MANUFACTURING OUTPUT AND ECONOMIC GROWTH IN NIGERIA: A DISAGGREGATED ANALYSIS

CHUKWUEDO SUSAN OBUROTA
Department of Economics, University of Calabar, Nigeria.
Email: susan.oburota@unical.edu.ng Phone no: + 2347034980587

IHUOMA CHIKULIRIM EKE
Department of Economics, University of Calabar, Nigeria.
Email: ihuomaeke@unical.edu.ng ; Phone no: + 2347036730579

ISMAIL SALAMI ADEYEMI
Department of Economics University of Calabar, Nigeria
Email: salamiismail@unical.edu.ng ; Phone no: + 2347034980587

ABSTRACT
The thrust of this study was to analysed the existing relationship between the manufacturing sector and economic growth in Nigeria between the period, 1990 to 2023. Specifically, the study quantified the contribution of manufacturing output to economic growth in Nigeria; the effect of food, beverages, and tobacco on economic growth in Nigeria; and the effect of textile, apparel and footwear output on economic growth in Nigeria. The findings demonstrate that manufacturing sector output positively impacts economic growth in Nigeria both in the short run and long run, with statistical significance evident mostly in the short run. From the food, beverages, and tobacco equation, it was found that; in the long run, Food, Beverages, and Tobacco output has a positive but non-statistically significant relationship with economic growth in Nigeria. In the short run, the current period of food, beverages, and tobacco output revealed a positive and statistically significant impact on economic growth in Nigeria. From the Textile, Apparel, and Footwear equation, it was found that, in the long run, Textile, Apparel, and Footwear output has a positive and statistically significant relationship with economic growth in Nigeria. 'In the short run, textile, apparel, and footwear, revealed a positive non-statistically significant impact on economic growth. It's recommended that the Nigerian government support and Invest in the Manufacturing Sector. Increased investments in the production of garments, such as shirts, pants, and dresses from fabrics like cotton and silk, should be encouraged to drive sustained economic growth in the country.
Keywords: Manufacturing, Output, Economic, Growth, Nigeria
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1. INTRODUCTION
Increased manufacturing sector productivity has been viewed as a real path to achieving the high and desirable vision and benefits of increased population quality of life. Manufacturing, like other industrial pursuits, boosts agriculture, diversifies the economy, and increases the country's gains from foreign exchange. Massive imports of finished goods and insufficient financial support for the manufacturing sector are the main causes of the sector's dismal performance which has finally led to a decline in the capacity utilization in the nation (Obamuyi et al., 2012). The underperformance of the manufacturing sector has constrained the growth of the Nigerian economy. Economic growth rate has dwindled from 8.52 percent by 1985 to 1.87 percent in 1995. It went up again to 7.01 as at 2005, highly driven by oil booms and debts forgiveness by the international agencies, the growth rate dropped significantly to 2.79 in 2015

and peaked to 3.52 in the fourth quarter of 2022 during the post covid recovery (National Bureau of Statistics Report, 2023). As of 2023 in the 4th quarter the growth rate had declined to 3.46 percent (National Bureau of Statistics, 2024).

Nigeria's Economic growth also faces severe infrastructure deficits, including inadequate transportation networks, power shortages, underutilization of capacity as seen in the manufacturing industries, low government support and macroeconomic instability (Nadabo, 2023). Data from the CBN annual statistical bulletin, (2022) revealed that in 1985, the manufacturing sector contribution to GDP was at a record high of 20.1 percent. This significant contribution deteriorated along with political instability and poor policies, in the following decades, to the year 2000, the manufacturing sector's contribution to growth has nosedived by approximately 11.7 percent, in 2019 the value was 6.03 percent this improved slightly to 6.45 percent as of 2010 and rose to a paltry 8.9 percent in the year 2020. The Manufacturing value added as a percentage of the GDP increased to 14 percent in 2022 (World Development Indicators, 2024).

The Nigerian government have taken steps to improve the manufacturing sector, common among them is the implementation of various industrial development policies aimed at promoting the growth and competitiveness of the manufacturing sector such as tax breaks, duty exemptions, and investment promotion schemes to attract domestic and foreign investment in manufacturing activities, local content development initiatives, export promotion schemes implemented to support manufacturers in accessing international markets and expanding their export activities and, the establishment of industrial parks and special economic zones (Ogungbenle, 2021).

Despite these efforts, the manufacturing sector still struggles with skills shortages, mismatches between labour market demands and educational outcomes, and low productivity levels. A significant portion of the workforce lacks adequate technical and vocational skills, constraining the adoption of advanced manufacturing technologies and processes. Access to affordable finance remains a major constraint for manufacturers, particularly the infant small and medium-sized enterprises (SMEs). High interest rates, collateral requirements, and a lack of credit information systems restrict access to bank loans and financing options for expansion (oburota and Okoi, 2017). Haraguchi et al., (2017) further opines that the declining in manufacturing growth as a share of the GDP in many developing countries occurred due to a shift of manufacturing activities to a few number of populous countries such as China.

Various studies have investigated the relationship at different time scope and technique between manufacturing output and economic growth (Oburota and Okoi 2017; Olanrewaju, 2018; Eze et al; 2019; Korgbeelo and Deekor, 2021; Okpala and Anyanwu, 2023), investigate the relationship between manufacturing output and economic growth. However, none of the studies reviewed explored the disaggregated nature of the manufacturing sectors such as the Food, beverages, and tobacco output, and the textile, apparel and footwear industries which contribute the major share of the manufacturing sector output. This study extends the literature by ascertain the contribution of the manufacturing output to economic growth. A disaggregated analysis of the relationship of the major components of the manufacturing output namely, food, beverages, and tobacco; and textile, apparel, and footwear output on economic growth was also conducted. The objectives of this study are;

i. To examine the impact of manufacturing sector on economic growth in Nigeria.
ii. To determine the effect of food, beverages, and tobacco on economic growth in Nigeria.
iii. To analyse the effect of textile, apparel and footwear output to economic growth in Nigeria.

The study is organized into five sections, namely introduction, review of literature, methodology, results and discussion of findings and conclusion and policy recommendation.

2. LITERATURE REVIEW

2.1 THEORETICAL LITERATURE REVIEW

The Classical Growth theory

The Classical Growth Theory postulates that a country's economic growth will decrease with an increasing population and limited resources. Such a postulation is an implication of the belief of classical growth theory economists who think that a temporary increase in the real GDP per person inevitably leads to a population explosion, which would limit a nation's resources, consequently lowering real GDP. As a result, the country's economic growth will start to slow. The theory has some limitations: The classical model which is the Harrod Domar model of growth ignores the role efficient technical progress such as the manufacturing could play for the smooth running of an economy. This model assumes that the production function of fixed coefficient type. That the unit of labour required to produce one unit of output is constant. This is also true of capital. But production can only take place with inputs of both capital and labour. The model's important contribution to the growth literature is that investment to capital stock and, therefore, increases the capacity to produce output so that the act of investing affects output. By investing, investors demand some proportion of the aggregate output. The owners of factors must be compensated. Through the multiplier effect, investment will add to national income, which will increase the demand for goods and services. The model's major criticism is that it has no room for some of the important variables to be determined within the system. All the three factors are exogenous: Labour is determined by nature; saving is determined by the habit of the people; and technology is determined by capital.

The Neoclassical Growth Theory

The Neoclassical growth theory or Solow-Swan model of economic growth was independently developed by Robert Solow and Trevor Swan in 1956. The theory postulates a continuous production function linking output to the inputs of capital and labour which leads to the steady state equilibrium of the economy. It is based on the following assumptions: one composite commodity is produced, output is regarded net output after making allowance for the depreciation of capital, there are constant returns to scale, there are diminishing returns to an individual input, the two factors of production, labour and capital, are paid according to their marginal physical productivities.

There are some important implications or predictions of the Solow-Swan model of growth. The growth rate of output in steady state is exogenous and is independent of the saving rate and technical progress. Secondly, if the saving rate increases, it increases the output per worker by increasing the capital per worker, but the growth rate of output is not affected. The third implication of the model is that growth in per capita income can either be achieved by increased saving or reduced rate of population growth. The Solo-Swan model have been criticized for the following: The Solow-Swan model assumes homogeneous and malleable capital, which is not reflective of the real-world scenario where capital goods are heterogeneous and vary significantly in their characteristics and uses; the model treats technological progress as an exogenous factor, meaning it is determined outside the model and not explained within it. The relationship between capital and output can be much more variable, influenced by numerous factors including technological changes and varying efficiencies.

Endogenous Growth Theory

The Endogenous Growth Theory postulated by Romer (1994) states that economic growth is generated internally in the economy, i.e., through endogenous forces, and not through exogenous ones. The theory contrasts with the neoclassical growth model, which claims that external factors such as technological progress, etc. are the main sources of economic growth.

Governmental policies can raise an economy's growth rate if the policies are directed toward enforcing more market competition and helping stimulate innovation in products and processes. There are increasing returns to scale from capital investment in the "knowledge industries" of education, health, and telecommunications. Private sector investment in R&D is a vital source of technological progress for the economy.

2.2 EMPIRICAL LITERATURE REVIEW

Various studies have examined the relationship between manufacturing output and economic growth. These studies have addressed the issues of the short run and long run relationship using time series data, while others have employed the panel methodology to analyse this relationship for various countries. Oburota and Okoi (2017) investigate the relationship between manufacturing output and economic growth. The analysis of the study was conducted using time series data from the period of 1981-2013. To quantify the relationship between manufacturing output and economic growth, an eclectic model consisting of both Kaldor's first law of growth, and the endogenous growth model was estimated. The study finds that manufacturing output, capital and technology were the significant determinants of economic growth. Results also confirm that the quality of institutions and labour force does not exert any impact on economic growth. Moyo and Jeke (2019) assess the impact of the manufacturing sector on economic growth in 37 African countries. The study employs the System-GMM Model for the period between 1990 and 2017. This technique is ideal as the number of cross-sectional units is greater than the number of time periods. The study finds that manufacturing value has a positive effect on economic growth in African countries. The study recommends that policymakers enact measures to boost manufacturing output.

Afolabi and Laseinde, (2019) examine the impact of manufacturing sector output on economic growth in Nigeria from 1981 to 2016. The study finds that manufacturing capacity utilization has a positive influence on RGDP while manufacturing output also affects RGDP positively. On the contrary, Olawumi (2020) examined the nexus between the manufacturing subsector and economic growth in Nigeria. Specifically, the study investigated the extent and performance of the manufacturing sub-sector and its contribution to economic growth in Nigeria. The study employed Johansen Cointegration, Error Correction Model (ECM) and ARDL model of estimation. It relied on secondary data spanning from 1981-2018. The study finds that in the long run, the Manufacturing Output has a negative impact on Nigeria's economic growth. Umaru et al. (2022) examine how Nigeria's manufacturing output can be observed in estimating economic growth. The ARDL model and OLS technique were employed in our assessments, and quarterly data was sourced from the CBN statistical bulletin for 2019 and the NBS annual report from 2010Q1 to 2020Q4. The study finds that manufacturing output positively and significantly affects growth in Nigeria and, therefore, can significantly predict further economic growth and, by extension, recession in Nigeria.

3. METHODOLOGY

3.1 Theoretical Framework

This study is anchored on the Solo-Swan Model. The model explains long-term economic growth by looking at capital accumulation, labor, or population growth, and increases in productivity, mainly driven by technological progress. To estimate the relationship among the variables, three equations were formulated. Equation one captured the manufacturing sector output on economic growth in Nigeria; Equation two is a disaggregated component of the manufacturing sector captured by outputs of Food, beverages, and tobacco on economic growth; and Equation three captured the outputs of Textile, apparel, and footwear on economic growth in Nigeria. The dependent variable of economic growth is captured by the real gross domestic product which reflects the GDP adjusted for inflation. However, other independent variables like Inflation rate is captured to reflect the impact of price changes as the economy expand, the exchange rate is employed in this study to measure the impact of export products on the domestic currency, tax on product variable is employed to measure the returns from production tax on long term growth while the labour force is captured to measure the relative effects of working population in the production sector on economic growth in Nigeria. anchored on the Solo-Swan model, the equations for this study are specified thus;

The study equation is specified in functional form as follows:

Manufacturing output and economic growth equation.

RGDP = f(MANOUT,INF, EXR, TAX, LF).....(3.1)

Food Beverages, and Tobacco equation

RGDP = f(FBT,INF, EXR, TAX, LF)..... .(3.2)

Textile, Apparel, and Footwear equation.

RGDP = f(TAF,INF, EXR, TAX, LF).....(3.31)

Where;

RGDP = Real gross domestic product

MAN = Manufacturing sector output.

FBT= Outputs of food, beverages, and tobacco.

TAF = Outputs of textile, apparel, and footwear

INF = Inflation rate.

EXR = The exchange rate.

TAX = Taxes on production.

LP = The labour force.

Equation *(3.1)* can be transformed into an econometric model through the introduction of the stochastic error term. This is done as follows:

$RGDP=\lambda_0 + \lambda_1 MANOUT + \lambda_2 INF + \lambda_3 EXR + \lambda_4 TAX + \lambda_5 LP$..... (3.4)

$RGDP=\lambda_0 + \lambda_1 FBT + \lambda_2 INF + \lambda_3 EXR + \lambda_4 TAX + \lambda_5 LP$.....(3.5)

$RGDP=\lambda_0 + \lambda_1 TAF + \lambda_2 INF + \lambda_3 EXR + \lambda_4 TAX + \lambda_5 LP$.....(3.4)

	RGDP	MANOUT	FBT	TAF	INF	EXR	TAXES	LF
Mean	45136.52	4427.4	2527.8	754.60	18.26	153.94	471.18	50849585
Median	42044.78	3708.6	2513.6	501.98	12.10	130.75	219.95	49475731
Maximum	74639.47	6684.2	3302.7	1443.0	76.80	414.0	1897.38	75721345
Minimum	21462.73	2898.5	1893.2	344.06	0.20	8.04	2.76	32844703
Std. Dev.	20350.94	1473.5	439.8	441.76	16.54	122.36	542.5	12752366
Skewness	0.15	0.53	0.25	0.61	2.22	0.77	1.19	0.29
Kurtosis	1.37	1.54	1.67	1.59	7.29	2.63	3.57	1.92
Jarque-Bera	3.89	4.7	2.9	4.9	54.29	3.55	8.51	2.10
Probability	0.15	0.097	0.23	0.09	0.0	0.16	0.014	0.34
Sum	1534642.	150531.4	85946.86	25656.6	620.8	5234.23	16020.23	1.73E+09
Sum Sq. Dev.	1.37E+10	71649738	6383264.	6440120.	9032.9	494058.2	9712927.	5.37E+15
Observations	34	34	34	34	34	34	34	34

Source: Central Bank Statistical Bulletin various years. Researchers' Computation

A priori $\lambda_1 > 0$, $\lambda_2 < 0$, $\lambda_3 > 0$, $\lambda_4 > 0$, $\lambda_5 > 0$

Where; U = Stochastic/random error term.

The data to be used in this study will be secondary data. The data will be derived from the Central Bank of Nigeria's annual statistical bulletin (2023), and the National bureau of statistics.

3.2 Estimation Technique

The Autoregressive Distributed Lag (ARDL) estimation technique is employed in estimating the relevant equations for this study. The reason for the employment of the Autoregressive Distributed Lag (ARDL) technique is the fact that the method is suited better for small sample size as obtained in this study. Secondly, there is a possibility of having a mutually integrated variables; a scenario in which variables can be integrated of a mixture of order I(0) and I(1).

4. RESULTS AND DISCUSSIONS ON FINDINGS

4.1 Data presentation

Table 4.1 Presentation of Descriptive Statistics of the Study Variables.

The descriptive result show that, the minimum recorded GDP during the period of this investigation was 21462.73, while the maximum was 74639.47, same period, the manufacturing sector recorded a minimum output of 2898.470, and a maximum of 6684.220. The disaggregated sub-sector of the manufacturing sector; food, beverages, and tobacco minimum output were 1893.220 and maximum of 3302.660. Other disaggregation like the textile, apparel and footwear had minimum and maximum outputs of 344.06 and 1443.03, this show that the food, beverages, and tobacco recorded more output and contributed to the GDP more than other disaggregation of the manufacturing sector between 1990 and 2023 respectively.

4.2 Unit root test

The unit root test was employed to verify the integrating order of selected variables. The test was based on the Augmented Dickey – Fuller (ADF) test. The results of the unit root

test are reported in Tables 4.2a and 4.2b. However, the results revealed that of the 9 variables, inflation and labor force were stationary at levels, given that their calculated ADF statistics in absolute terms was greater than the critical value at the five per cent level of significance at the level. However, other remaining variables were not stationary at the level because their calculated ADF statistics in absolute terms at the level were greater than the critical values at the five per cent level of significance, but they were stationary after their first, and second differencing.

On the other hand, the confirmatory Kwiatkowski-Philips-Schmidt-Shin (KPSS) test showed that food, beverage, and tobacco (TAF), textile, apparel, and footwear were stationary at the level given that their computed t-statistics in absolute terms were greater than the critical value at the five percent level of significance. However, other variables were stationary after their first differencing. Given that the series was integrated of either 1(0) or 1(1), the autoregressive distributed log (ARDL) bounds testing procedure for co-integration was suitable in testing for the existence of cointegration and for the estimation of both short and long run results.

Table 4.2a: Augmented-Dickey Fuller (ADF) test

Variable	ADF Statistic				
	Level	Critical value at 5%	1st difference	Critical value at 5%	Remarks
RGDP	-0.534074	-2.957110	-6.069305	-2.963972	I(2)
MANOUT	-0.665648	-2.957110	-3.606653	-2.957110	I(1)
FBT	-1.087939	-2.954021	-5.634879	-2.957110	I(1)
TAF	-1.068453	-2.957110	-3.187448	-2.957110	I(1)
INF	-4.016782	-2.963972			I(0)
EXR	1.112975	-2.954021	-4.056300	-2.957110	I(1)
TAX	1.201201	-2.954021	-5.388578	-2.957110	I(1)
LF	4.875168	-2.957110			I(0)

Source: Researchers' computation, 2024

Table 4.2b: Kwiatkowski-Philips-Schmidt-Shin (KPSS)

	ADF Statistic				
	Level	Critical value at 5%	1st difference	Critical value at 5%	Remarks
RGDP	0.645966	0.463000	0.205621	0.463000	I(1)
MANOUT	0.496953	0.463000	0.215452	0.463000	I(1)
FBT	0.442721	0.463000			I(0)
TAF	0.445378	0.463000			I(0)
INF	0.292824	0.463000			I(0)
EXR	0.724510	0.463000	0.269755	0.463000	I(1)
TAX	0.718759	0.463000	0.375274	0.463000	I(1)
LF	0.681187	0.463000	0.132949	0.146000	I(1)

Source: Researchers' computation, 2024

4.3 Analysis of the Manufacturing Output Equation

4.3.1 Bounds test of the Manufacturing Output Equation

The result of the bounds test for cointegration as depicted in table 4.3 showed that the computed F-statistic of 22.5 was greater than the upper bound critical values of 3.79 at the five percent level of significance. Given the fact that the computed F-statistic value is greater than the upper bound critical value, the study concluded that there is long run relationship among the variables in the manufacturing output equation.

Table 4.3: Bounds test for cointegration.

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	22.50447	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Researchers' computation, 2024.

4.3.2 Long Run Estimates of the Manufacturing Output Equation.

The existence of a long run relationship as reflected in the bounds test necessitated the estimation of the long run results of the manufacturing sector output model. The result of the long run estimation is depicted in table 4.4.

Table 4.4: Long run estimates of the Manufacturing Output Equation.

ARDL Long Run Form and Bounds Test
Dependent Variable: D(RGDP)
Selected Model: ARDL(1, 1, 2, 3, 3, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MANOUT)	1.367039	0.977069	1.399121	0.1835
INF	-0.016262	0.018068	-0.900083	0.3833
LOG(EXR)	0.832637	0.757593	1.099055	0.2903
LOG(TAX)	0.358558	0.143453	2.499483	0.0255
LF	-1.50E-07	1.28E-07	-1.171492	0.2610

Sources: Researchers' computation, 2024.

The result showed that in the long run, manufacturing sector output will exert positive impact on economic growth in Nigeria. This finding aligns with economic theories, implying that in real terms, a one percent increase in manufacturing sector output would bring about an increase in economic growth of Nigeria by approximately 1.37 percent. However, this result is not statistically significant.

The result of the coefficient of inflation rate, in line with a priori expectations revealed a negative intercept. This implies in real terms that a percentage increase in inflation rate will lead to a fall in economic growth in Nigeria by approximately 0.01 per cent. This inflation rate will not possess a statistically relevant impact on economic growth in the long run. However, the long-run results between exchange rate and economic growth in Nigeria indicates a positive relationship in the long run. This is agreeing with economic theories, implying that a unit increase in the value of domestic currency say the naira, will lead to an increase in economic growth of Nigeria by approximately 0.83 per cent. The high probability value of the exchange rate implies that despite the positive relationship, the exchange rate would not exert any statistical impact on economic growth in Nigeria in the long run.

Similarly, the result of the coefficient of taxes on production in Nigeria indicates a positive relationship with economic growth in Nigeria in the long – run. This in real terms imply that, a percentage increase in taxes on production will lead to an increase in economic growth in Nigeria by approximately 0.36 per cent. However, this positive relationship between taxes and growth will exert a statistically significant impact on economic growth in the long – run, given its low probability value of 0.0255. Finally, the coefficient of labor force surprisingly revealed a negative relationship with economic growth in the long run. This does not agree with economic theories, implying in real terms that, a unit change in labour supply will bring about a reduction in economic growth in Nigeria by approximately 1.5 per cent. The coefficient of la our force will not have any statistically significant impact on economic growth given its high probability value of 0.2610, ceteris paribus.

4.3.3 Model selection for Manufacturing output Equation

Prior to the estimation of the ARDL, model selection test was conducted to choose appropriate lag lengths for the variables. The Akaike information criterion was employed as the model selection criteria. The result of the model selection criteria is was given as: ARDL (1, 1, 2, 3, 3, 1). This is because at this specification, the AIC has the lowest value of 5.953513 and highest adjusted R-squared of 0.999480.

4.3.4 ARDL Error Correction Estimates for Manufacturing Output Equation

The result of the ARDL estimates for the short run dynamics of Manufacturing Output equation is presented in table 4.5.

Table 4.5: ARDL Error Correction for Manufacturing output equation.

Dependent Variable: D(MMR)				
Selected Model: ARDL(1, 1, 2, 3, 3, 1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(RGDP(-1))	0.791332	0.133160	5.942693	0.0000
DLOG(MANOUT)	0.254340	0.064259	3.958027	0.0014
D(MANOUT(-1))	-3.27E-05	1.60E-05	-2.045159	0.0601
D(INF)	-0.000511	0.000461	-1.108519	0.2863
D(INF(-1))	0.001010	0.000432	2.338209	0.0347
D(EXR)	-0.000649	0.000223	-2.912218	0.0114
D(EXR(-1))	0.000457	0.000290	1.575471	0.1375
EXR(-2)	-0.000472	0.000253	-1.865952	0.0831
EXR(-3)	0.000465	0.000294	1.580009	0.1364
D(TAXES)	2.78E-05	3.89E-05	0.712960	0.4876
D(TAXES(-1))	-5.12E-05	6.22E-05	-0.823559	0.4240
D(TAXES(-2))	-3.85E-05	3.86E-05	-0.996509	0.3359
D(TAXES(-3))	-7.94E-05	4.27E-05	-1.862528	0.0836
D(LF)	3.76E-08	3.54E-08	1.060865	0.3067
D(LF(-1))	-2.21E-08	3.56E-08	-0.619870	0.5453
ECT(-1)	-0.134838	0.075844	-1.777838	0.0971
R-squared	0.848008			
Adjusted R-squared	0.685159			
Durbin-Watson stat	2.256230			

Source: Researchers' computation, 2024.

The results above show that in the current period, manufacturing output exerts a positive and statistically significant impact on economic growth in Nigeria. This aligns with the relevant a priori expectations, implying in real terms that, a one percent increase in manufacturing sector

output will lead to an increase in economic growth in Nigeria by approximately 0.25 per cent. Although, the lag one period of manufacturing output revealed an inverse, but statistically significant relationship with growth in Nigeria, deviating from economic expectations.

The coefficient of inflation rate in the current period revealed a negative and non-statistically significant relationship with economic growth in Nigeria. This finding agrees with a priori expectations, implying in real terms that, a percentage increase in inflation rate will bring about a reduction in economic growth in Nigeria by approximately 0.0005 per cent. On the other hand, the lag one period of inflation rate revealed a positive and statistically significant relationship with growth in Nigeria. this implies that, past inflation rates have led to an increase in economic growth in Nigeria by approximately 0.001 per cent, ceteris paribus.

The results show that the exchange in the current and lag two periods have negative but statistically significant relationship with economic growth in Nigeria. These findings deviate from the relevant economic theories, implying that a unit increase in the value of the domestic currency say naira, will bring about a decrease in economic growth in Nigeria by approximately 0.0006 per cent. However, lags one and three periods of the exchange rate revealed positive relationships with economic growth in line with economic theories. This implies that exchange rats in the past one and three years have led to an increase in economic growth in Nigeria by approximately 0.0004. although, the lags one and three periods will not exert statistically significant impact on growth in Nigeria, being that their calculated probabilities values are greater than 0.05 critical value.

The result of the coefficient of taxes on production in line with relevant economic theories revealed a positive, but non-statistically significant relationship with eco nomic growth in Nigeria. This implies that, a percentage increase in taxes on production will lead to an increase in economic growth in Nigeria in the current period by approximately 2.8 per cent, ceteris paribus. On the other hand, lags one to three periods of taxes on production revealed a negative and non-statistically significant relationship with economic growth in Nigeria.

Finally, the results of the coefficient of labour force in the current period revealed a positive, but non-statistically significant relationship with economic growth in Nigeria. This result agrees with relevant economic theories, implying that a unit increase in labour supply will lead to an increase in economic growth in Nigeria by approximately 3.8 per cent. On the other hand, lag one period of labour force revealed an inverse and non-statistically significant relationship with economic growth in Nigeria. This however does not agree with economic theories, implying that an increase in last years' labour supply led to a decrease in economic growth in Nigeria by approximately 2.2 per cent, ceteris-paribus.

The short run result showed that the error correction term has the expected negative coefficient and was also statistically significant at the 10 percent significance level in line with theories. The magnitude of the coefficient of the error correction variable of 0.134838 implies that over 13.4 per cent of the disequilibrium in economic growth will be corrected back to equilibrium within one year. This indicated a moderate speed of adjustment from the short run disequilibrium to the long run equilibrium.

The R-squared of 0.848008 and the Adjusted R-squared of 0.685159 showed about 68.5 percent of the changes in economic growth has been accounted for by the independent variables. Also implying that the Durbin-Watson statistic value of 2.25 showed that the residual terms are not correlated and hence, there is no problem of serial correlation in the model.

4.3.5 Diagnostic Test for Manufacturing Output Equation

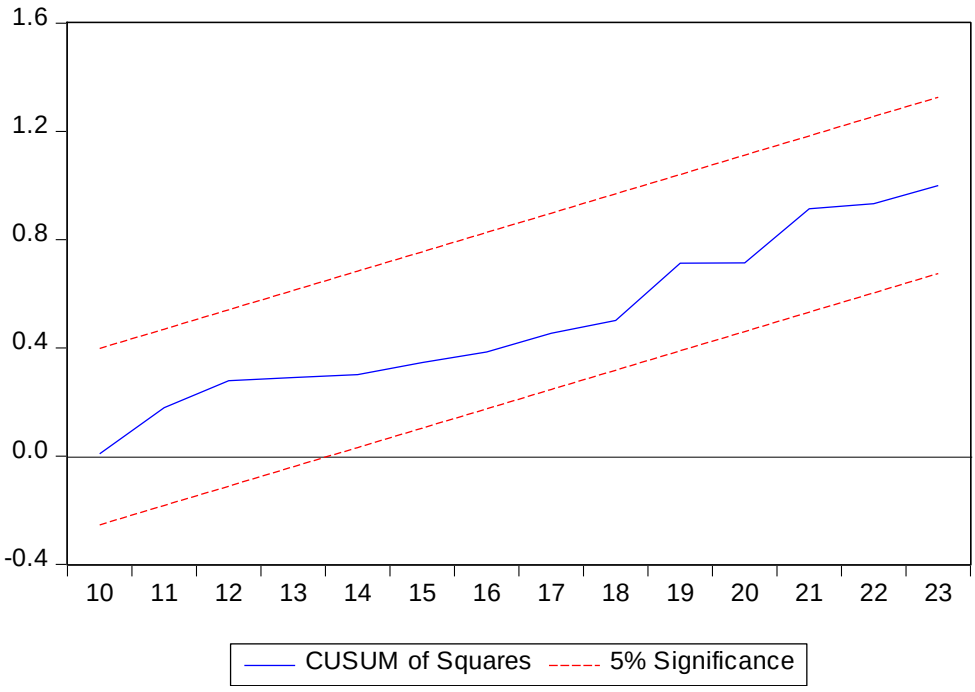
The study employed many diagnostic tests to check the stability of the model ranging from the CUSUM test, the Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test and the autoregressive conditional heteroscedasticity (ARCH) test were employed to check the existence of the normality or adequacy of the estimated model. The Breusch-Godfrey serial LM test statistic of 0.496086 with its high probability value of 0.6209 showed that there is no problem of autocorrelation in the model. This indicates that the residuals terms are independent and hence there is no autocorrelation in the estimated equation. The Breusch-Pagan-Godfrey Heteroscedasticity test value of 0.187094 with its high probability of 0.9990 showed that there is no problem of heteroscedasticity and hence the disturbance terms are normally distributed. The conclusion from the various diagnostic tests conducted showed that the estimated equation is adequate and well-behaved. The plot of CUSUM test graph at the five percent critical lines as depicted in figure 4 showed that the recursive line wander clearly in between the critical lines, indicating the stability of the estimated manufacturing output equation, and further reveals the absence of structural breaks in the data.

Table 4.6.

Test statistic	Value(prob.)
Breusch-Godfrey Serial Correlation LM Test	0.496086
	(0.6209)
Breusch-Pagan-Godfrey Heteroscedasticity Test	0.187094
	(0.9990)

Source: Researchers' computation, 2024.

FIG. 1: Cumulative Sum of Residuals (CUSUM) test for manufacturing output equation.



Source: Researchers'computation, 2024.

4.4 Food, Beverages, and Tobacco Equation

4.4.1 Bounds test of food, beverages, and tobacco equation

The result of the bounds test approach to cointegration of food, beverages, and tobacco equation is depicted in table 4.7. The result of the bounds test for cointegration as depicted in table 4.7 showed that the computed F-statistic of 14.4 was greater than the upper bound critical values of 3.79 at the five percent level of significance. Based on this, the study concluded that there is long run relationship among the variables in the food, beverages, and tobacco equation.

Table 4.7: Bounds test for food, beverages, and tobacco equation.

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	14.45138	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Researchers' computation, 2024.

Table 4.8: Long Run Estimate of the Food, Beverages, and Tobacco Equation.

Dependent Variable: D(RGDP)
Selected Model: ARDL(2, 3, 1, 3, 3, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(FBT)	11.74581	41.12257	0.285629	0.7800
INF	-0.049352	0.187603	-0.263063	0.7970
LOG(EXR)	5.299675	19.85742	0.266886	0.7941
LOG(TAXES)	2.821914	9.377606	0.300921	0.7686
LF	-1.11E-06	4.10E-06	-0.270784	0.7912

Sources: Researchers' computation, 2024.

The result above show that in the long-run, food, beverages, and tobacco outputs will have a positive, but non-statistically significant relationship with economic growth in Nigeria. This finding aligns with economic theories, implying in real terms that a unit increase in the production of different varieties of food, wines, and drinks, as well as tobacco will lead to an overall economic growth of Nigeria by approximately 11.7 per cent. On the contrary, the coefficient of inflation rate revealed a negative and non-statistically significant intercept with economic growth, in line with economic theories. This finding in real terms mean that, a one per cent increase in inflation in Nigeria will lead to a decrease in economic growth in Nigeria by approximately 0.5 per cent. Moreso, the findings of exchange rate revealed a positive but non-statistically significant relationship with economic growth in Nigeria. This aligns with relevant economic theories, implying in real terms that a unit increase in exchange rate of the domestic currency say Nigeria will lead to an increase in economic growth in Nigeria by approximately 5.3 per cent. Similarly, the result show that taxes on production have a positive but non-statistically significant relationship with economic growth in Nigeria. this agrees with theories, implying that a unit increase in taxes on production will bring about an increase in the general economic growth of Nigeria by approximately 2.8 per cent in the long - run. Conversely, the result of the coefficient of labour force revealed an inverse and non-statistically significant relationship with economic growth in Nigeria. This deviates from the relevant economic expectations, implying that a unit increase in labour supply will bring about a decrease in economic growth in Nigeria by approximately 1.1 per cent, ceteris paribus.

4.4.2 Model Selection for Food, Beverages, and Tobacco Equation.

Before estimating the ARDL, the study estimated the short run model, model selection test was carried out to select appropriate lag lengths for the variables. The Akaike information criterion was employed as the model selection criteria. The result of the model selection criteria is given as: ARDL (2,3,1,3,3,1). This is because at this specification, the AIC has the lowest value of 6.558003 and highest adjusted R-squared of 0.999737.

4.4.3 ARDL Error Correction Estimates for Food, Beverages, and Tobacco Equation

The result of the ARDL estimates for the short run dynamics of food, beverages, and tobacco equation is presented in Table 4.9.

Table 4.9: ARDL Error Correction for Food, Beverages, and Tobacco Equation.

Dependent Variable: D(MMR)				
Selected Model: ARDL(2, 3, 1, 3, 3, 1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(RGDP(-1))	0.649241	0.330703	1.963214	0.0732
DLOG(RGDP(-2))	0.213630	0.372415	0.573635	0.5768
DLOG(FBT)	0.226307	0.061208	3.697328	0.0031
D(FBT(-1))	-3.08E-05	3.69E-05	-0.835314	0.4199
D(FBT(-2))	-1.12E-05	3.91E-05	-0.286303	0.7795
D(FBT(-3))	1.97E-06	2.38E-05	0.082643	0.9355
D(INF)	-0.000670	0.000588	-1.138858	0.2770
D(EXR)	-0.000437	0.000221	-1.976099	0.0716
D(EXR(-1))	0.000338	0.000319	1.057431	0.3111
EXR(-2)	2.24E-05	0.000352	0.063717	0.9502
EXR(-3)	-0.000133	0.000411	-0.323204	0.7521
D(TAXES)	6.29E-05	5.49E-05	1.144581	0.2747
D(TAXES(-1))	-8.15E-06	7.62E-05	-0.106979	0.9166
D(TAXES(-2))	-3.39E-05	4.12E-05	-0.822726	0.4267
D(TAXES(-3))	-4.25E-05	4.21E-05	-1.011004	0.3320
D(LF)	3.34E-08	4.13E-08	0.809041	0.4342
D(LF(-1))	-1.97E-08	4.00E-08	-0.493237	0.6307
ECT2(-1)	-0.074035	0.087985	-2.841446	0.0416
R-squared	0.848008			
Adjusted R-squared	0.685159			
Durbin-Watson stat	2.256230			

Sources: Researchers' computation, 2024.

The results above show that in the current and lag three periods, food, beverages, and tobacco output have a positively significant relationship with economic growth in Nigeria in line with economic theories. This result in real terms mean that that, a unit increase in the output of the production of food, wines, and tobacco in the current and lag three periods brought about an increase in economic growth in Nigeria by approximately 0.22 and 1.9 per cents. Although, the findings from lag one and lag two deviates from economic theories by revealing an inverse and statistically insignificant relationship between food, beverages, and tobacco production output with economic growth in Nigeria. This in real terms mean that one year and two years past outputs from food, beverages and tobacco production led to a decrease in economic growth in Nigeria by approximately 3.0 and 1.1 per cent.

The short run result revealed a negative relationship between inflation and economic growth in Nigeria. This finding is in line with a priori expectations, meaning in real terms that a percentage increase in inflation rate will bring about a reduction in economic growth in Nigeria

by approximately 0.0006 per cent. Altthough, the reduction will not exert any statistically significant impact on economic growth in the short run, ceteris paribus.

Exchange rate in the current and lag three period revealed an inverse relationship with economic growth of Nigeria. These results deviate from economic expectations, implying in real terms that a unit increase in the current and lag three period of the value of the domestic currency say the naira, led to a decrease in economic growth in Nigeria by approximately 0.0004 and 0.0001 per cents. On the other hand, the lag one and lag two periods of the exchange rate revealed a positive relationship with growth in line with expectations. This mean that the past one and two years increase in the value of the domestic currency led to an increase in growth in Nigeria by approximately 0.0003 and 2.2 per cent. However, only the current value of the exchange rate coefficient will exert a statistically significant impact on growth in Nigeria due to its low probability value of (0.0716) lower than 0.10 critical values at the 10 per cent level of significance. Other variables were statistically insignificant.

The results of the relationship between taxes on production and economic growth revealed a positive intercept in the current period. This agrees with the relevant economic theories, meaning in real terms that a unit increase in taxes on production will lead to an increase in economic growth in Nigeria b approximately 6.3 per cent. On the other hand, lag one to three revealed an inverse relationship with growth in Nigeria. this does not agree with economic theories, implying that a unit increase in the past one to three years taxes on production led to a decrease in economic growth in Nigeria by approximately 8.1, 3.4 and 4.2 per cent. However, taxes on production across all periods exerts revealed a non0-statistically significant impact on growth in Nigeria given their high probability values.

Finally, the result above show that on average, the coefficient of labour force participation has a positive relationship with economic growth in Nigeria in the current period. This aligns with the relevant economic theories, implying that a unit increase in the supply of labour will lead to an increase in economic growth in Nigeria by approximately 3.3 per cent. On the other hand, the lag one period revealed an inverse relationship with growth in Nigeria. this does not agree with theories, implying that an increase in the past one year's labour supply led to a decrease in economic growth in Nigeria by approximately 1.9 per cent. Although, both the current and lag one periods does not exert a statistically significant impact on growth in Nigeria given their high probability value of (0.4342), (0.6307), greater than the 0.05 critical value.

The error correction term has the expected negative coefficient and was also statistically significant at the 5 percent significance level in line with theories. The magnitude of the coefficient of the error correction variable of 0.074035 implies that over 7 per cent of the disequilibrium in economic growth will be corrected back to equilibrium within one year. This indicated a slow speed of adjustment from the short run disequilibrium to the long run equilibrium. The R-squared of 0.8607 and the Adjusted R-squared of 0.6635 showed about 66.3 percent of the changes in economic growth has been accounted for by the independent variables.

4.4.4: Diagnostic Test for Food, Beverages, and Tobacco Equation

The study employed many diagnostic tests to check the stability of the model ranging from the CUSUM test, the Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test and the autoregressive conditional heteroscedasticity (ARCH) test were employed to check the existence of the normality or adequacy of the estimated model. The results of the tests are summarized in Table 4.10 and figure 2. The Breusch-Godfrey serial LM test statistic of 1.095487 with its high probability value of 0.3714 showed that there is no problem of autocorrelation in the model. This indicates that the residuals terms are independent and hence there is no autocorrelation in the estimated equation. The Breusch-Pagan-Godfrey

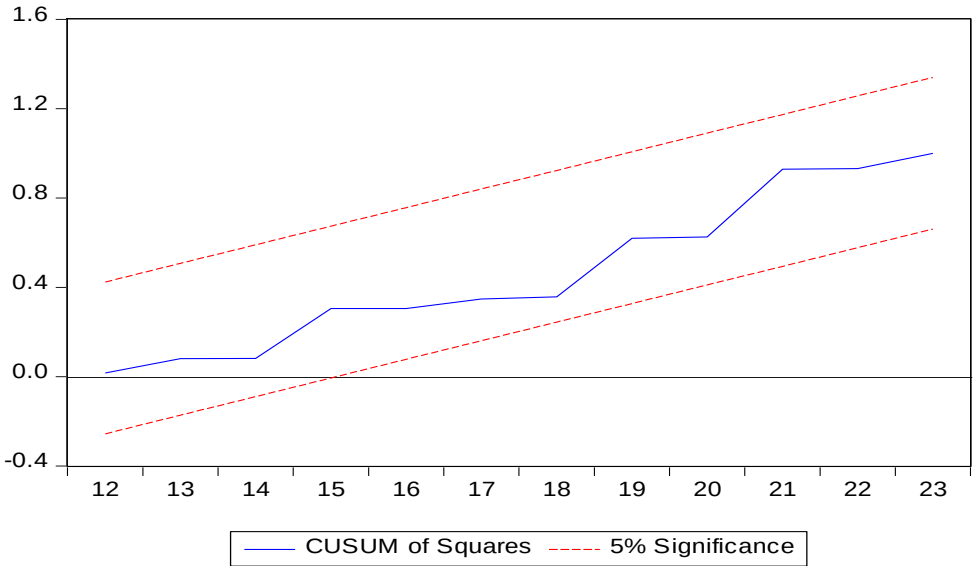
Heteroscedasticity test value of 0.147875 with its high probability of 0.9998 showed that there is no problem of heteroscedasticity and hence the disturbance terms are normally distributed. The conclusion from the various diagnostic tests conducted showed that the estimated equation is adequate and well-behaved. The plot of CUSUM test graph at the five percent critical lines as depicted in figure 6 showed that the recursive line wander clearly in between the critical lines, indicating the stability of the estimated food, beverages, and tobacco equation, and further reveals the absence of structural breaks in the data.

Table 4.10: Diagnostic test for the food, beverages, and tobacco equation

Test statistic	Value(prob.)
Breusch-Godfrey Serial Correlation LM Test	1.095487
	(0.3714)
Breusch-Pagan-Godfrey Heteroscedasticity Test	0.147875
	(0.9998)

Sources: Researchers' computation, 2024.

FIG. 2: Cumulative Sum of Residuals (CUSUM) test for Food, Beverages, and Tobacco equation



Sources: Researchers' computation, 2024.

4.5 Textile, Apparel and Footwear Equation

4.5.1 Bounds test of textile, apparel, and footwear equation

The result of the bounds test approach to cointegration of textile, apparel, and footwear equation is depicted in table 4.11. The result of the bounds test for cointegration as depicted in table 4.11 showed that the computed F-statistic of 27.7 was greater than the upper bound critical values of 3.79 at the five percent level of significance. Based on this, the study concluded that there is long run relationship among the variables in the textile, apparel, and footwear equation.
Table 4.11: Bounds test for textile, apparel, and footwear equation.

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	27.76811	10%	2.26	3.35
K	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Sources: Researchers' computation, 2024.

Table 4.12: Long Run Estimate of the Textile, Apparel and Footwear Equation.

Dependent Variable: D(RGDP)
Selected Model: ARDL(2, 3, 1, 3, 3, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(TAF)	0.277154	0.155661	1.780497	0.0940
INF	-0.018094	0.009675	-1.870262	0.0799
LOG(EXR)	0.237905	0.232971	1.021180	0.3224
LOG(TAXES)	0.488906	0.197324	2.477684	0.0248
LOG(LF)	-3.896872	2.753150	-1.415423	0.1761

Sources: Researcher's computation, 2024.

The result above show that in the long-run, outputs of textile apparel and footwear will have a positive, and statistically significant relationship with economic growth in Nigeria. This finding agrees with economic theories, implying in real terms that a unit change in the production of textile apparel and footwear products, will result to an increase in economic growth in Nigeria by approximately 0.27 per cent. Conversely, the result show that in the long run, inflation will have a negative and statistically significant relationship with economic growth in Nigeria in line with economic theories. This finding in real terms imply that a percentage increase in food prices, commodity prices and other relative prices will in future bring about a fall in economic activities in Nigeria, ceteris paribus.

The textile apparel and footwear equation show that in the long run, exchange rate will have a positive but non-statistically significant relationship with economic growth in Nigeria, in line with a priori expectations. This finding in real terms imply that a unit increase in the value of the domestic currency say the naira will in future result to an increase in economic activities in the country by approximately 0.23 per cent. Similarly, the findings show that on average, taxes on production will exert positive and statistically significant relationship with economic growth in Nigeria, in line with the relevant a priori expectation. This result in real terms mean that a unit increase in taxes on production in Nigeria will in the future lead to an increase in growth in the country by approximately 0.48 per cent.

Finally, the result show that on average, the labour force participation will have an inverse relationship with economic growth in Nigeria. This does not agree with the relevant a priori expectations, implying in real terms that, a unit increase in the supply of labour will lead to a decrease in growth in Nigeria by approximately 3.9 per cent, ceteris paribus. However, the coefficient of labour participation reveals a non - statistically significant relationship with growth in Nigeria given its high probability value of (0.1761), being greater than 0.05 critical value.

4.5.2 Model selection for Textile, Apparel and Footwear Equation

Before estimating the ARDL, model selection test was carried out to select appropriate lag lengths for the variables. The Akaike information criterion was employed as the model selection criteria. The result of the model selection specification, the AIC has the lowest value of 5.259691 and highest adjusted R-squared of 0.999049.

4.5.3 ARDL Error Correction Estimates for Textile, Apparel, And Footwear Equation

The result of the ARDL estimates for the short run dynamics of textile, apparel, and footwear equation is presented in Table 4.10.

Table 4.13: ARDL Error Correction for Textile, Apparel, And Footwear Equation.

Dependent Variable: D(MMR)				
Selected Model: ARDL(1, 0, 3, 3, 1, 1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RGDP(-1))	2.66E-05	5.96E-06	4.463877	0.0005
DLOG(TAF)	0.005876	0.054331	0.108145	0.9153
D(INF)	-0.001260	0.000692	-1.821781	0.0885
D(INF(-1))	0.000295	0.000654	0.452010	0.6577
D(INF(-2))	0.000122	0.000673	0.181390	0.8585
D(INF(-3))	-0.000601	0.000687	-0.874258	0.3958
DLOG(EXR)	-0.039820	0.031315	-1.271595	0.2229
D(EXR(-1))	0.000479	0.000472	1.013659	0.3268
D(EXR(-2))	5.43E-05	0.000345	0.157398	0.8770
D(EXR(-3))	0.000536	0.000377	1.422567	0.1753
DLOG(TAXES)	0.052451	0.027526	1.905489	0.0761
D(TAXES(-1))	-9.22E-05	8.09E-05	-1.140189	0.2721
D(LF)	1.09E-07	5.04E-08	2.160738	0.0473
D(LF(-1))	-1.31E-07	4.98E-08	-2.632880	0.0188
ECT3(-1)	-0.159258	0.105083	-1.515542	0.1504
R-squared	0.651987			
Adjusted R-squared	0.327175			
Durbin-Watson stat	1.978169			

Sources: Researchers' computation, 2024.

The results above show that in the current period, textile, apparel, and footwear outputs have a positive relationship with economic growth in Nigeria. this finding agrees with economic theories implying that a unit increase in the outputs of textile, apparel, and footwear production will bring about an increase in economic growth in Nigeria in the current period by approximately 0.005 per cent. However, textile, apparel, and footwear outputs does not exert any statistically significant impact on economic growth in Nigeria given its high probability value of (0.9153), being higher than the conventional 0.05 critical values.

The findings conversely show that in line with economic theories, inflation will exert an inversely relationship with economic growth in Nigeria in the current and lag three periods. This finding in real term imply that a unit change in inflation rate in the present and past three years will result to a decrease in economic activities in Nigeria by approximately 0.001 and 0.0006 per cent. On the other hand, lag one and lag two periods of inflation have a positive relationship with economic growth in Nigeria. this deviates from economic theories, implying that a per cent change in the past one- and two-year inflation rates in Nigeria led to an increase in economic growth by approximately 0.0002 and 0.0001 per cent. However, inflation rate in the current period is statistically significant at the 10 per cent level of significance, given its low probability value of 0.0885, lower than 0.10. Lags one to three periods were statistically insignificant due to their high probability values.

The finding from the textile, apparel, and footwear equation shows that in the current period, exchange rate reveals a negative relationship with economic growth in Nigeria. This finding

deviates from the relevant economic theories, implying that a unit increase in the value of the domestic currency will lead to a decrease in economic activities in the current period in Nigeria by approximately 0.03. however, the result further shows that exchange rate in the lags one, two and three periods have a positive relationship with economic growth in Nigeria. This finding agrees with economic theories, implying in real terms that, the past one to three years exchange rate in Nigeria led to an increase in economic activities in Nigeria by approximately 0.0004, 5.4 and 0.0005 per cent, ceteris paribus. However, lags one to three periods reveal a non-statistically significant impact on economic growth in Nigeria due to their high probability values greater than 0.05 critical values.

Moreso, the short run results show that taxes on production have a positive and statistically significant relationship with economic growth in Nigeria. This result aligns with economic theories, implying in real terms that a unit increase in taxes on commodities undergoing production will lead to a significant increase in economic activities in the current period in Nigeria by approximately 0.05 per cent. Conversely, the lag one period of taxes on production reveals an inverse relationship with economic growth in Nigeria, this deviates from a priori expectations, implying that past one years' tax on goods under production reduced economic activities in Nigeria by approximately 9.2 per cent. However, lag one period of taxes on production does not have a statistically significant impact on economic growth in Nigeria.

Finally, the result show that the labour force has a positive relationship with economic growth in Nigeria in the current period. This aligns with a priori expectations, implying in real terms that, a unit increase in the supply of labour in Nigeria in the present period will bring about an increase in economic activities by approximately 1.09. conversely, lag one period of the labour force reveal an inverse relationship with economic growth in Nigeria. this deviates from economic theories, implying that last years' increase in labour supply led to a decrease in economic activities in Nigeria by approximately 1.3 per cent. However, the current and lag on periods of the labour force exerts a statistically significant impact on economic growth in Nigeria given their low probability values of (0.0473), and (0.0188), being less than 0.05 critical value at the 5 per cent level of significance, ceteris paribus.

4.5.4 Diagnostic Test for Textile, Apparel, and Footwear Equation

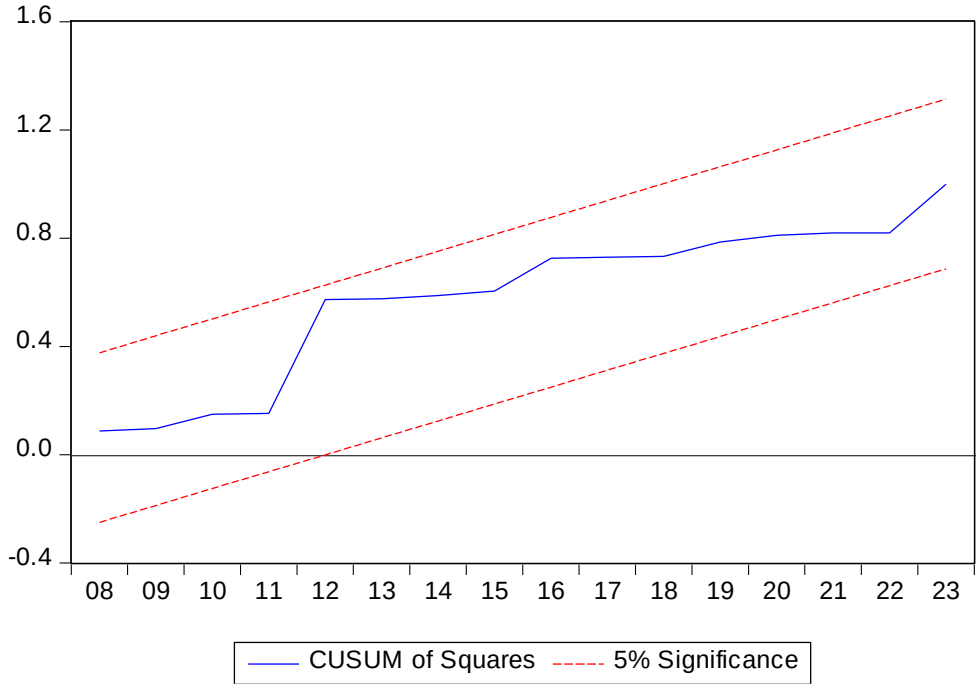
The CUSUM test was employed to check the condition of stability of the estimated model. Also, the Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test and the autoregressive conditional heteroscedasticity (ARCH) test were employed to check the existence of the normality or adequacy of the estimated model. The results of the tests are summarized in Table 4.14 and figure 3. The Breusch-Godfrey serial LM test statistic of 1.331144 with its high probability value of 0.3036 showed that there is no problem of autocorrelation in the model. This indicates that the residuals terms are independent and hence there is no autocorrelation in the estimated equation. The Breusch-Pagan-Godfrey Heteroscedasticity test value of 2.465674 with its high probability of 0.0681 showed that there is no problem of heteroscedasticity and hence the disturbance terms are normally distributed. The conclusion from the various diagnostic tests conducted showed that the estimated equation is adequate and well-behaved. The plot of CUSUM test graph at the five percent critical lines as depicted in figure 6 showed that the recursive line wander clearly in between the critical lines, indicating the stability of the estimated textile, apparel, and footwear equation.

Table 4.14

Test statistic	Value(prob.)
Breusch-Godfrey Serial Correlation LM Test	1.374552
	(0.2851)
Breusch-Pagan-Godfrey Heteroscedasticity Test	0.948055
	(0.5357)

Sources: Researchers' computation, 2024.

FIG.3: Cumulative Sum of Residuals (CUSUM) test for the textile, apparel, and footwear equation



Sources: Researchers' computation, 2024.

The findings from the result in the preceding section revealed that the manufacturing sector has had varying impact on economic growth in Nigeria during the evaluation period. Specifically, the result showed that manufacturing sector output and other control variables revealed nearly a similar pattern of relationship with growth in Nigeria for instance, the findings show that the manufacturing sector output has positive impacts on growth in Nigeria both in the short-run and in the long run. Revealing statistical significance only in the short run. These findings conform with related studies by (Oburota & Okoi, 2017; Karaki, 2023) who investigated the relationship between manufacturing output and economic growth and found that manufacturing output, capital, and technology were the significant determinants of economic growth in Nigeria. Similarly, (Joshua, 2018), examined the impact of manufacturing on Economic growth using the Autoregressive Distributed Lag (ARDL) model, and established a long-term positive impact of manufacturing output on economic growth and development. These findings drive the point that investments in the production of garments, such as shirts, pants, and dresses from various fabrics like cotton and silk will in the long run result in sustained economic growth, hence, there is a need for government to shift focus in the improvement and subsidizing the cost of machinery to boost the production capacity. This will birth a shift from consumption to production.

The findings that food, beverages, and tobacco output have a positively significant relationship with growth in the short run, but a non-statistically significant impact, in the long run, reveals their challenges with long-term production and steady supply which might be hindered by government policies like unfriendly imposition of taxes, insecurity of unfavorable business environment. This can be adjusted via government intervention and investment in this key sector to increase the productive capacity of the manufacturing sector in Nigeria.
Finally, the finding that textile, apparel, and footwear has positive but non-statistically significant impacts on economic growth in the short run but exert a positive impact in the long run reveals the nascent state of our manufacturing capacities. It also conforms with early studies and highlights the need for government intervention and investment to meet local demand. This will, however, bring down sale prices and checkmate soaring inflation to the barest minimum.

5. CONCLUSIONS AND RECOMMENDATIONS

The thrust of this study was to analyze the existing relationship between the manufacturing sector and economic growth in Nigeria between the period, 1990 to 2023. Specifically, the study quantified the contribution of manufacturing output to economic growth in Nigeria; the effect of food, beverages, and tobacco on economic growth in Nigeria; and the effect of textile, apparel and footwear output on economic growth in Nigeria. The findings demonstrate that manufacturing sector output positively impacts economic growth in Nigeria both in the short run and long run, with statistical significance evident mostly in the short run. The findings that investments in garment production, such as shirts, pants, and dresses from various fabrics like cotton and silk, will lead to sustained economic growth is evident by similar case studies from developed nations of Europe and America, who invest heavily in their fabrication and textile industries to boot reserves and export. It is at this juncture pertinent for Nigeria to leverage the abundant available human and natural resources to expand her production base, diversify the economy from crude, and increase the availability of made in Nigeria product.
The findings also reveal that the output of food, beverages, and tobacco has a positively significant relationship with growth in the short run but a non-statistically significant impact in the long run. This connotes challenges with long-term production and steady supply, eventually hindered by government policies such as unfavorable tax impositions, insecurity, and an adverse business environment. Government intervention and investment in this sector are necessary to enhance its productive capacity. Lastly, the finding that textile, apparel, and footwear output has a positive but non-statistically significant impact on economic growth in the short run, but a positive impact in the long run, reestablishes the fact that the manufacturing in Nigeria is yet developing, needy and vulnerable. Enhancing the manufacturing sector by via subsidies and access to machinery will capitalize on its immense short-term positive impact on economic growth and ensure sustained long-term benefits.

Given the above findings, the following recommendations are proposed for consideration. The Nigerian government needs to support and Invest in the Manufacturing Sector. Increased investments in the production of garments, such as shirts, pants, and dresses from fabrics like cotton and silk, should be encouraged to drive sustained economic growth in the country.
To ensure the effective performance of the manufacturing sector policies that promote low and stable inflation rates should be implemented because this will positively influence economic growth. There is need to implement policies that control exchange volatility and maintain competitive exchange rates, to fight against negative short-term impacts on economic growth.
Reforms on tax policies on production to balance revenue generation with manufacturing growth to avert long-term negative effects on economic growth is crucial. Policy makers should address challenges in the long-term production and steady supply of food, beverages, and tobacco.

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