SOCIAL GLOBALIZATION AND NIGERIA'S MANUFACTURING SECTOR OUTPUT

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ABSTRACT

This study investigated the impact of social globalization on Nigeria's manufacturing sector output. This study utilized the autoregressive distributed lag estimation technique and sourced its data from the world development indicators. The study found that the manufacturing production and the social globalization index have long-term correlations, it also discovered that the coefficient of social globalization was positive and insignificant which suggested that social globalization has not promoted Nigeria's manufacturing sector output during the study period. This study observed that in order for Nigeria to harness the benefits of social globalization there is need for Nigeria to make sufficient reliable and effective policies. The study concludes that social globalization was insufficient to propel manufacturing output in Nigeria and recommends policy measures such as strengthening of the Nigeria local content development, including the promotion of vocational training alignment with global standards and supporting digital platforms for local manufacturers.

Keywords: Manufacturing sector, social globalization, manufacturing output, economic growth, Nigeria economy.

JEL Codes: F02, H56, D74, & F5

1. INTRODUCTION

Adenikinju & Adeola (2013) noted that production of merchandise for sale or use and application of tools, machine labor, chemical and biological formulation is known as manufacturing. It is about a joint of craftsman of finished goods and also of high tech in forms of transformation of goods in unfinished to finish. The majority of the manufacturing sector output is measured as an index of product revenues, adjusted for price changes. To prevent error in measurement of manufacturing sector output, adjustments were made to exclude output that will be sold to other manufacturing firms within same unit of measurement (Chukwuedo, Chikulirim, and Salami, 2024).

"Social globalization" is the exchange of ideas, know-how, technologies, and social practices creating intertwined individuals, societies and information flows (Ajibola, 2018). This interconnection affects the manufacturing industry in various ways in Nigeria. Furthermore, social globalization will help in building a country's ability to manufacture items for final consumption or other uses, this includes converting raw materials in addition to other inputs into completed goods both in Nigeria and abroad (Ajibola, 2018). Social globalization will help nations struggling to export their locally made goods abroad to become less dependent on foreign countries for exportation synergy or partnership, it will also encourage Nigeria's economic growth, manufacturing consistency and make the developing country maximize the use of its of its natural resources in manufacturing products that meets global standards (UNECA, 2018; Zhang, Liu, Wang, and Chen, 2024). Social globalization helps advance the growth of an economy and its manufacturing sector output. Social globalization has the capacity of accelerating economic and manufacturing advancement, hastening the completion of economic and manufacturing structural change and promotes the diversifying economies diversification from been dependent on oil to manufacturing (Ajibola, 2018; Li, Kim, Zhang, and Wang, 2024).

Anyanwu et. al. (2010); Zhang, et al. 2024) averred that social globalization enables the manufacturing sector to maintain adaptability, create economic policy resilience that is necessary to promote economic growth and improve the standard of living for the citizens. According to Chukwuedo, et al. (2024) the primary focus of social globalization in the context of economic development is to project big populations and labour force countries like Nigeria

on a rapid manufacturing sector development. It is believed that the Nigeria labour force resources could be absorbed by the intended beneficial advancements in manufacturing processes (UNECA, 2018). Thus, since gaining independence in 1960, Nigeria's governments have adopted a variety of industrialization plans in an effort to completely revamp the country's economy through manufacturing sector collaboration with other foreign manufacturers abroad. It is important to affirm that over the past fifty years, Nigeria's manufacturing production has sadly been quite low irrespective of the policies that have been made to tackle this manufacturing output decline. The government has not succeeded in reviving Nigeria's manufacturing sector back to its pre-colonial days, when Nigeria used to be among the top producers and exporters of red oil, cocoa, and other local products (OECD, 2015).

Instead, the manufacturing subsector policies have focused on importing goods that we could easily be produced or manufactured in Nigeria while ignoring the local manufacturing inadequacies that needs policy attention. Nigeria's manufacturing production has decreased due to the deficiencies of this policy inefficiency and Nigeria manufacturers need the collaboration of social globalization to attain its good old days when it performed better. Additionally, compared to many other nations, the yearly growth of manufacturing production as a proportion of GDP is only somewhat higher (UNECA, 2018). In 1960s and early 1970s, Singapore, Malaysia, and Indonesia were developing at a similar pace as Nigeria. However, the same countries that Nigeria manufacturers were competing with back then has long left Nigeria behind due to less commitment and non-transparent policy formulation and implementation in the manufacturing sector (Adebayo 2020).

Nigeria's manufacturing output continued to decrease in size in the last 4 decades, in addition to this, the yearly growth of manufacturing relative to GDP growth is not inconsistent when compared to Singapore, Malaysia, and Indonesia and others that were at par with Nigeria at the time it gained independence. Nigerian manufacturing used to be $54.75 billion, whereas Singapore, Malaysia and Indonesia manufacturing production is $83.66 billion, $228.32 billion and 87.53 billion respectively. However, the share of the manufacturing sector in Nigeria's GDP has been decreasing, rather than growing over time. The manufacturing sector production share of GDP, which was 76.6% in 1975 dropped to 38.3% in 1985. Nigeria's manufacturing output is also inconsistent as it dropped to 32.4% in 1998. This downward trend has persisted despite the fact that the Nigerian manufacturing sector had little growth in 2011 and 2016 respectively. This does not mean that everything is good in the manufacturing industry; it only shows its frailties (Central Bank of Nigeria CBN, 2017).

The manufacturing sector factory growth index has been retrogressing; it was in 1987 it was 17.95%, in 1988 it was 14.5%, in 1990 it then becomes 6.3%, it went further low in 1991, 1992, and in 1993 as the case may be (Central Bank of Nigeria CBN, 2017). Academic nexus suggests that all economies in the world are significantly impacted by social globalization. Scholars emphasize that social globalization plays great impact in the manufacturing, exportation and of quality goods that meets global standard. They also argue that social globalization encourages efficient manufacturing services like the employment of labor, investments in human capital and collaboration with developed countries in manufacturing. The diffusion of technology to social globalization contributes to increase productivity, efficiency and competitiveness among countries through quality manufacturing of goods (OECD, 2015).

Ajibade, Ajayi, and Allo (2016) listed transnational flows of data, news, pictures, labour, capital, and management as components of social globalization and globalization in general. Ajibade, et. al., (2016) noted that transnational companies, intergovernmental organizations, non-governmental organization and alternative government organizations were identified

as the primary promoters of manufacturing sector of every nation. Similarly, Akinlo, (2019) implied that Nigeria's manufacturing circumstances are not dissimilar from those of other developing countries with struggling manufacturing sector due to the unequal distribution of gains and losses resulting from social globalization.

Nigeria manufacturers have witness numerous policy changes since independence, some of such policies are; the import substituting strategy, the structural adjustment programme, economic and financial liberalization programme, the bank of industry programme and others. These policies and programmes were developed to aid the improvement of Nigeria manufacturing collaboration with other developing and developed countries through social globalization Organisation for Economic Cooperation & Development (2015). Social institutions and gender index: Understanding the drivers of gender inequality. Paris: OECD Publishing. These policies were to drive manufacturing output growth, increase domestic and foreign business interaction, help accelerate the development of manufacturing through credit facility from Nigerian banks, improve efficiency of Nigeria's manufacturing sector between 1962 to 2020. However, despite the above-mentioned policy initiatives, Nigerian manufacturers continued to face an extremely unfavourable and destructive working environment causing disruption to the manufacturing output (McKenzie and David, 2017; Agbonrofo, and Ajibola, 2023).

Subsequently, this has made Nigeria's manufacturing sector unable to hit its 2020 GDP target of 10% from its initial position of 4% (Adebayo, 2020). Consequently, it made major Nigeria manufacturing company to shut down and seeks to move their factories abroad in search of a better manufacturing atmosphere. Also, Nigeria manufacturing sector yearly revenue which was projected to reach N5 trillion in 2020 could not be achieved as a consequence of failed or redundant policies (IMF, 2020). Taking this as a premise, it is worth to note social globalization have so many little research attentions as it relates to its growth in the manufacturing sector output of Nigeria. Investigation of globalization on Nigeria manufacturing sector output has been almost exclusive to most authors. Therefore, this paper will fill this gap by critically and empirically investigating the impact of social globalization on the Nigeria manufacturing output. The objective of this paper is to ascertain whether social globalization significantly impacts Nigeria's manufacturing output or not.

2. LITERATURE REVIEW

There is very scanty of exact studies on social globalization and Nigeria's manufacturing sector output. However, there is numerous related studies that have been conducted on social globalization and Nigeria's, manufacturing sector output. However, a variety of approaches that are often accepted in social science research were used to perform the theoretical literature summary. There is also various research, such as that of Jarreau and Poncet (2012); Jolliffe (2014) and Kemneti, Aworinde, and Ajibola, (2024), addressing the association and interaction between industrialization and globalisation in relation to economic development in West Africa as a case study but for developing and rising economies in general.

Based on the substantial correlation established between the manufacturing sector's output and economic growth, this research generally came to the conclusion that globalization improves manufacturing sector performance and promotes economic growth. This study main flaw is that it supported different conclusions without data-based correlation between the two variables. For instance, even though there is a correlation between variables, correlation does not necessarily mean causation and consequently a high level of correlation between

variables is not a prerequisite for social globalization for economic growth.

A series of well-coordinated studies which focused on the comparative direction of causality between the manufacturing output, globalization, and economic growth. Using Granger directional translation or causality test analysis. This research examined whether certain nations demonstrated evidence of manufacturing output and economic growth with the impact of globalization. For instance, such studies as Newfarmer, Richard, John P. & Finn T., (2018) and Jonathan, Kehinde, Oladopo, and Adedolapo (2015) are of this type. The main flaw in this study is that they relied on granger causality test and they only work properly when the original time series are not co-integrated.

This is because when the original times series are cointegrated and integrated of order one, on this note the causality tests may become invalid and misleading. The aforementioned studies (Arip, Yee, and Abdul Karim 2010; Abdul and United Nations Economic Commission for Africa (UNECA) 2018; Atkin and Donaldson (2015) stressed the importance of first ensuring that the originality of the contribution of globalization and manufacturing of output time series is checked for stationarity and cointegration properties before applying the Granger causality test.

In order to determine if the implications of social globalization and international commerce are relevant for promoting Nigeria's economic growth, Atkin and Donaldson (2015) employed the conventional Granger causality test. Their study found out that, there are reciprocal relationships in Nigeria between globalization and international commerce. The study then proves that globalization and international commerce are responsible for Nigeria's economic growth. The study didn't take cointegration into account, even though it looked at the stationarity characteristics of the utilized variables. Again, the collaborative study conducted in 2015 by the OECD and WTO analyzed globalization and economic growth in West Africa using the conventional Granger causality test and Johansen cointegration testing. The study findings demonstrated a long-term bidirectional causal relationship between globalization and West African economic expansion. Econometrically, applying the conventional Granger causality test is inappropriate since the variables under consideration (economic growth and globalization) are cointegrated and integrated of order one. It was necessary to conduct the Granger causality test within the context of the error correction model.

In-line with the context of a generic manufacturing technology, Yinka, Opusunju, and Ahmed (2020) examined the connection between economic growth and investments in the manufacturing sector. The study then analysed the data using modern econometric techniques such as error correction and cointegration. Error Correction Modeling Technique and the Engel-Granger two-step cointegration procedure were adopted in this study's analysis. The analysis confirmed that there is insufficient investment in Nigeria's manufacturing sector to promote made in Nigeria goods. The study did not address the topic of causality and the direction of causality of the variables. However, as in any big scale studies like this, there is confusion regarding the directionality and causation in social globalization's role in manufacturing sector output decline.

The focus of this study is to address the methodological gap found in the empirically reviewed studies. This study will utilize panel auto regressive distributed lag model, cointegration test, and Cusum and Cusum Q stability test.

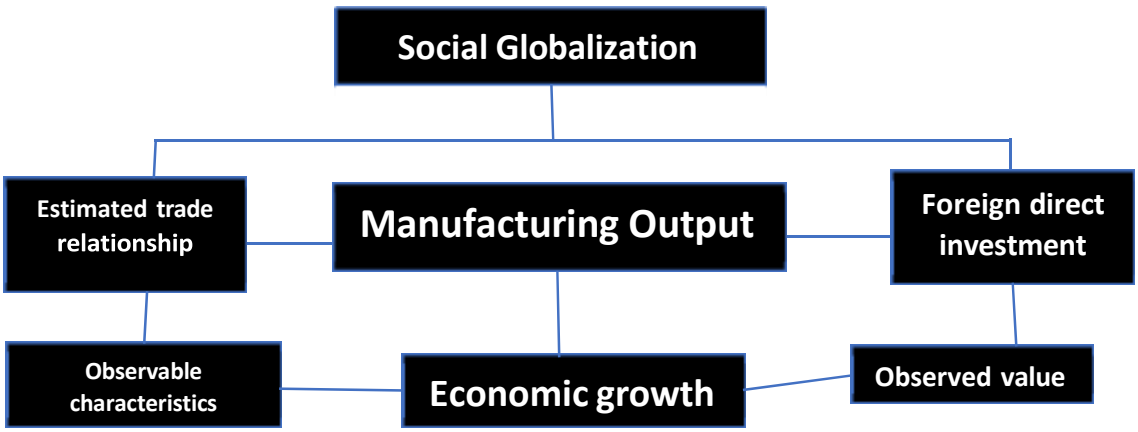
2.1 Theoretical Framework

The Heckscher-Ohlin Theory, Keynesian Growth Theory, and Paul Romer New Growth Theory serve as the foundational theories for this investigation. These theories were chosen based on whether manufacturing sector output are selected because they tend to provide

better macroeconomics results when the right policies are in place and social globalization impact. This study found the selected theories widely accepted as their theoretical and empirical significance to the output of the manufacturing sector and to the economy's overall performance. Bhorat, Haroon, Ravi, Christopher, and François (2017) presented a two-nation development theory with endogenous technological advancement that is consistent with the Heckscher-Ohlin theory approach. Their theory says that social globalization causes exports, technological advance, and rising economic productivity and manufacturing development.

2.2 Conceptual framework

Figure 1: Conceptual Framework



Source: Researchers view, 2023

The figure above provides a detailed explanation of how social globalization and the manufacturing sector are conceptualized. It also reveals while it makes economic sense to integrate these two factors in an academic study. Nevertheless, due to their shared critical path to global economic growth, these two variables are inextricably linked and yoked together for a quality research output. While globalization can be defined as the acceleration of movements and exchanges of people, capital products, services, technologies, or cultural practices throughout the globe. Social globalization fosters and intensifies economic contacts between various communities, states, nations and regions worldwide. This is why social globalization is as important as globalization itself to national economies of the world. Again, manufacturing strategy cannot be separated from socialization (social globalization) as it brings economic synergy into play; this enables countries to partner, sign bilateral – trade agreements for economic prosperity.

The social globalization linkages to other nations such as; foreign trade, importation and exportation are used to sustain manufacturing sector. The manufacturing sector cannot function effectively without social globalization as it provides access to new technology development and global markets for the manufacturing sector (Desai, Raj & Homi 2017). The manufacturing strategy process outlines the formulation and implementation of these strategies. This conceptual framework also illustrates how the manufacturing sector is becoming more decentralized as a result of the need for businesses to become more adaptable, productive and competitive in the face of the impact of social globalization. In order for manufacturers to fully benefit from social globalization, governments must give local manufacturers and local producers more authority and responsibility at the industry and enterprise levels.

This study aims to capture its dynamics both before and after globalization was adopted in the Nigerian manufacturing setting. The decision to investigate social globalization and

manufacturing output provides a special response to the difficulties faced by the Nigeria manufacturing sector (Desai, et al., 2017).

3. METHODOLOGY

The relationship between social globalization and Nigeria's manufacturing sector output was estimated for 32-year period using contemporary econometric analytical methods and advanced econometric techniques, the auto regressive distributed lag model (ARDL). Data was sourced from the World Development Indicator (WDI).

3.1 Model Specification

According to the study's stated objectives, which include investigating how social globalization has impacted Nigeria's manufacturing output; this paper adopted the work of Jonathan, Kehinde, Oladopo, and Adedolapo (2015), whose model was stated as:

$$MO_{t-i} = \alpha_0 + \sum_{i=1}^{p} B_{i1} OPEN_{t-i} + \sum_{i=1}^{p} B_{i2} FDI_{t-i} + \sum_{i=1}^{p} B_{i3} EXR_{t-i} + \sum_{i=1}^{p} B_{i4} INFR_{t-i} + \varepsilon_t$$

The Jonathan, Kehinde, Oladopo, and Adedolapo (2015), model was modified to enable us accommodate other variables which we introduced.

Hence, the stated model for this study is specified below:

MSO = f (SOC, EMP, GDP, CPS, EXR) -----1

The representation of the econometric form of the model is summarized as a functional relationship below: We state this mathematically.

$MSO = \beta_1 SOCG + \beta_2 EMP + \beta_3 GDP + \beta_4 EXR + \beta_5 EXR$----2

Where; β_0 is the constant intercept which shows the level of MSO, when the explanatory variables SOCG, EMP, GDP, and EXR are zero. Manufacturing sector output is the dependent variables in this study, and dependent on SOCG, EMP, GDP, and EXR. This means that SOCG, GDP, and EXR are the independent variables and therefore determine the behaviour of the MSO.

Stating the relationship in an econometric model, it becomes;

$MSO=\beta_0+SOCG+EMP+GDP+EXR+$ ui.

From the infusion of β_0 and ui above, it becomes an econometric model. β0 is the constant and the stochastic error term or disturbance variable is Ui. The Ui takes care of other variable that influence the dependent variables but not stated in the model. It therefore has the following assumptions guiding its behaviour, this assumption includes; assumption of zero mean, assumption of correct aggregation, assumption of randomness, assumption of homoscedasticity and assumption on normality (Koutsoyiannis, 2003).

4. RESULTS AND DISCUSSIONS OF FINDINGS

Table 1: Unit root test results

Variable	t-Statistics	ADF 5%	ADF 1%	1(0)	1(1)	Prob.	Decision
MSO	-7.124431	-3.574244	-4.309824		**	0.0000	1(1)
EMP	-9.544211	-3.633033	-4.416345	*		0.0000	1(0)
GDP	-5.191501	-3.595026	-4.356068		**	0.0015	1(1)
CPS	-3.647920	-3.574244	-4.309824	*		0.0429	1(0)
EXR	-4.074398	-3.574244	-4.309824		**	0.0171	1(1)
SOCG	-5.230159	-3.587527	-4.339330		**	0.0013	1(1)

Source: Authors' computation using e-view12

The unit root test results above indicate that social globalization index is significant at 5% significant level. This is because the manufacturing sector output (MSO) has a probability value of 0.0000 which is less than 0.05, augmented Dickey-Fuller test statistic value of -

7.124431 which is greater than the Test of critical value of -3.574244 at 5% level of significance. Social globalization index (SOCG) has a probability value of 0.0013, t-statistics of -5.230159 which is greater than the augmented Dickey Fuller test statistics value of -3.587527 at 5% significant level.

Table 2: Presentation of ARDL results

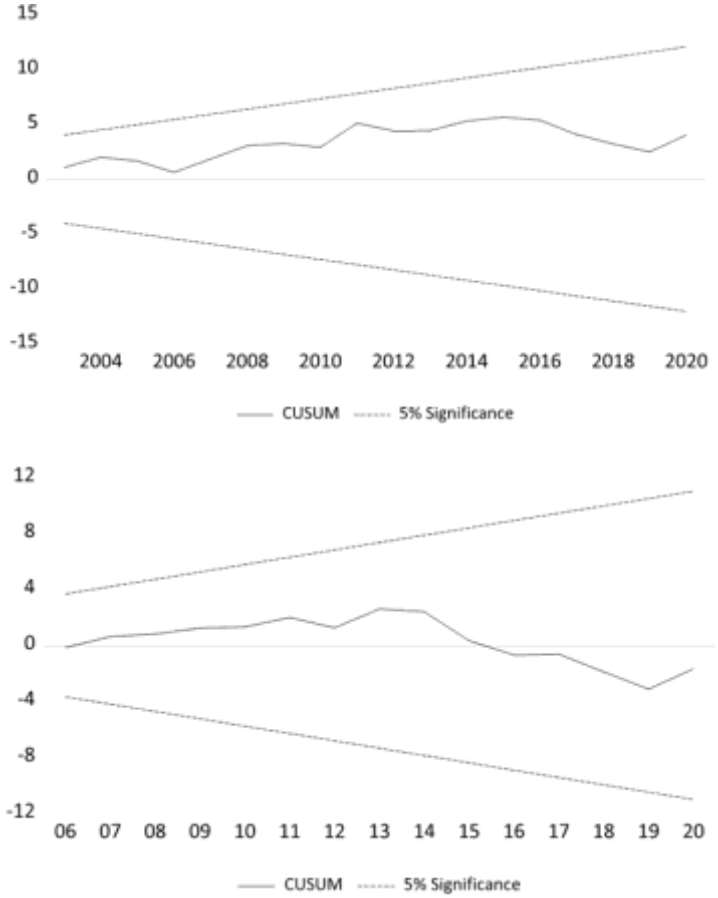
Variable	**Coefficient**	**Std. Error**	**t-statistics**	**Prob.***
MSO(-1)	0.652585	0.024090	27.08909	0.0235
TSV	0.138680	0.214683	0.645979	0.5281
NFCI(-1)	-3.279280	1.546732	-2.120135	0.0511
EXCH	-0.258505	0.108271	-2.387577	0.0306
ECOG	-0.493844	0.028403	-17.38693	0.0366
MCU	-11.33916	0.237050	-47.83444	0.0133
@TREND	2.615883	0.925318	2.827011	0.0127
Prob(F-statistics)	0.019991			
R-squared	0.999974			
Adjusted R-squared	0.999334			
D-Watson	3.342156			

Source: Authors' computation using e-view12

The value (Prob (F-statistic)) of 0.019991 is in fact statistically significant meaning the result is significant and the value (Durbin-Watson stat) of 3.342156 means there is a negative autocorrelation. The reason is that if Durbin Watson value is less than 0 and more than 2– this means it has positive autocorrelation, and if the Durbin Watson value is more than 2– this means negative autocorrelation. Although it's helpful in technical analysis that focuses more on movements of asset prices through charting than on a company's financial stability or its management, autocorrelation may not be helpful in statistical analysis.

From the result above the R-squared represents the percentage of data explained in a model, however, the regression model explained 99% of data since it has an R-squared that is equal to 0.999974, this means that the regression model explains 99% of the variable contained in the model. R-squared is useful because it predicts how much our input variables will explain the variation in our output or predicted variable. The adjusted R-squared with a value of 0.999334, justified that the more input variables provide value to the model because adjusted R-squared increases when predictor variables improve the model.

Figure 2: Result of Cusum and Cusumq diagnostic test



Source: Authors' computation using Eview 12

The results from the CUSUM and CUSUMSQ estimation indicate that the recursive residuals are normal and exist in the critical 5% significant lines. This indicates either that structural change has not occurred or has misspecification in the estimated model. They also indicate and support that the stability of estimated coefficients has been verified.

Test of hypothesis

The study Wald test hypothesis results revealed that the probability value (PV) is 0.4 which is greater than 0.05 at 5% significant level. With respect to the decision rule, we recall that if the PV is less than 0.05, we will accept the null hypothesis, and we reject the alternate hypothesis whereas if the PV is greater than 0.05, we reject the null hypothesis, and will accept the alternate hypothesis, and on this basis we will accept the null hypothesis, and reject the alternate hypothesis.

The analysis also shows that in effect, Nigeria's manufacturing sector has a negative value coefficient of -0.493227, which implies a threat to its future manufacturing output and economic development. Since there is very little chance that this situation will change in the long run, it means that in the absence of any economic policies aimed at reviving Nigeria's manufacturing sector; especially the one of reviving manufacturing output, Nigeria may continue with low level of manufacturing output, low contribution to GDP growth and low level of manufacturing industry development. This therefore, will stop manufacturers from producing what Nigerians would want to consume and would still promote heavy importation which is happening in Nigeria now.

Furthermore, in order to fulfill the growing demand of the country's population, social

globalization is expected to help boost manufacturing production and the technical know-how of workers in the manufacturing sector. This will assist Nigeria become more productive using local manufacturing raw materials, also the opposite is true; rather than helping Nigeria's manufacturing output, social globalization has hurt it more because of poor government policies and institutional failures that fell short of expectations in terms of performance. The nation was unable to leverage the benefits of social globalization, and import more advanced manufacturing equipment that could have prevented Nigeria from almost totally collapsing due to absence of the manufacturing output jams.

Social globalization of the economy also showed that Nigerian manufacturing average costs of production is rising. This goes against the prevailing pattern and the a-priori expectation of social globalization impact as perceived when this study was envisaged to have a favourable impact on Nigeria's manufacturing output. This suggests that manufacturing firms will not be able to produce items at a cheaper cost, which will cause the costs of goods made locally to soar. Therefore, an impact of 0.394%, which dropped sharply down to -0.032% and -0.482% respectively shows a negative trend on Nigeria's contribution to the country's manufacturing production over the long and short terms. Thus, there seems to be or at best exist a very tiny very negative correlation between Nigeria's manufacturing output and what I denote as social globalization.

5. CONCLUSIONS AND POLICY RECOMMENDATIONS

The research investigates the effect of social globalization on the Nigeria's manufacturing sector output using the autoregressive distributed lag (ARDL) estimation method to examine the research variables. 'Nigerian policymakers aren't pushing as far as they should with the innovation of social globalization in line with adding new life to the country's manufacturing sector output and increasing the sectors growth which was explained in this study's findings. This study presented an empirical analysis of a technical synergy that if properly directed toward the advancement and development of Nigeria's manufacturing sector it will promote manufacturing output while contributing to the country's economic prosperity. Thus, our investigation showed that the government's poor financing, mundane or inconsistent regulations and lack of provision of credits to manufacturers are the cause of manufacturing sectors low output.

Consequently, the study comes to the conclusion that social globalization impact was insufficient to propel Nigeria's manufacturing output. Also, it further recommends that Nigeria examine its foreign policies especially in the areas of manufacturing in order to enhance manufacturing output. This can be accomplished by implementing a successful import substitution plan, which will raise the share of domestic value-added in exports and enable our nation to become self-sufficient in the production of high-end manufactured goods.

This therefore concludes that the Nigerian manufacturing sector requires an emergency policy declaration if its economy is to benefit from social globalization as the major objectives of this study. This is because our results above show that manufacturing sector is laden with several shortcomings. The regulatory agencies of the government should have a major goal of crafting a good policy, which should also promote sanity and expedite the growth of the manufacturing sector. It can be achieved by removing obstacles that will hinder this sector's expansion by sound, effective policies. This is necessary because, among other things, the government generates cash from taxes when manufacturers experience growth in their respective manufacturing industries.

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