business, poor contract enforcement for businesses respectively. These factors do not guarantee security of investments, and increases cost of investment. These has led to closure of a good number of manufacturing multinational firms, and discouraged incoming ones to the

extent that the contribution of manufacturing sector to GDP has been on downward trend over the years. For instance, from 23% in 1990, the share of manufacturing sector to GDP for Nigeria declined to 3.67% and 1.88% in 2000 2012 respectively. Evidence points to the fact that this decline persists even in recent period; the contribution of manufacturing sector to GDP is 15.2% in 2013 and 13% in 2017Q3 (Brand South Africa, 2014, 2018).

Past research findings in this particular macroeconomic problem remains inconclusive as results are mixed. While some studies reported a positive impact of FDI on manufacturing sector performance (Ehijiele *et al* 2016, Nchoe, 2016; Emako *et al*., 2022), some others found a negative relationship instead (Akintoye, 2013) depicting inconsistency in findings. This means that more work needs to be done to resolve the observed inconsistency in previous findings. Secondly, Carbonell and Werner (2018) provided support for country-specific studies as way out of myriads of inconsistencies surrounding previous studies. Carbonell and Werner argue further that absorptive capacity which is required for FDI to enhance productivity and output growth can be measured in terms of depth of human capital, openness to trade, financial market development among other variables. Furthermore, empirical investigation of impact of FDI on growth needs control for domestic credit creation for GDP transactions, otherwise result could suffer from omitted variable bias. It is worthy of note that credit creation is under the control of domestic financial system; it is injected into productive activity via the financial sector.

In previous investigations and indeed Nigeria specific studies, the above highlighted theoretical postulation was ignored; the role of the financial sector in deepening the level of domestic credit through money creation were neglected (see Carbonell and Werner, 2018). These studies also did not deem it necessary to disaggregate credit into real economy credit (determining productivity growth) and financial credit (credit for non-productive purposes, such as assets and property transaction). This gap in previous studies in the context of the Nigerian economy is addressed in this investigation by utilizing domestic credit provided by the financial sector as proxy for real economy credit, in addition to the use of secondary school enrolment rate as proxy for quality of stock of human capital, and sum of trade as a ratio of GDP as proxy for trade globalization (See Carbonell and Werner, 2018). Also addressed in this investigation which has been widely neglected in previous studies is

important role of quality of government regulation. Studies have provided evidence of a strong causal link between regulatory quality and economic performance (see World Bank, 2004). The study utilized World Bank index of regulatory quality as proxy for capacity of government to formulate and implement sound policies and regulations that could permit as well as promote private sector development. Drawing from the above, the objectives that guided this investigation are to: (i) assess the effects of the individual component of absorptive capacity on manufacturing value added (MANV) in the FDI-MANV relation; (ii) determine the effect of government regulatory quality (GVREG) on MANV in FDI-MANV relation.

The paper is divided into five sections; succeeding this introductory section is section two that x-rays the empirical evidence identifying existing literature gap, section three specifies the methodological procedures employed in the empirical analysis, four presents result of the empirical analysis, while five concludes the study, highlighting policy implications of findings from the study.

2. EMPIRICAL LITERATURE

International evidence in support of different held views regarding the effect of FDI on growth and development of national economies remains divergent and inconsistent. At the aggregate level, a number of findings support significant positive effect of FDI on growth; (Hansen and Rard, 2006; Lumbila, 2015; Zakia and Ziad, 2007; Adigwe *et al*, 2015; Yao and Wei, 2007; Pegkas, 2015; Ali and Hussain, 2017; Emako *et al*., 2022; Wondimu, 2023), some others, significant negative effect (Saqib *et al*, 2013; Carkovic and Levine, 2002; Durham, 2004; Ikpe and Nteegah, 2014). There are also studies that failed to find any evidence of growth effect (Akinlo, 2004; Adewumi, 2006; Herzer *et al*, 2008; Ikpe, 2019; Ozili, 2025). Specifically, Herzer *et al* reported no clear evidence in the link between FDI and growth.

This lack of consensus among studies has been explained in terms of differences in economic environment (Li and Liu, 2005; Durnham, 2004; Batten and Vo 2009). This offers reasons why empirical evidence seems to agree that positive growth-effect of FDI is more in developed than developing economies. For clarification purpose, studies examined the relationship between specific factors that define absorptive capacity of an economy and

FDI. While Li and Liu (2005) found support for significant positive association between human capital and the growth-impact of FDI in both developed and developing countries, Blomstrom *et al* (1994) failed to find any relationship between education and FDI inflows in developing countries. Furthermore, Harmes and Lensin(2003) concludes that in the absence of developed domestic financial system, FDI is an insignificant growth determinant; this indicates mixed findings. This development may have prompted current focus on specific sectors of the economy; many research efforts on this singular macroeconomic issue now focus on examination of the effect of FDI on technology transfer and domestic productivity (Johnson, 2006; Castellani and Zanfei, 2003; Nchoe, 2016). Again, international evidence in this context is also mixed. For instance, while positive effect was reported by some studies (Sun, 1996; Alvarez, 2003; Nchoe, 2016), some other found support for negative effect (Adejumo, 2013; Aitken and Harrison, 1999; Djankov and Hoekman, 2000). Some positive effect in some countries, and no effect in some others (Castellani and Zanfei, 2003). Studies like Young and Lan (1997) failed to discover any positive effect of FDI on total factor productivity in 123 countries.

From the foregoing there is clear evidence of lack of consensus among scholars on likely effect of FDI either at the aggregate or sectoral levels. Investigation of individual effect of each of the specific factors that explain absorptive capacity also produced mixed results. It is normal to have different findings for different countries, due to differences in individual country characteristics; these to a large extent determine the outcome of investigations even when the same model and data source is adopted. Secondly, the capacity of the economy to enforce existing industrial regulations to an optimal level that does not create market distortions was equally neglected in previous studies.

3. METHODOLOGY

3.1. Data

Data utilized for analysis in the study are annual time series data that span over the period 1990 – 2021. While data for FDI and GVREG were sourced from the UNCTAD world investment report and Kaufmann and Kraay (2023) respectively, other data series used in the analysis were sourced from World Bank world development indicators (WDI (2023)). Other relevant information on data is well presented in Table 1.

Table 1: Variables, Description and Sources

Variables	*Description*	*Sources*
MANV	Manufacturing value added as a percentage of GDP	*WDI*
FDI	Inward stock of foreign direct investment as a percentage of GDP	*UNCTAD*
GfCAK	Gross fixed capital formation as a percentage of GDP	WDI
SSENROL	Secondary school enrolment rate as a percentage of gross.	WDI
CREDIT TRDGDP GVREG	Total domestic credit provided by the financial sector as percentage of GDP. Trade globalization measured as sum of trade (export + import) as a ratio of GDP. Government regulatory quality; it reflects perceptions of government's ability to formulate and implement sound policies and regulation that permit and promote private sector development	*WDI* WDI Kaufmann & Kraay

WDI = World Development Indicators (World Bank, 2023). TRDGDP was computed using the relevant indices of trade and GDP(Import, Export, and GDP) from WDI, 2023: https://data.worldbank.org/indicator; Kaufmann & Kraay, 2023 https://info.worldbank/governance/wgi/index.aspx#home
UNCTAD, 2023: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=90759

3.2. Theoretical Framework and Model Specification

Theoretical base for the analysis of the impact of FDI on manufacturing sector performance is derived from the popular Cobb-Douglas production function specified as $Y = K^{\alpha}(AL)^{1-\alpha}$, $0 < \alpha < 1$ - - (1)

Y is output, K is stock of physical capital, L is stock of human capital, A is the efficiency factor, α indicates constant returns to physical capital, and 1-α indicates constant returns to human capital. From 1, the output function was derived. This in Solow's model is defined as a function of the initial output and the determinant of ultimate steady state. The specific empirical function in this investigation follows Carbonell and Werner (2018)'s reduced/parsimonious GETS model for the Spanish economy, with modification. The modification was necessitated by the need to filter-out some control variables considered not relevant for this study, and create space for "Quality of Government Regulation" previously neglected in literature, but considered important for achievement of the overall objective of this investigation. Thus,

MANV = f(GfKAP, SSENROL, FDIGDP, CREDIT, TRDGDP, GVREG) (2)

where,
MANV represents Manufacturing value added, GfKAP denotes fixed capital formation (proxy for stock of physical capital), SSENROL is secondary school enrolment (proxy for quality of human capital) FDIGDP is Foreign Direct Investment as a percentage of GDP, CREDIT is domestic real economy credit, TRDGDP represents trade as a percentage of GDP – it is proxy for openness of the economy, and GVREG represents government regulatory quality. Analysis of data was done using E-view 10 econometrics software.

3.3. Estimation Strategy

By thoroughly examining the time series properties of the macroeconomic variables, it was observed that the order of integration for each of the macroeconomic variables runs between zero and one (Table 2). According to Pesaran *et al*. (2001), ARDL bounds testing approach to cointegration analysis can be applied to series that are integrated at I(0) or I(1) or [I(0) and I(1)]. However, it must be ensured that none of the variables in the series are I(2) as that could make the computed F-Statistics required to determine cointegration invalid. In order to identify the order of integration of series correctly, unit root analysis is implemented in this study. With Perron (2006) suggesting that conventional unit root tests such as Augmented Dicky–Fuller (ADF; Dickey and Fuller (1979, 1981), Philip Perron (PP; Phillips and Perron (1988), Kwiatkowski–Phillips–Schmidt–Shin (KPSS; Kwiatkowski *et al*. (1992) and Ng and Perron (2001) provide biased results because of their low explanatory

Table 2: Zivot-Andrews Unit Root Test

Level form I(0)			***First difference I(1)***		
Variable	*t – statistics*	*Break date*	*t – statistics*	*Break date*	*Order of integration*
*ln*MANV	-6.8937*	1995	-5.9718*	1998	I(0)
*ln*GFKAP	-3.8065	2009	-9.5596*	2005	I(1)
*Ln*SSENROL	-2.3104	2009	-5.1916**	2008	I(1)
*Ln*FDIGDP	-5.1774	1993	-6.5201*	1995	I(1)
*Ln*TRDGDP	-4.2316	2012	-5.4664*	2006	I(1)
*Ln*CREDIT	-5.5006*	1995	-6.0930*	1995	I(0)
*Ln*GVREG	-4.6990***	2005	-7.6106*	2005	I(1)

Note: *, **, *** denote significant at 1%, 5%, and 10% level of significance respectively. Variables are adjudged to be significant where significance is established at, at least 5% level of significance

strength to identify unknown structural breaks in the series, this study applies Zivot and Andrews (1992) unit root test, which takes into account unknown single structural break in the series. The results in Table 2 show a structural break in all the data series. The stationary properties show mixed integration in the data series[I(0) and I(1)]. Interestingly, none of the variables is found to be integrated at second difference [I(2)].

The autoregressive distributed lag (ARDL) approach to cointegration analysis is used in this study. ARDL has widely been used in recent studies due to its statistical power to provide valid and reliable estimates (see Adamu and Rasiah, 2016; Nampewo and Opolot, 2016; Aboagye, 2017; Agbanike, *et al*., 2019; Abango, et a., 2019). In the particular case of this study, the mixed order of integration (I(0) and I(1)) observed from the unit root tests makes ARDL the most appropriate econometric technique for the long-run analysis (see Pesaran *et al*. 2001). Equation for the ARDL model is thus specified:

$$\Delta MANV_T = \beta_0 + \sum_{i=1}^{q} B_1 \Delta MANV_{T-i} + \sum_{j=0}^{q} \alpha_j \Delta GfKAP_{t-j} + \sum_{k=0}^{q} \lambda_k \Delta SSENROL_{t-k} + \sum_{1=0}^{q}$$

$$\varphi_1 \Delta FDIGDP_{t-1} + \sum_{m=0}^{Q} \eta_m \Delta CREDIT_{t=m} + \sum_{n=0}^{q} \theta_n \Delta TRDGDP_{t-n} + \sum_{o=0}^{q} \mu_o \Delta GVREG_{t-o} + \sum_{p=0}^{q}$$

$$\gamma_1 \Delta FDIGDP^* GVREG_{t-p} + \Delta_0 MANV_{T-1} + \delta_1 GfCAK_{t-1} + \delta_2 SSENROL_{t-1} + \delta_3 FDIGDP_{t-1} + \delta_3 FDIGDP_{t-1} + \delta_4$$

$$CREDIT_{t-1} + \delta_5 TRDGDP_{t-1} + \delta_6 GVREG_{t-1} + \delta_7 \Delta FDIGDP^* GVREG_{t-p} + \varepsilon_t$$

(3)

According to Pesaran, Shin and Smith (2001) the cointegrating equation based on an asymptotic non-standard F-test on coefficient of the lag level variables of the unrestricted correction model is specified as:

$$\Delta MANV_T = \beta_0 + \sum_{i=1}^{q} B_1 \Delta MANV_{T-i} + \sum_{j=0}^{q} \alpha_j \Delta GfKAP_{t-j} + \sum_{k=0}^{q} \lambda_k \Delta SSENROL_{t-k} + \sum_{1=0}^{q}$$

$$\varphi_1 \Delta FDIGDP_{t-1} + \sum_{m=0}^{Q} \eta_m \Delta CREDIT_{t=m} + \sum_{n=0}^{q} \theta_n \Delta TRDGDP_{t-n} + \sum_{o=0}^{q} \mu_o \Delta GVREG_{t-o} + \sum_{p=0}^{q}$$

$$\gamma_p \Delta FDIGDP^* GVREG_{t-p} + \Omega Ect_{t-1} + \mu_t$$

(4)

Where Ect_{-1} defines the error correction term and Ω is the speed of adjustment to equilibrium. Other variables are as previously defined.

4. RESULTS AND DISCUSSION

The results of the ARDL bounds test are presented in Table 3. The results show that the calculated F-statistic is higher than the upper critical bound from Narayan (2005) at 5% level of significance. This suggests evidence of long-run relationship among the variables in the model. The null hypothesis of no cointegration among the variables is therefore rejected, thus giving justification of analysis on the basis of ARDL bound test approach. In the analysis, equation "3" is estimated (first without the interaction term FDIGDP*GVREG); this captures the direct impact of each of the explanatory variables on MANV, then with the interaction term to capture the effectiveness of government regulation on FDI; in this, variable of interest is FDIGDP*GVREG.

Table 3: ARDL Cointegration Results

	Specification 1			*Specification 2*	
	Brk	*Selected Model*	*F-Statistic*	*Selected Model*	*F-Statistic*
South Africa	2006	ARDL(1, 0, 0, 1, 0, 1, 1)	4.3515**	ARDL(1, 0, 0, 0, 1, 0, 1, 0)	4.8038**
Nigeria	1995	ARDL(1, 1, 0, 0, 0, 1, 1)	4.2529**	ARDL(1, 1, 0, 0, 0, 1, 1, 0)	4.2927***
	I(0)	I(1)		I(0)	I(1)
1%	3.976	5.691		3.864	5.694
5%	2.794	4.148		2.730	4.163
10%	2.334	3.515		2.277	3.498

** indicates significance at 5% level. *Source of Asymptotic critical value bounds:* Narayan (2005)

Outcome of the long run regression (Table 4a) shows that three (GfKAP, SSENROL, and TRDGDP) of the six explanatory variables accounts for changes in growth performances of the manufacturing sector in Nigeria. These include economy's stock of physical capital, quality of stock of human capital, and openness of the economy. Individual specific impact of each of the variables shows that GfKAP exerts a significant positive growth-impact on manufacturing sector. Numerically, value added of the manufacturing sector to GDP increases by 0.96% for every 1% increase in GfKAP. Among the secondary variables of interest (variables that define absorptive capacity),

economy's quality of human capital (SSENROL) significantly reduces growth-performance of the manufacturing sector by -0.75%. This indicates tendency of MANV to diminish by -0.75% for every 1% increase in SSENROL. Similarly, 1% increase in the economy's level of openness significantly reduces growth in MANV by -0.55%. FDI (the primary variable of interest), quality of government regulation, private sector credit (CREDIT) as a component of absorptive capacity is not of importance in shaping levels of growth in the manufacturing sector. The presence of structural break does not exert any significant changes on the long run impact of these variables on manufacturing value added. On the other hand, result in specification "2" shows that effort by the government to bring about significant positive changes in the impact of FDI on manufacturing sector growth through policy regulation failed to yield the desired result, given insignificant impact of FDIGDP*GVREG on MANV. Specific dynamics of these relationships (Table 4b) show that even in the short run, FDI failed to exert any significant impact on MANV. On the contrary, variables that determine levels of manufacturing growth-performance in the short run include all three variables which define absorptive capacity (SSENROL, CREDIT, and TRDGDP), as well as GVREG. Specifically, while SSENROL and TRDGDP significantly reduce MANV by -0.66%, and -0.31% respectively for every 1% increase in each of the variables, CREDI increases it significantly by 0.19%. On the other hand, GVREG significantly reduces MANV by -9.11% for every 1% increase in the aggregate. Significant impact of ΔBrk indicates that structural break that individually occurred for each of the variables negatively affected their individual impact on MANV by -6.67%. The model has an ECM (-1) of -0.93, and it is negative, indicating adjustment to equilibrium at the rate of 93% in the case of disequilibrium each period. Long run and short run results, as well as diagnostic tests are presented in tables 4a, and 4b. As in the long run model, evidence in specification "2" shows that the interaction term (FDIGDP*GVREG) is statistically insignificant. This indicates ineffective impact of government regulatory action on FDI in Nigeria. Results of the diagnostic test as can be observed (Table 4b) indicate failure to reject the null hypotheses. For instance, both Breusch-Pagan Godfrey test of Hetroscedasticity and Breusch-Godfrey LM test of serial correlation indicate failure to reject the null hypothesis of no hetroscedasticity and no serial correlation in both specification "1" and "2" respectively. Similar results were

also arrived at in the case of the usual test of omitted variables bias (RAMSEY RESET) given probability values of 0.4666 for specification "1", and 0.6287 for specification "2".

Table 4a: Long-run estimates

	Specification 1				*Specification 2*			
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
*Ln*GFKAP	0.9583	0.3062	3.1296	0.0055	0.9070	0.2830	3.2050	0.0049
*Ln*SSENROL	-0.7530	0.0600	-12.5427	0.0000	-0.7501	0.0549	-13.6688	0.0000
*Ln*FDIGDP	-0.2272	0.5972	-0.3804	0.7079	9.6712	6.1325	1.5771	0.1322
*Ln*CREDIT	0.1270	0.1020	1.2446	0.2284	0.1337	0.0934	1.4321	0.1692
*Ln*TRDGDP	-0.5498	0.0817	-6.7303	0.0000	-0.5405	0.0752	-7.1849	0.0000
*Ln*GVREG	-1.0167	4.5660	-0.2227	0.8262	15.6310	11.7879	1.3260	0.2014
*ln*FDIGDP* *ln* GVREG					-10.1616	6.5939	-1.5411	0.1407
Brk	-8.2263	4.5224	-1.8190	0.0847	-8.1294	4.1117	-1.9771	0.0636
C	51.3312	7.6490	6.7108	0.0000	66.8613	12.0839	5.5331	0.0000

Table 4b.. Short-run estimates and Diagnostic tests

	Specification 1				*Specification 2*			
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
Δ*ln*GFKAP	-0.0444	0.3027	-0.1468	0.8848	-0.0396	0.3061	-0.1293	0.8985
Δ*ln*SSENROL	-0.6626	0.2192	-3.0221	0.0070	-0.7190	0.2120	-3.3918	0.0032
Δ*ln*FDIGDP	-0.2407	0.4216	-0.5708	0.5748	-9.6677	4.9950	-1.9355	0.0688
Δ*ln*CREDIT	0.1901	0.0748	2.5408	0.0199	0.1927	0.0723	2.6638	0.0158
Δ*ln*TRDGDP	-0.3074	0.0776	-3.9600	0.0008	-0.3059	0.0750	-4.0778	0.0007
Δ*ln*GVREG	-9.1121	3.6326	-2.5084	0.0214	8.9785	9.4226	0.9529	0.3533
Δ(*ln*FDIGDP * *ln*GVREG)					-10.2748	5.4608	-1.8816	0.0762
ΔBrk	-6.6708	2.2976	-2.9033	0.0091	-6.3758	2.1758	-2.9304	0.0089
CointEq(-1)	-0.9326	0.1725	-5.4061	0.0000	-1.0250	0.1723	-5.9504	0.0000
Diagnostic Tests								
Jarque-Bera test	1.0539	[0.5904]			1.0868	[0.5808]		
BG Serial Correlation LM Test	0.3472	[0.5630]			1.2768	[0.2742]		
BPG Heteroskedasticity Test	0.4715	[0.8987]			0.5222	[0.8733]		
Ramsey RESET Test	0.5532	[0.4666]			0.2425	[0.6287]		
Notes: P-valuesin [ ];								

5. CONCLUSION AND POLICY IMPLICATION OF FINDINGS

5.1. Conclusion

On the basis of findings from this study, it is the conclusion of the study that nature of causal relationship between FDI and MANV is a function of level of absorptive capacity in host economy, as earlier advocated by Borensztein, *et al* (1998), and more recently by Hermes and Lensink (2003), Alfaro *et al*. (2004), and Durham (2004). More specifically, findings from the study strongly supports findings by Harmes and Lensin (2003); Harmes and Lensin concludes that in the absence of developed domestic financial system, FDI is an insignificant growth determinant – similar conclusion is also arrived at in this study. Also, of great importance in FDI – growth relation is relevance of ability of the government to implement and enforce growth enhancing laws in ways that do not hurt operating private firms.

5.2. Policy Implication of Findings

Contending issue of whether host country's level of absorptive capacity does matter for manufacturing sector performance, and indeed growth-impact of FDI, evidence from this study provided support for that conjecture. In fact, statistical significance of the components of absorptive capacity in the model is an indication of the importance of absorptive capacity in FDI-MANV model. Findings provided evidence of tendencies of individual component of absorptive capacity to either exert negative or insignificant effect on manufacturing growth performance at lower capacity of development. For instance, SSENROL which is at a very low level of development in Nigeria has a strong significant relationship with MANV (-0.7530). Similarly, the fact that openness of the economy has a significant negative relationship with MANV (-0.5498); export value for Nigeria in relation to her import is weak, hence the averagely significant negative effect of openness on MANV.

Secondly, regulatory role of the state is a key factor that determines both the magnitude and nature of the individual private contributory factors of production to total output. The public sector is not only required to be alive to its regulatory responsibility, but is expected to do that in ways that could promote positive contributions of the private sector to total output. In the context of this study, government regulatory quality (GVREG) exerts strong negative impact on MANV (-1.0167), which is insignificant at the long-

run, but significant at the short-run. This underscores the importance of effective government regulation in promoting growth of the manufacturing sector, and the economy in general. The fact that interaction between FDI and GVREG has a strong significant negative effect on MANV in the short run model, but insignificant in the long run indicates the need for Nigeria to improve on the capacity of its government to implement and enforce necessary growth enhancing laws in other to harness the benefits of FDI. The quality of government regulation in Nigeria in the context of World Bank estimates has consistently remained negative, hence the need for government to improve on this.

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