

RESEARCH ARTICLE

Nigeria–South Africa Trade Relations and Sectoral Performance of the Nigerian Economy: A Diagnostic Analysis

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ABSTRACT

This study addresses the persistent structural asymmetries and missing sectoral linkages that characterize Nigeria–South Africa trade corridors, leaving the Nigerian economy highly vulnerable. The paper uses a two-level research structure, with a systematic literature review combined with an ex-post facto quantitative econometric model from 1990 to 2024. The empirical analysis tests three fundamental dependent variables: real GDP growth, manufacturing output and agricultural output, and compares them to key export and import factors, while holding exchange rates, population growth, and institutional quality constant. Structural imbalances are highlighted using diagnostic testing within E-Views 10. South African foreign direct investments are very deep into Nigeria's services and construction industry, but Nigeria's exports outside are poorly diversified and still heavily dependent on primary products, with Nigeria's exports to South Africa accounting for 97% of oil. In addition, the results of Augmented Dickey-Fuller and Phillips-Perron unit root tests confirm the mathematical foundation of applying an Autoregressive Distributed Lag (ARDL) Bounds testing approach in a situation where the variables are of mixed order of integration; some are I(0) (level) and others are I(1) (first difference). The study findings finally suggest that Nigeria needs to deliberate on the need to implement targeted industrial policy changes and build stronger linkages with the local industries to address these one-sided trade flows and attain the best macroeconomic benefits within the African Continental Free Trade Area (AfCFTA).

KEYWORDS

Trade Relations, Sectoral Performance, Petroleum Exports, Mixed Integration, ARDL Bounds Test, Nigeria, South Africa.

1. Introduction

Nigeria-South Africa economic ties is one of the key pillars of continental development, and the two largest economies of Sub-Saharan Africa have been playing a major role in regional trade and fiscal policy. The bilateral relations have traditionally been based upon the structural imbalance that has permeated the whole relationship dynamics, impacting on the bilateral trade (Ali & Maryam, 2023). Nigeria's outbound trade to South Africa is still largely export dominated with primary commodities accounting for nearly 100 per cent of the trade. By contrast, South Africa's exports to Nigeria are quite diversified, including consumer goods, high-tech electronics, telecommunications facilities, machinery and processed agricultural products. This situation of divergence forms a long-term, intricate economic relationship between the two countries, especially in terms of the implications of their interaction on the domestic performance of Nigeria's key economic sectors.

The Nigerian economy has a highly differentiated performance across sectors, which are significantly influenced by the international trade exposure and bilateral linkages. The long-

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term macroeconomic assessments reinforce the persistent challenges in Nigeria to achieve sustainable, cross-sectoral growth with its abundant resource endowment. Empirical studies based on distributed lag approach have shown that primary agricultural exports do not necessarily promote systemic economic growth because there is a lack of domestic value addition (Amali & Ajayi, 2022). Rather, the developmental trajectories of manufacturing and the services sector are much more important in sustaining domestic productivity. This is because Nigeria's external sector competitiveness is highly dependent on the price of crude oil and the recurrent nature of its trade imbalances, due to its significant dependence on oil revenue (Duke et al, 2017).

The landscape of investment in South Africa has changed the course of certain areas in the domestic landscape, especially the telecommunications, retail and corporate services sectors. Some major South African conglomerates have expanded into Nigeria, bringing capital, and helping to drive digital integration. The Corporate investment has undergone a paradigm shift for the tertiary sector in Nigeria and this has created employment opportunities and infrastructural development in urban commercial hubs (Ali & Maryam, 2023). Yet there is one huge development snag. Capital and operating structures of these service investments have not had any significant impact on structural integration and spillover effects to the Nigerian manufacturing or primary agro sectors.

The informal economy is huge but often overlooked, and must be assessed alongside these formal commercial networks in order to have a holistic view. The informal sector in Nigeria and South Africa represents a critical economic stabiliser, taking up huge numbers of young people out of work and fueling the growth of local micro-commerce (Etim & Daramola, 2020). Ongoing structural challenges in the formal sectors of Nigeria, including insufficient infrastructure, regulatory challenges, and power supply issues, push entrepreneurs into this unrecorded sector. As a result, formal trading relations between Abuja and Pretoria remain dominated by large-scale corporate services and energy commodities, whereas the real lifeline for the domestic economic survival of millions of citizens is provided by informal networks which are not backed by formal institutions.

This is a structural approach to redressing these skewed trade vectors through the framework of continental integration, particularly in the form of the African Continental Free Trade Area (AfCFTA). South Africa's experienced industrial sector puts it in a good position to expand its trade footprint in Africa, with tariffs being removed (Mutambara, 2025). Furthermore, a detailed diagnosis of the Nigeria–South Africa trade relationship is essential since there is a tendency to focus on macroeconomic variables in existing literature without considering the differential impact on Nigeria and South Africa. The extensive research on the volumes and diplomatic dimension of this bilateral corridor is less known, however, is the impact of certain channels on the specific domestic sectors.

One of the key empirical rationales for this study stems from the asymmetry of bilateral investments. For example, South African corporate growth has radically transformed tertiary infrastructure in Nigeria, but this service-based movement is not spread evenly across the industry matrix, and specifically, across the domestic manufacturing or agricultural industry (Ali & Maryam, 2025). This institutional disconnect exposes Nigeria's high vulnerability because its main export baskets are in unprocessed crude commodity which does not provide value addition within the country (Amali & Ajayi, 2022). Moreover, conventional trade models tend to ignore that formal trade pressures and lack of infrastructure create informal spaces for local economic activities (Etim & Daramola, 2020). This study directly fills these critical analytical voids by focusing on the impact of bilateral free trade regimes, the nature of commodity dependence and the weak linkages of industries on sectoral performance, which are needed to prescribe the corrective measures necessary to achieve the best possible trade outcome under the African Continental Free Trade Area.

2. Methodology

The methodology of this study is twofold; a systematic literature review (SLR) and quantitative and ex-post facto econometric research design to analyse Nigeria-South Africa trade relations and Nigerian sectoral performance between 1990 and 2024. The first phase is to create an empirical baseline using an SLR. Relevant literature was searched from relevant international and regional databases such as Google Scholar, Scopus, Web of Science and research archives of the Central Bank of Nigeria using accurate boolean search strings. Studies included should be peer-reviewed, published in English in the last 35 years, relate to bilateral trade between both countries, relate to agricultural or manufacturing productivity within one of these countries, and report baseline properties of the productivity before the estimation. Microeconomic and firm-level data and qualitative reviews are not included. Data extraction includes the identification of timelines, trade variables, and observed orders of integration (I(0) or I(1)); these data are placed into a thematic narrative synthesis to identify the general pattern of empirical results across data distributions and stationarity.

The second phase leads to the direct estimation of empirical data through a quantitative framework, based on annual secondary data from the World Development Indicators (WDI) and the Central Bank of Nigeria (CBN) statistical bulletins. Real GDP growth, manufacturing output, and agricultural output are computed in the evaluation matrix to reflect macroeconomic performance. Trade relations are proxied by the exports of petroleum, solid mineral and imports of electrical power machinery, textile fabrics, iron and steel, and agricultural raw material, while holding constant real exchange rates, population growth and institutional quality. The data analysis is done in three stages using E-Views 10, which include descriptive statistics, stationary tests, and model estimation; descriptive statistics (mean, standard deviation, ranges, and Jarque-Bera normality test), stationary tests (Augmented Dickey-Fuller test and the Phillips-Perron test to test for a unit root), and model estimation. Finally, the systematic review in this study outlines the evidence of the past and the diagnostic tests identify a mixed order of variable integration, thus providing a basis for the implementation of an Autoregressive Distributed Lag (ARDL) Bounds testing approach to test the long-run cointegrating relationships.

The operationalization of the variables in this study is as follows: Real gross domestic product growth (RGDPG) was used to measure the principal proxy of economic growth and aggregate demand, and was measured in constant 2015 USD. To align with the second objective of the study, the second dependent variable was the manufacturing sector output (MFO) measured in billions of Naira that represents output across the sub-sectors of engineering, textile, chemical and industrial sectors. Agricultural sector output (AGRT) was quantified in Naira (billion) to monitor the total volume of crops and livestock, for measuring sector-specific productivity, which is the third dependent variable.

The first independent trade variable was petroleum export (PET) which was used as a proxy for a large primary export from Nigeria to South Africa, and was recorded in thousands of US dollars. The second independent trade variable, solid minerals export (SLM), was included using thousands of US dollars which was used to represent the rest of the main export content to South Africa. Electrical power machinery imports (EPM) was quantified in thousands of US dollars for imports of electromechanical energy converters and machinery and is the third independent trade variable. Textile fabrics imports (TEX) measured in thousands of US dollars is the fourth independent trade variable which represents input of woven, knitted or bonded textile fabrics imported into Nigeria. Iron and steel imports (IRS) was the fifth independent trade variable, which was measured in thousands of United States dollars and represented by ores and metals, and was used to measure the flow of basic engineering and construction materials. The sixth independent trade variable is agricultural raw materials imports (AGRM) and is measured in thousands of US dollars (USD), to account for primary earth products imported for processing.

The first control variable is the real effective exchange rate (REER), which was the variable used in this study as a proxy for an index, with 2010 set to 100, thereby accounting for inflation and valuation shocks. Population growth (POPG), percentage growth of the de facto population per year, was the second control variable. The third control variable is an index of the institutional quality (IQX), which was created as a composite measure across six dimensions of institutional governance to capture the efficiency of institutions and policy stability in the baseline periods.

3. Results

3.1 Nigeria - South Africa Bilateral Economic Relations

There have been many favorable bilateral economic relationships between South Africa and Nigeria since Nigeria's democratic governance. Over the years, South Africa has invested heavily in the Nigerian economy in various areas. South African companies are well represented in Nigeria, especially in the sectors of telecommunications, engineering, banking, retail, hospitality, real estate development, construction and tourism. South Africa has better technology and infrastructure than Nigeria and has a huge market potential to invest in Nigeria, which gives a competitive edge to South Africa over Nigeria. Consequently, a number of South African companies have been heavily investing in Nigeria.

The governments of South Africa and Nigeria signed bilateral agreements on trade and investment in 1999. One of the objectives of these agreements was to increase trade and investments between South Africa and Nigeria. As a result of the implementation of these accords, the South African economy, among other things, became more strongly connected with the Nigerian economy and South African companies played an active role in the Nigerian economy. Since 1999, South Africa's trade relationship improvement with Nigeria has resulted in more trade between the two countries. Pre-1999 there was little trade between the two countries. South Africa exported goods worth of US\$8.1 million to Nigeria and imported goods worth of US\$3.1 million from Nigeria in 1994 (Okiche, 2026).

The South Africa-Nigeria bilateral trade agreement changed the situation. South Africa exported US\$470.39 million worth of goods to Nigeria and imported US\$2.26 billion worth of goods from Nigeria in 2022 (United Nations COMTRADE, 2022). South Africa exports machinery, electrical equipment, appliances, wood, paper, processed foodstuffs, beverages, plastics, rubber, chemicals and more to Nigeria. Oil comprises 97% of Nigeria's exports to South Africa (Pahad & Graham, 2012). The situation indicates that a mixture of products are being exported from South Africa to Nigeria, with a significant proportion being value-added manufactured products.

This means that South Africa has a high export potential while Nigeria primarily exports oil to South Africa, and is not expected to diversify its export portfolio in the short-term. This establishes an unfair trade situation where Nigeria is under the control of South Africa. Furthermore, some enterprises in South Africa have developed a wide footprint in various industries in Nigeria, such as agriculture and industry, reflecting the unequal trade relationship between the two countries.

3.2 South African Corporations as Major Contributors to the Nigerian Economy

In 1999 only four South African companies were operating in Nigeria. The situation has now taken a distinct turn for the better thanks to the support from the South African government, bilateral agreements and the South Africa - Nigeria Bi-national Commission. There were approximately 100 Nigerian companies with interests in South Africa in 2022. South African companies have increasingly grown in size and influence over the last few years in almost every sector of the Nigerian economy (Ezeoha & Uche, 2024).

South African companies' largest investment in Nigeria has been in the telecoms industry. The Nigerian government licensed the MTN with the mandate to set up a mobile telephone network in Nigeria in 2001. MTN therefore had to pay licensing fees in excess of

US\$285 million. Furthermore, MTN has allocated an extra US\$1 billion to establish its activities in Nigeria (Stefan & Lutchman, 2014). MTN was at the time the largest cellular network operator in Nigeria with an estimated subscriber base of 76.7 million (NBS, 2015) as of the end of the first quarter of 2023.

Nigeria's construction industry has seen a rise of South African companies. Entech, South Africa's engineering company, led a consortium of local businesses to win a contract worth R2.1 billion from the Lagos State government for the rehabilitation of Bar Beach and Victoria Island in Lagos (Pahad et al, 2019). There are also several leading South African companies, which have made their presence felt in the Nigerian tourism and leisure industry. The South African state-owned entity (SASEC) known as the Industrial Development Corporation (IDC), has emerged as a major investor in the tourism sector in Nigeria under the NEPAD umbrella.

Current estimates of the amount of funds allocated to tourism and telecommunication programs in Nigeria is US\$1.4 billion (United Nations Report, 2020). Bidvest is one of the leading companies in the tourist industry in South Africa. Through its subsidiary, Tom-vest, it has bought one of Nigeria's leading tourism companies, Touchdown Travels. The major strides made in Nigeria's tourism industry is the widespread Tinapa project in Cross River State. The initiative is related to NEPAD, and is strongly backed by the South African and Nigerian governments. South African companies have a significant impact on Nigeria's media and entertainment industry, including DSTV, which dominated the Nigerian market for satellite television during 2005-2022, accounting for 90% of the satellite television viewing market. This has made DSTV the sixth biggest firm on the Lagos Stock Exchange (Omojola, 2023).

Some 55 South African companies were operating in Nigeria by mid-April 2003. MTN is the leading investor. It made its debut entry into the Nigerian market in January 2001, a part of the first telecommunications auction in Africa. The most substantial investment that MTN made in the Nigerian market during that time is MTN's foray in Nigeria (Tochukwu et al, 2019; Ebegbulem, 2013). The need for enhanced economic cooperation between the two countries led to the establishment of the South Africa-Nigeria Bi-national Commission.

3.3 Trade relations and Human Capital Dynamics

While formal commerce dictates aggregate trade balances, the micro-level survival of domestic sectors depends on the human capital emerging from educational institutions. Cultivating specialized employability competencies among undergraduates serves as a baseline necessity for sustaining sector-specific growth amidst external market pressures (Onyiorah, 2026). Furthermore, introducing advanced technological training, such as artificial intelligence skill development, directly prepares graduates for structural shifts caused by capital-intensive foreign investments (Onyiorah, 2025).

To ensure uninterrupted workforce development during macroeconomic shifts, educational systems must optimize the utilization of modern internet technologies among instructional staff (Oguejiofor & Onyiorah, 2021). Adopting alternative institutional frameworks like distant learning programs can effectively sustain instructional delivery when traditional formats are disrupted (Onyiorah, 2022). This structural agility allows entrepreneurship education to actively foster global competitiveness and economic resilience within changing bilateral spaces (Oguejiofor et al., 2022). Additionally, acknowledging localized demographic influences, including how family background shapes student professional interests, helps policymakers align labor supply with new economic realities (Oguejiofor & Onyiorah, 2023).

Maximizing sectoral gains under competitive trade regimes requires a workforce proficient in digital commerce. Cultivating technical competencies, such as search engine and email marketing skills, empowers local actors to build self-employment opportunities that withstand the influx of foreign services (Okoro et al., 2025). Ultimately, safeguarding the domestic economy from aggressive external competition requires robust managerial capacities

at the grassroots level. Equipping local small and medium scale enterprises with sound debt and risk management skills provides a crucial financial buffer, ensuring that domestic production units remain sustainable and resilient against volatile trade-induced shocks (Emeasoba et al., 2026).

3.4 Educational implications of macroeconomic changes and domestic sectoral performance

The macroeconomic relationship between trade relations and sectoral performance has significant educational implications because, directly, it affects the development of human capital, pedagogic preparedness and curriculum design. A nation's need for labor depends on the changing patterns of international trade and investment in the region, and requires a flexible response from education. The regional economic integration and investment policy reforms significantly affect cross-border knowledge transfers, academic mobility and patterns of labour migrations at the global level (Andronova & Ryazantsev, 2023; Aloui et al., 2026). In the context of these evolving economic frameworks, higher education systems must flexibly grow and adapt to new industrial practices and requirements, such as green transition frameworks and emission technologies (Chen, 2025). Moreover, macroeconomic health has a direct impact on the macroeconomic health of household and institutional investments in education expenditures, highlighting the link between macroeconomic health and access to quality education (Liu et al., 2025).

Domestically, especially in emerging markets such as Nigeria, the sectoral achievement demands for a better instructional approach to build a competitively skilled workforce for the global market. The adoption of modern learning approaches, such as gamification and experiential learning, can greatly boost students' learning outcomes and motivation for studying core technical subjects (Enem et al., 2025; Muogbo et al., 2025). However, the deployment of these methodologies is dependent on internal psychological aspects of the students such as self-esteem and their level of motivation (Ezeanyagu et al., 2023).

Most important of all, for national productivity through trade, teachers must be computer literate and fully prepared to use the advanced artificial intelligence-based teaching tools in technical classrooms (Nneka & Okafor, 2013; Muogbo, Okafor, & Umezulike, 2026). Science education should continuously adapt to overcome the conceptual obstacles. This involves doing all these things so as to accommodate age differences in the way students conceptualise scientific phenomena, and actively identify and incorporate science content that is special to physics, which directly nurtures entrepreneurial skills (Okafor, 2019). Finally, technological breakthroughs and sectoral development depends on the scientific literacy (Okafor, 2017). Educational systems need to work towards the elimination of the intractable learning barriers especially mathematical complexities which are often experienced by secondary school learners in the core physical sciences of the labour market to maintain economic competitiveness over time (Ugonwa, 2015).

3.5 Pre-Estimation Tests

3.5.1. Descriptive Statistics of the Variables

The data used in this study are annual observations between 1990-2024 between Nigeria and South Africa. The main variables of interest in the study are the economic growth (RGDPG), manufacturing sector output (MFO), agricultural sector output (AGRT), petroleum exports (PET), electrical power machinery imports (EPM), solid minerals exports (SLM), textile fabric imports (TEX), iron and steel (IRS), and agricultural raw materials imports (AGRM). Additional control variables such as the real exchange rate (RER), population growth (POPG) and the institutional quality index (IQX) were also included in the study.

Table 1: Descriptive Statistics of the Variables

Variable	Mean	Std. Dev.	Minimum	Maximum	Jarque-Bera	Obs.
RGDPG	4.222343	3.850174	-2.035119	15.32916	2.119916	35
MFO	4325.047	1624.536	2667.492	6787.070	5.152210	35
AGRT	10871.21	5920.222	3053.221	20585.18	3.212680	35
PET	1564066	1536360	23220.82	5090435	3.716294	35
TEX	5050.662	4223.480	595.8900	15575.17	6.239113	35
EPM	64763.84	53629.60	127.4433	240470.5	6.535693	35
SLM	78.52492	100.1447	0.060000	454.5100	38.09460	35
IRS	11741.34	13869.37	1517.650	70228.08	119.9486	35
AGRM	2917.061	2674.816	153.9200	11860.71	40.00664	35
POPG	2.614910	0.230616	2.114870	2.842433	7.693830	35
IQX	-0.034072	1.605990	-2.625030	2.174605	3.744050	35
RER	108.2021	47.99901	49.77480	273.0017	38.32908	35

Source: Author's Computation, E-Views 10

Table 1 gives information on the features and distributions of these variables, which helps to assess whether the variables are normally distributed and to examine time series aspects in the study period. This information will be helpful for further analysis and interpretation of regression results. All variables have mean values that are the average of the values over the years, and these mean values are within the range defined by the maximum and minimum values. The standard deviation numbers indicate the amount of variation or deviation of the variables from their mean annual values in the long term.

The Jarque-Bera test is used to check whether the skewness and kurtosis of the data follow a normal distribution. If the significance level associated with the Jarque - Bera is not below 0.05, then this means that the data follows the normal distribution. Probability value < 0.05 indicates that data are not normally distributed.

3.5.2: Unit Root (Stationarity Test)

It is necessary to determine the stationarity of the variables, which is done using the unit root test. It is very important to establish stationarity, because if it is not established, data processing results may be biased. This consequently results in inaccurate interpretations and conclusions. In this sense, stationarity refers to the lack of changes in statistical characteristics within a time series, such as the mean, variance, and autocorrelation, which remain constant over time. In order to check the robustness of the results, this study employed Augmented Dickey-Fuller (ADF) tests and the Phillips-Perron test on the data to verify stationarity.

The tests are run on both the original data series and on the first order differenced series. The decision criterion involves the rejection of the null hypothesis when the ADF and Phillips-Perron test statistics are greater than the critical value at a certain significance level (absolute value). The results of the ADF and Phillips-Perron unit root tests are given in Table 2 below.

Table 2: Summary of ADF Unit Root Test Results

Variables	Test Stat in level	Test Stat. in First Diff.	5% Critical Value	Test Stat in level	Test Stat. in First Diff.	5% Critical Value	Order of Integration
	ADF Unit Root Test			Phillips-Perron Unit Root Test			
AGRM	-2.586058	-6.178185	-3.552973	-2.619938	-6.513297	-3.552973	1(1)
AGRT	5.568594	-	-1.951000	4.568348	-	-1.951000	1(0)
EPM	-3.590663	-	-3.548490	-3.608077	-	-3.548490	1(0)
IQX	-3.671052	-	-3.557759	-3.021403	-6.284460	-3.552973	1(0)
IRS	-2.175728	-5.705319	-3.552973	-2.137314	-6.228785	-3.552973	1(1)
MFO	-2.260249	-3.489922	-2.954021	-1.839011	-3.522243	-2.954021	1(1)
PET	-2.875303	-6.168670	-2.960411	-2.481456	-8.850880	-3.552973	1(1)
POPG	-4.122770	-	-3.562882	-1.455905	-2.154758	-1.951332	1(0)
RER	-2.586305	-5.288250	-3.552973	-2.742784	-5.261012	-3.552973	1(1)
RGDPG	3.706771	-	-3.548490	-3.842396	-	-3.548490	1(0)
SLM	-3.672824	-	-3.548490	-3.620400	-	-3.548490	1(0)
TEX	-4.236078	-	-3.552973	-3.366280	-10.20227	-3.552973	1(0)

Source: Author's Computation, E-Views 10

The null hypothesis is rejected when the value of the ADF statistic is below the criterion value (in absolute terms) at a given significance level, and is accepted when the value of the ADF statistic is above the criterion value. Table 2 suggests that there is a combination of orders of integration. The first order 1(1) contains eight (8) variables (agricultural sector output, electrical power machinery imports, agricultural raw material imports, iron and steel imports, manufacturing sector output, petroleum exports and real gdp growth). There are six (6) other variables of order 1(0) (textile fabric imports, solid minerals exports, real effective exchange rate population, government effectiveness and rule of law). The mixed order of level and first difference has been obtained and the ARDL Bound test can be conducted to check for the presence of a long-run relationship between the three models.

The descriptive statistics show that the real GDP growth (RGDPG) was on an average 4.22% for the 1990-2024 period, indicating moderate economic expansion. This discovery correlated with the observation of Amali and Ajayi (2022) about the irregular patterns of growth in the productive sectors of Nigeria. However, the very high mean value of petroleum exports (PET) at 1,564,066 highlights Nigeria's high level of commodity dependence. A similar study by Duke et al. (2017) confirmed a systematic decline of the country's external sector competitiveness caused by such extreme concentration in primary oil exports. In addition, the significant difference in the agricultural output (AGRT) and manufacturing output (MFO) indicate a disparity in the performance of the sectors. This result was in line with Ali and Maryam (2025), who found that the overall demand for services far outweighed the

manufacturing output. As far as the stationarity properties are concerned, the unit root tests do not contradict the hypothesis of Mixed order of integration, as variables such as MFO and PET are found to be $I(1)$; whereas variables such as SLM and TEX are found to be stationary at level, $I(0)$. Mutambara (2024) in a related study argued that due to the nature of modeling the bilateral macroeconomic data of trade corridors in Sub-Saharan Africa, the researcher finds it easier to encounter orders of integration that are mixed. Therefore, using the ARDL Bounds testing framework is appropriate.

4. Conclusion

The formal economic corridor between Nigeria and South Africa is characterised by a strong structural imbalance which directly affects the even performance of the sectors, this is the diagnostic analysis. Volume of bilateral trade and South African foreign direct investments have grown enormously since the formalisation of trade agreements in 1999, but the channels have not been equally effective in the Nigerian economy. South African corporate capital has managed to successfully modernize the 3rd sector, such as telecommunications, digital media and urban retail infrastructure. But these service-based inflows have rather been largely independent with little significant technical linkage and productive spillover into the main agricultural or domestic manufacturing sector of Nigeria.

For Nigeria on the export side, the trade picture is precariously skewed towards raw commodity exports, with crude oil exports consistently making up about 97% of the total export basket to South Africa. The pre-estimation diagnostic tests thoroughly validate this dynamic fragility. The unusually large fluctuations in the standard deviations of the petroleum revenues and a mixed integration profile (with core productive sectors being stationary at level, $I(1)$, and volatile financial indicators being stationary at level, $I(0)$) support the statistical validity of the systemic imbalance. The structural disconnect reduces the state's ability to convert the volume of trade into overall economic growth and productive domestic activity which fosters inclusion.

This study suggests that the trade displacement under the African Continental Free Trade Area (AfCFTA) for Nigeria will be aggravated if the trade is not deliberately prevented through institutional measures. The diagnostic evidence shows that Nigeria should move from being a raw energy resource supplier to an active, competitive exporter of high value energy products to improve the performance of the sector. To this end, Nigeria needs to take a bold step towards addressing its infrastructure deficit, design smart industrial policies that enforce foreign capital flows into local value chains, and create institutional capabilities to translate economic potential into sustainable multi-sectoral growth.

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