A Dynamic Panel Analysis of Drivers of Output Growth in the Nigerian Manufacturing Firms

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Abstract

Regardless of the efforts of government to revamp the manufacturing sector in Nigeria, the sub-sector has remained ineffective with dwindling output and there have been consistent fluctuations in the share of the manufacturing sub-sector to Gross Domestic Product (GDP) in Nigeria. This study therefore examines the determinants of output growth in the Nigerian formal manufacturing sub-sector. The study made use of fifty (50) formal manufacturing firms listed in the Nigerian Stock Exchange

Data for the formal manufacturing firms were sourced from the Nigeria Stock Exchange (NSE) Fact Book and the Central Bank of Nigeria Statistical Bulletin 2014. The estimated models in the study were specified following the works of Sangosanya (2011). The study employed the dynamic panel data analysis (the dynamic models of the Generalized Method of Moments (GMM) and the Systemic Generalized Method of Moments (SYSGMM)) for the Nigerian formal manufacturing sub-sector.

The study showed that the coefficient of operating efficiency in the GMM&SYSGMM estimate, i.e. -0.0349214 and -0.0199787 respectively showed a negative relationship between OPREF and firms' growth. This implied that information supplied by firms about their growth indicators is at variance with their performance. This further speaks volume of the weakness of regulatory agencies to effectively monitor the performance of manufacturing firms in Nigeria. Also, the study showed that exchange rate, bank efficiency and managerial efficiency have significant positive relationship with output growth of firms. Also variables such as degree of financial development, energy infrastructural facilities and government regulations and policy have significant negative impact with output growth of firms in Nigeria.

Findings revealed that all the explanatory variables identified in the study are strong determinants of firm growth in the Nigerian manufacturing

sub-sector. The study recommended among others that government should formulate and implement policies that would hinder formal manufacturing firms from publishing fake report of their growth. Also, government should formulate and implement policy measures that would make imported goods more expensive and appropriate monetary policies that would make the cost of borrowing from banks (interest rate) affordable should be priotised in Nigeria.

Keywords: Output Growth, Manufacturing firms, Dynamic panel, Bank efficiency, Energy infrastructure

1. INTRODUCTION

Manufacturing sector plays a dominant role among other sectors of the economy in terms of production and distribution of consumer goods. This singular sector has many dynamic benefits that are crucial for economic transformation. It is one of the sectors whose forward and backward linkages can effectively take place. According to Ogwuma (1995), the manufacturing sector has a wider and more effective linkage among different sectors. This sector also creates investment capital at a faster rate than any other sectors of the economy.

The manufacturing sub-sector is crucial for two main reasons; it has significant potential to provide modern employment to a growing labour force especially that of less skilled type and second by its own healthy growth, stimulate and provide a foundation for growth in the economy.

The world over, the manufacturing sector is recognized for creating mass employment for low-skilled workers in the modern sector. With a rapid decline in the capacity of agriculture to offer jobs and the limited scope of the modern services sector to absorb relatively unskilled labour that has been displaced from agriculture, expectations are that the manufacturing sector will create mass employment for this displaced lot. (Arvind & Danish, 2009).

Africa is blessed with abundant human and material resources but characterized with rapid population growth and in terms of employment, a large agricultural sector. With limited access to fertile land, the agricultural sector may not be able to deliver sustained growth in per capita income in the future. As land is not an important factor for manufacturing production, thus is much less of a constraint for manufacturing growth. For reasons to do with technology and costs, manufacturing may benefit from economies of scale, so that average production cost fall as firm grow. Policy makers in Africa countries recognize the importance of manufacturing sector for long-term economic development (Agarwal & Gort 2002).

The experience of the East Asian newly industrialized countries with successful manufacturing sectors, attests to the fact that efficiency and output

growth in the manufacturing sector is the way to promoting competitiveness and growth of the industrial sector and the economy as a whole. Although, manufacturing is usually a small sector in African economies, in terms of share of total output or employment, growth of this sector has long been considered crucial for economic development. This special interest in manufacturing stems from the belief that the sector is a potential engine of modernization, a creator of skilled jobs, and a generator of positive spillover effects (Tyboat, 2000).

The path to economic recovery and growth may require increasing productivity inputs such as land, labour, capital and technology and or increasing their productivity though, with bumpy roads to stability in the face of the global economic meltdown. The changes in the government policy have become increasingly significant within the productivity sector as manufacturing has become more capitalized and more dependent on international markets. As a result of this, the sector is being more vulnerable to variations in interest rates, exchange rates, the size of gross domestic product, foreign direct investment etc. (Alao, 2010).

A number of researchers have contributed to the frontier of knowledge on the significance of manufacturing sub-sector and its contributions to economic growth across the world. Therefore, it is imperative to examine some of the factors that could determine the growth of output in the Nigerian formal manufacturing sub-sector and to identify some issues that have hindered the performance of the manufacturing sub-sector.

Despite the initial flourishing growth phase recorded, the sector was not able to successfully meet local demand and cost the country much to pay for manufactured goods (Mustapha & Goh, 2010). The need to give the manufacturing sub-sector great attention is important, if the economy is to complete developmentally as a strong and thriving manufacturing sector usually precipitate industrialization (Emerenini & Ajudua, 2015). It is, therefore, imperative to examine the factors that have contributed to the decline in output growth of the Nigerian formal manufacturing sub-sector over the years.

In an attempt to speed the pace of industrialization, government provided a set of incentives such as tax holiday, high rate of protection (through tariff and non-tariff barriers), favourable exchange and credit policies, etc, with the intention of encouraging foreigners to invest in manufacturing activities (Bakare, 2013).

A close look at the relative contribution of manufacturing production to GDP showed that SAP, indeed, triggered a shrinking of the manufacturing sector contribution to GDP in Nigeria. In 1980, manufacturing accounted for 8.4 percent to GDP. This relative share rose to 9.9 percent in 1983, and was still 8.7 percent in 1986. However, with the adoption of SAP, the

manufacturing sector's relative share in output began to fall and reached a low level of 5.29 percent in 1989 (Loto, 2012). There is need to find out the causes of the variations in the trend of output growth in the Nigerian manufacturing sub-sector over the years?

2. LITERATURE REVIEW

Several studies on the determinants of output growth in the Nigerian manufacturing sub-sector have been carried out. The search for the factors that affect output growth in the manufacturing sub-sector as remained the central interest of researchers from both developed and the emerging economies of the world. For instance, Evans (1987) showed that the growth rate of manufacturing firms and the volatility of growth are negatively associated with firm size and age. Glancey (1998) as developed from the work of Gibrat (1931) stated that growth is a random process and that firm growth is actually determined by a set of factors related to the efficiency or productivity of the firms. The study suggests that firms tend to enter small and to reach the minimum efficient scale of operations, they have to grow quickly into a larger size. If they do not, they operate on a scale disadvantages and the probability of failure and exit is higher. As a result, surviving firms in small size cohorts demonstrate a higher growth rate than firms above the MES. Goldfried & Song (2000) researched into the financing small scale manufacturing firms in Ghana. The econometric results indicated that high profits small-scale firms are more likely to have access to loans from the formal financial institutions, and government credit schemes. High profit firms are likely to attract loans with high interest rates, thus tend to be risk neutral. Brown & Marcus (2004) investigated into what makes small firms to grow in Romania. They examined growth variables such as finance, human capital, Technical Assistance and Business Environment. Their result reveals that financial constraints through loans has positive impacts on the sales and employment growth while reinvested profit is estimated to have a strong positive effect on both sales and employment. Aiello, Mastromarco & Zago {2008} examined the sources and determinants of output growth in Italian manufacturing firms". The study found that both input accumulation and TFP growth are important in explaining output growth. Also, efficiency change {technological catch up} is the most significant component of TFP growth. Kwabena & Osei-Amponsah (2009) also examined the determinants of the output of the manufacturing industry in Ghana from 1974-2006. The study found that the level of output of manufacturing industry was driven in the long run period by the level of per capita real gross domestic product, the export-import ratio and political stability. Also that in the short run period, the level of manufacturing was driven by export-import ratio and political stability.

In a complete departure from the views of the earlier studies, Otalu & Anderu (2015) examine the determinants of industrial sector growth in Nigeria using co-integration and error correction model. Result showed that all the identified determinants such as capital proxied by gross capital formation, labourproxied by total labour force in the industrial sector, exchange rate, education proxied by school enrolment, inflation rate, capacity utilization, trade openness and electricity generation have more permanent effect on industrial output than transitory effect. The study found that both labour and capital have significant impact on industrial sector growth while exchange rate shows a positive and significant impact on the industrial sector growth in Nigeria.

Finally, Ajudua & Ojima (2016) carried out a more recent work on modeling the determinants of output in the Nigerian manufacturing sector. The study found a significant relationship between gross capital formation, bank credit to manufacturing sector, lending rate, employed labour force, foreign direct investment, manufacturing capacity utilization rate, foreign exchange rate and output of manufacturing sector in Nigeria.

Sangosanya (2011) employed a Panel analysis to analyze the dynamics of manufacturing firms' growth in Nigeria. The estimated dynamics panel revealed that the manufacturing firms finance mix, utilization of asset to generate more sales, abundance of funds reserves and government intervention as indicated by Tobin's Q, operating efficiency, capital reserve; the stock of physical capital in money terms, labour used in production, infrastructural facilities and the rate of evolution of technology are significant determinants of manufacturing firms growth and dictated their dynamics in Nigeria.

Obembe, Adebisi & Adesina (2011) examine the relationship between bank loans, ownership between and efficiency of listed manufacturing firms in Nigeria. The study collected data for seventy six (76) non-financial firms from the Nigerian Stock Exchange between 1997 and 2007 using the OLS, FE and GMM models to verify the impact of bank loans and ownership structure on firm productivity. The results showed that bank loans and director ownership had negative impact on the efficiency of firms; however, while it was significant for the director ownership, it was insignificant for the bank loans.

In the view of Aregbeyen, (2007), size of the firms, capital intensity, foreign equity holding, government structure, inflation, financial constraints and vertical integration are significant in explaining the firms' growth rate.

In a clearly different manner, Aiello, Mastromarco & Zago (2008) found that both input accumulation and total factor productivity are important determinants of output growth in the Italian manufacturing firms. In the view of Margaritis & Psillaki (2008), capital structure and ownership structure are very important determinants of firms' performance. Kwabena & Osei-

Amponsah (2009) found that the level of output manufacturing industry in Ghana was driven in the long run period by the level of per capita real gross domestic product, the export-import ratio and political stability. Also, in the short run period, the level of output of manufacturing was driven by export-import ratio and political stability.

In a slightly different manner, Venkatesh & Muthiah (2012) found that firm size is the most significant among the determinants of firm growth. Ahmed (2012), found that individual contributions of capital, labour and materials, as well as the combine contributions of quality of these inputs captured by total factor productivity growth (TFPG) have significant impact on the growth of food manufacturing industries in Malaysia. From a clearly different view, Mbugua, Mbugua, Wangoi, Ogada & Kariuki (2013) found that inadequacy of availability of finances, poor business management skills, poor marketing and entrepreneurial attributes of the owners are statistically significant in determining growth of the enterprises in Eldoret, Kenya.

Ozuturk & Agan (2014) examines the determinants of industrial production in Turkey. The study employed the VAR model and found that export, investment and interest rate are significant in explaining industrial production.

Werigbelegha & Ogiriki (2015) found that stock market performance, capacity utilization have positive relationship with manufacturing sector growth in Nigeria. In a more recent work carried out by Ajudua & Ojima (2016), it was revealed that there is a significant relationship between gross capital formation, bank credit to manufacturing sector, lending rate, employed labour force, foreign direct investment, manufacturing capacity utilization rate, foreign exchange rate and output of manufacturing sector in Nigeria.

From the foregoing, it is evident that there have been various views on the determinants of output growth in the manufacturing sub-sector but were characterized with conflicting and inconclusive results. Therefore, it is fundamental to find out the true determinants of output growth in the Nigerian formal manufacturing sub-sector. Findings from the numerous research works that have hitherto been carried out on the determinants of output growth in the Nigerian manufacturing sector have failed to reach a consensus as a result of variations in their findings thus, making their studies inconclusive, thereby creating a knowledge gap which this study intends to fill.

In terms of their methodologies, it is observed that none of these studies made use of the Systemic Generalized Methods of Moment (SYSGMM) in their dynamic panel model which is a more reliable and superior estimate than the Generalized Methods of Moment (GMM) (Anderson & Hsiao, 1982). Obembe et al (2011), who made use of the GMM for their panel analysis, were seemed to be one sided by not exploring the use of the SYSGMM which provides more efficient and robust estimate of the

determinants of output growth in the Nigerian formal manufacturing sub-sector. This had created a research gap, hence, the resolve of this study to go beyond the GMM estimated technique to the use of the SYSGMM. On this note, the main objective of the study is to examine the determinants of output growth rate in the Nigerian formal manufacturing sub-sector.

3. METHODOLOGICAL FRAMEWORK

3.1 Model Specification

This aspect of the study presents the panel data estimation technique adopted for the study in order to carry out a comprehensive analysis of the variables adopted for the study on the determinants of output growth in the Nigerian formal manufacturing firms.

Based on the vector of other determinants of the ith firm growth rate in the growth model specified in the work of Sangosanya (2011) and based on the factors that can enhance the growth of firms that were raised in the model,i.e. the basic characteristics of the firm size; internal factors such as financial constraint, managerial efficiency and operational efficiency; external factors that are beyond the control of the firms like government policy and regulations, the model for this study was therefore specified following the work of Sangosanya (2011) with some modifications. First, we used the most recent data set to determine output growth of firms in Nigeria, spanning through data period ending in the year 2014. Second, we incorporated some seemingly important variables into our growth model. These variables include: energy infrastructural facilities available to manufacturing firms, degree of financial development in the manufacturing sub-sector, bank efficiency and exchange rate in the economy.

Therefore, model 3.1 below was specified to capture the objective of the study. The functional relation of the model is:

$GRT = f(\alpha, GRT_{(t-1)}, CIT, OPREF, MEF, GRPC, EIFRA, DFDM,, BEFIC, EXCHR)$……3.1

The model is specified explicitly thus:

$GRT_{it} = \alpha + \alpha GRT_{it(t-1)} + \beta_1 CIT_{it} + \beta_2 OPREF_{it} + \beta_3 MEF_{it} + \beta_4 GRPC_{it} + \beta_5 EIFRA_{it} + \beta_6 DFDM_{it} + \beta_7 BEFIC_{it} + \beta_8 EXCHR_{it} + \mu_t$ ……...3.2

Linearizing the model we have:

$LGR_{it} = \alpha + \alpha LGRT_{it(t-1)} + \beta_1 LCIT_{it} + \beta_2 LOPREF_{it} + \beta_3 LMEF_{it} + \beta_4 LGRPC_{it} + \beta_5 LEIFRA_{it} + \beta_6 DFDM_{it} + \beta_7 LBEFIC_{it} + \beta_8 LEXCHR_t + \mu_t$ ……3.3

3.2 Definition of Variables.

GRT_{it} = Growth rate of firms measured by profit after tax (PAT) of the individual firms based on major argument fromthe reviewed theoretical propositions.

$GRT_{i(t-1)}$ = Lag of the growth rate of the firms as indicator of previous firm's growth

CIT_{it} = Capital Intensity in the firm captured by capital-output ratio i.e. ratio of capital employed to sales.

$OPREF_{it}$= Operating efficiency of the firms captured by gross fixed asset expressed as a ratio of capital stock.

MEF_{it}= Management Efficiency in the firms captured by net profit margin i.e. net profit after taxes as a percentage of sales.

$GRPC_{it}$ = Effect of Government Regulations and Policies captured by tax margin as a percentage of gross profit.

$EIFRA_{it}$ = Energy Infrastructural facilities available to Nigerian manufacturing sub-sector captured by energy usage of each firm in the formal manufacturing sub-sector.

$DFDM_{it}$ = Degree of Financial development in the Nigerian Manufacturing sub sector captured by ratio of liquid liability to GDP in the manufacturing sub sector.

$BEFIC_{it}$ = Bank Efficiency captured by loans and advances of commercial banks to the Nigerian formal manufacturing firms

$EXCHR_t$ = Exchange rate in the economy.

u_t= The Error term

i = Firm's identifier i.e. the cross-sectional survey of firms.

3.2 Apriori Expectation

A positive relationship is expected between CIT, OPREF, MEF, GRPC, EIFRA, DFDM, BEFIC, EXCHR and Output growth of manufacturing industry in Nigeria. Thus;

$\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$, $\beta_6 > 0$, $\beta_7 > 0$, $\beta_8 > 0$.

4. EMPIRICAL RESULTS

4.1 Presentation of Result

Emphasis have been made by different researchers in the past that the estimates from the static panel data might not be efficient though consistent. As a follow up and a robustness check to the static panel data, the dynamic panel data was developed by both Arellano & Bond (1991) and Blundell & Bond (1998). The two approaches are referred to as Generalized Method of Moments (GMM) and Systemic Generalized Method of Moments (SYSGMM). The results from the dynamic panel data are presented in table 4.1.

Table 4.1: The GMM and SYS-GMM Estimation Results for Manufacturing firms Growth Rate(GRFIF).

Dynamic Panel Data Analysis	Variables	Coefficient	Standard Error	Z	Probability z
GMM	**LGRFL1**	0.0329165**	0.0210235	1.57	0.017
	LOPREF	-0.0349214*	0.0193236	-1.81	0.071
	LCIT	-0.2957875***	0.0558293	-5.30	0.000
	LMEF	0.6857787***	0.0453093	15.14	0.000
	LGRPC	-0.1731723**	0.0688019	-2.52	0.012
	LEIFRA	-0.1356721**	0.066942	-2.03	0.043
	LBEFIC	0.2796555***	0.0322682	8.67	0.000
	LEXCHR	0.2794967*	0.2155315	-1.30	0.095
	LDFDM	-0.0029181	0.0104534	-0.28	0.780
	_CONS	5.754082	1.073829	5.36	0.000
Wald chi2(10) =3614.90 , Prob> chi2 = 0.0000					
SYS-GMM	**LGRTL1**	0.0693931***	0.0194767	3.56	0.000
	LOPREF	-0.0199787	0.0186902	-1.07	0.285
	LCIT	-0.2081444***	0.0403733	-5.16	0.000
	LMEF	0.5499924***	0.0379277	14.50	0.000
	LGRPC	-0.0184831*	0.0596043	-0.14	0.087
	LEIFRA	-0.1701096**	0.0679744	-2.50	0.012
	LBEFIC	0.358902***	0.028267	12.70	0.000
	LEXCHR	0.2640953**	0.2130086	-1.24	0.015
	LDFDM	0.0065164	0.0102543	0.64	0.525
	_CONS	5.722762	1.065443	5.37	0.000
Wald chi2(10) = 5257.49 Prob> chi2 = 0.0000					

** statistical significance at 5%.** *statistical significance at 1%

Source: Author's Computation, 2017.

4.2 Interpretation of Result

The implication of this result is that the operation efficiency of the firms has not been having significant positive impact on the growth rate of the firms. In other words, operation efficiency coefficient which is not significant especially in the GMM results shows that the operational efficiency of the firms has been adversely affecting the growth rate of the firms.

Again capital intensity (CIT) which measures the rate at which capital capacity is utilised in the firm does not have significant positive impact on the growth rate of the firms. Both the GMM and SYSGMM results indicate that the coefficient is negative and significant thus showing that capital intensity in all the manufacturing firms has not been having the expected positive relationship with the growth rates of the firm.

Government regulations and policies (GRPC), captured by tax margin as a percentage of gross profit, expectedly has a negative relationship with the firms' growth rate. The coefficient is significant in both the GMM and SYSGMM thus indicating that GRPC has significant negative impact on the

growth rates of the firms. For instance the coefficient under the systemic GMM is -0.018. This simply implies that a unit rise in the marginal tax which is proxy for government regulation and policies will lead to about 2% fall in the growth rates of the manufacturing firms.

Energy Infrastructural facilities (EIFRA) available to Nigerian manufacturing sub-sector captured by energy infrastructural development expenditure of government to manufacturing sub-sector (i.e. energy usage of each identified firm) also showed a negative and significant relationship with the growth rates of the firms. This implies that the supply of energy to the manufacturing sector has not been having significant positive impact on the growth rates of the firms

Finally, the two dynamic models, GMM and SYSGMM yield almost similar results. Notwithstanding, the results from the SYSGMM are interpreted due to the superiority of its estimates over GMM (Anderson & Hsiao, 1982).

4.3. Discussion of Findings

From the panel results, capital intensity and operation efficiency do not have significant positive effecton the growth of the firms. They both showed negative signs contrary to apriori expectation.

Managerial efficiency showed a significant positive impact on the growth of the manufacturing firms in Nigeria. This finding is supported by Muogbo (2013) who opined that the performance of many firms in is dependent on the effectiveness of its managerial efficiency.

The study showed that manyof the government regulations and policies in Nigeria are inimical to the growth of the private manufacturing firms. This assertion has been corroborated in the work of Obembe, Adebisi & Adesina (2011). Government policy has a negative relationship with the growth rates of the firm in the dynamic panel models. This implies that government policies are not manufacturing sector friendly in Nigeria.

Decadence in the infrastructural facilities especially energy in the production environment in Nigeria has also been identified by past studies as the bane of the manufacturing firms' performance in Nigeria. This has again showed in the findings from this study (Sangosanya 2011 &Bakare 2013). Energy infrastructural facility does not have significant positive impact on the growth of the manufacturing firms. It has been observed for so many years that a huge percentage of the overhead cost of many manufacturing firms in Nigeria is attributed to alternative sources of energy provision since the supply of electricity in Nigeria is not encouraging (Bakare, 2013). It would be recalled that precisely a huge segment of UAC foods, one of the leading confectionery manufacturers in Nigeria in 2004 left for Ghana and the main reason was due

to ever surging energy cost in Nigeria (NVS 2009). Many manufacturing firms such as PZ and Unilever have also followed suit since then (Bakare 2013).

Bank efficiency is measured by the loans and advances to the manufacturing firms has a significant positive relationship with the growth of the manufacturing firms. The simple implication is that the amount of credit facilities made available to the manufacturing firms by the banks will go a long way to influence their growth positively (Tomola, Adebisi & Olawale 2009). The fifty (50) firms sampled in this study reveals that loans and advances move directly with the growth rate of firms and the relationship is significant. This conforms to CBN (2005) assessment of the small and medium scale enterprise in Nigeria where it was discovered that loans and advances to this sector had a significant impact on the growth of small and medium scale enterprise in Nigeria (Tawose 2012).

Despite the loans and advances having positive significant impact, on output growth of manufacturing in Nigeria, the financial development indicator which measures the overall liquidity in the manufacturing sector fails to have significant positive impact on the growth of the manufacturing firms. Notwithstanding the growth is positive but it is not significant, thus, confirming the position of Somoye (2004).

According to Olomola (2006), currency appreciation has the tendency of squeezing out the tradable sector of the Nigerian economy. This position has been supported by the findings from this study. The exchange rate has been shown to have a significant and direct relationship with the growth rates of manufacturing firms. The implication of this is that when there is currency depreciation that is, a fall in the value of naira, the growth rate of manufacturing firms in Nigeria rises. This shows that over-valuation of naira might be inimical to the growth of the manufacturing firms in Nigeria. According to Omolade & Ngalawa (2014) the mechanism behind this work is through trade protectionist theories, where it was emphasized that arbitrary currency appreciation without recourse to the market realities can inhibit the growth of domestic manufacturing firms while currency depreciation or devaluation has the tendency of promoting the growth of domestic manufacturing firms by making import dearer and export cheaper. Nigeria economy has been identified to be largely a consuming economy with very little domestic production. Consequently, rise in exchange rate or currency devaluation has the tendency of discouraging import and encouraging export, therefore many of the imported goods that supposed to be competing with the locally produced goods becomes more expensive thereby paving way for local manufacturing firms.

5. CONCLUSION

Sequel to the results and the findings discussed so far in the study, the study hereby presents the following conclusions:

Managerial Efficiency (MEF), Bank Efficiency (BEFIC) and Exchange Rate (EXCHR) have significant positive impacts on the output growth rate of the Nigerian formal manufacturing sub-sector. This implies that the higher the MEF, BEFIC and EXCHR, the higher the growth of output in the Nigerian formal manufacturing sub-sector. Operational Efficiency (OPREF), Capital Intensity (CIT), Government Regulations and Policies (GRPC), Energy Infrastructural Facilities (EIFRA) and degree of Financial Development (DFDM) have negative impacts on the output growth rate of the Nigerian formal manufacturing sub-sector. OPREF and CIT are expected to have a positive relationship with the output growth in the sub-sector. This result is contrary to apriori expectation. This means that published records provided by quoted manufacturing firms in Nigeria as their growth indicators might not be the true reflection of their performance. Also, GRPC and DFDM have not been favourable to the Nigerian formal manufacturing sub-sector while the decadence in the EIFRA is the bane of Nigerian formal manufacturing sub-sector.

6. POLICY RECOMMENDATIONS

Based on the findings and conclusion in the study, the following policy recommendations were made to enhance the growth of formal manufacturing firms in Nigeria and to provide basis for economic diversification;

Regulatory Agencies in Nigeria should be mandated by government to carry out effective monitoring of the activities of the formal manufacturing firms in order to provide details of their growth indicators.

Government should provide enabling environment where firm owners can acquire affordable managerial training. Government should encourage the firm owners to proceed on foreign managerial training to boost output growth.

Policies like task holiday, unhindered access to credit through the Bank of Industries and other measures should be put in place by government. Government of Nigeria should maximize the gains in the manufacturing sector in order to douse the tension in the oil sector.

Measures such as the immediate fixing of all electrical installations and maintenance of energy facilities in the country, should be put in place to boost energy supply to the manufacturing firms in Nigeria.

Government should formulate and implement appropriate monetary policies that would make the cost of borrowing from banks (interest rate) affordable. Also, efforts must be put in place to remove all stringent conditionalities attached to the loan.

Government should introduce monetary policy measures that enable banks with the capacity to increase their liquidity. If this is done, the overall liquidity in the financial institutions would have a positive impact on the formal manufacturing firms in Nigeria.

All imported goods (finished products) should be made more expensive through relevant government policies and ban should be placed on importation of goods that can be manufactured locally.

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