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IMPACT OF IN-BOUND LOGISTICS COSTS ON INDUSTRIAL PERFORMANCE IN NIGERIA

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ABSTRACT: The Nigerian industrial sector, particularly in manufacturing, has been characterized by low performance. This paper explores the influence of in-bound logistics costs from Nigerian firms' importation on industrial performance, using seaport import clearance cost and manufacturing businesses' turnover, sales cost, and profit as proxy metrics. A survey was conducted on 23 Nigerian Stock Exchange-listed firms that regularly import goods via seaports through a questionnaire. The study collected primary data and time-series data from secondary sources over a ten-year period. This paper utilized the vector error correction model to reveal that the total import clearance cost significantly and positively impacts the industrial performance of the sampled firms in the long run. This paper revealed that throughout a ten-year period (2010-2019), a 10% increase in the total cost of import clearance resulted in increases of 2.4%, 1.99%, and 1.98% in turnover, sales cost, and profit, respectively. Additionally, the adjusted R-square shows that the total import clearance cost explains approximately 86.3%, 84.4% and 83.8% of the total variation in turnover, sales cost and profit respectively. The study indicates that industrial performance in Nigeria heavily relies on in-bound logistics from firms' material import, highlighting the significant impact of the trade logistics environment on industrial development.

Keywords: Inbound, Logistics Management, Trade Facilitation, Industrial Performance

INTRODUCTION

Nigeria's industrial performance is crucial for its economic and social benefits, and its development and global competitiveness are interconnected. Industrial performance boosts GDP, employment, poverty reduction, government revenue, and living standards by providing training, skills development, infrastructure development, urbanization, modernization, and improved healthcare services. Since Nigeria's independence in 1960, the government has implemented numerous industrial policies to understand the role of industrial development. Industrial regimes have evolved over time, including the Pre-Structural Adjustment Program (SAP) Era (1960-1985), Structural Adjustment Program Era (1986-1993), Post-SAP Era (1994-2007), and recent Policies (2008-Present). The various regimes in Nigeria have emphasized the importance of industrial development.

Adofu et al. (2015) highlight Nigeria's potential for a thriving industrial sector, particularly in manufacturing, which requires increased productivity to support economic growth and improve living standards. By moving productive resources to more dynamic sectors, the author proposed that the manufacturing sector's dynamic nature promotes economic growth. As it enables efficient backwards and forward links with other economic sectors, Victoria (2019) emphasized the significance of the manufacturing sector in an economy. The real

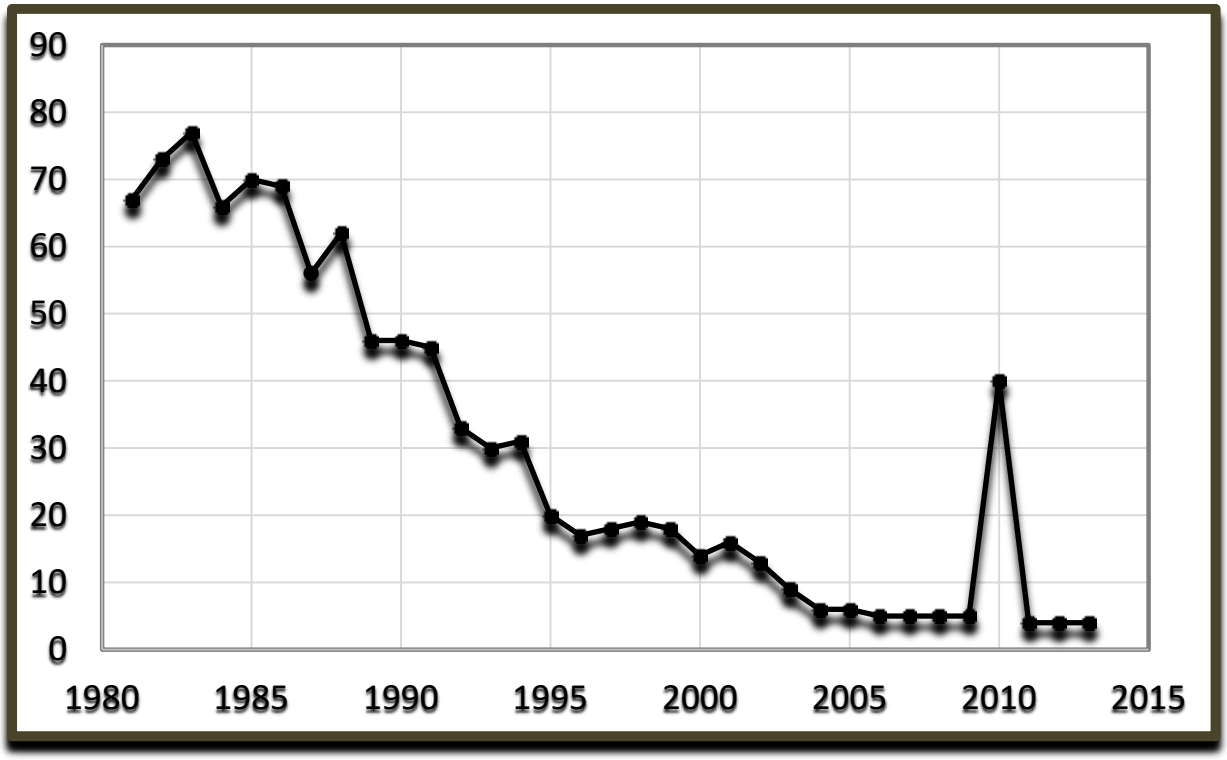
sector of the economy needs to be empowered and diversified for growth and development, according to Ekpo (2020). It follows that the importance of a robust manufacturing sector in a country cannot be overstated, as manufacturing is essential to this process.

In addition to empirical works, several institutions have also argued in support of a robust manufacturing sector in Nigeria. In 2019, the Lagos Chamber of Commerce and Industry (LCCI) declared that the manufacturing sector in Nigeria has been declining over the last 20 years, with an average contribution to GDP of 7% over this time (Figure 1.0). Furthermore, the manufacturing sector's contribution to GDP in Nigeria is significantly lower than that in other emerging economies, including Brazil, Thailand, Malaysia, and Indonesia, which were at the same stage of development as Nigeria in the 1960s and early 1970s. For example, the manufacturing sector has contributed up to 20 percent of GDP in Brazil, 35 percent in Thailand, 30 percent in Malaysia and 28 percent in Indonesia. The Manufacturer Association of Nigeria (MAN, 2022), recommends Nigeria to boost industrialization by aiming for 15% sector growth, 20% GDP contribution, 15% export growth, and 10% increase in manufacturing share in the next decade. The question arises as to how the Nigerian manufacturing sector can achieve its targets in the next decade amidst declining performance over the past 20 years.

The Manufacturers Association of Nigeria (MAN, 2020) suggests that reducing inbound logistics costs for import-oriented firms can significantly improve the performance of Nigerian enterprises. This is predicated on understanding that import logistics are typified by exorbitant demurrage fees for consignments that are held, unpredictable clearing procedure delays, and gridlock on port access roads. Therefore, when import logistics determinants are used, Nigeria's industrial sector—which mostly produces cement, construction materials, food, drinks, chemicals, fertilizers, wood, and textiles—may perform better. For example, according the National Bureau of Statistics (NBS, 2020), Nigerian businesses imported goods worth N570.6 billion in 2020; this amount rose to N710.2 billion in the third quarter and N715.7. This finding indicates that a substantial portion of operating costs for businesses are related to inbound logistics and that efficient management could enhance industrial performance. Nevertheless, for businesses to effectively manage inbound logistics, they need to measure the exact effects of the different but related procedures that comprise inbound logistics.

Research indicates that reducing port logistics expenses may positively impact firm performance, as supported by numerous studies on supply chain management (SCM).The importance of port integration for supply chains as a whole was studied by Host et al. (2018). Furthermore, supply networks' incorporation of North Adriatic Ports was examined. It was assumed that the port would become part of the supply network if the seasonal patterns of all the participating enterprises (classes) were connected. When Kim, et al. (2020) investigated the connection between supply chain performance and logistics integration, they looked only at shipping companies. Data from 250 South Korean manufacturers were used in the analysis of the study. Establishing strategic partnerships with logistics suppliers, according to the study, helps manufacturing companies improve the operational and business efficacy of their supply chain.

Figure 1.0 Manufacturing sector's contribution to GDP (%) from 1981-2013



Source: Anachusi (2015): Data from the CBN statistical bulletin

Additionally, using Colombo Port as a case study, Park and Dossanib (2020) examined the function of port infrastructure in the integration of supply chains for the South Asian apparel sector. Greater supply chain integration in these vital regions has been a result of the transshipment hub at Colombo Port and its multicountry group age services. The other South Asian nations, however, still need to improve their internal logistics as well as the appropriate port and transportation infrastructure.

Although there is a correlation between import logistics and supply chain performance, the literature suggests that lowering port logistics costs can greatly increase firms' performance. More research is yet required because previous research has not made evident what the optimal course of action is to minimize the negative impact of import clearance costs—which make up more than 80% of port logistics costs in Lagos seaports. Understanding the relationship between import clearance costs in seaports and Nigeria's industrial performance is crucial for determining the optimal course of action to minimize negative impacts. Therefore, the aim of this investigation is to tackle the following questions: (i) how does Nigeria's industrial sector perform in relation to the costs of import clearance that businesses incur for inbound logistics via Lagos seaports? (ii) What steps need to be taken to enhance the industrial sector's performance in Nigeria?

LITERATURE REVIEW

Verwaal and Donkers (2001) examined the influence of organization size on transaction costs, international trade intensity, and customs-related transaction costs. A 1996 study of 642 foreign traders revealed that import-related transactions, even at low rates, restrict

companies' ability to conduct international business, indicating a connection between firms' international trade activity and the transaction costs associated with material importation. The study reveals a correlation between firms' international trade activity and transaction costs related to customs, but does not consider other organizational performance measures.

Holzner and Peci's (2009) study examined the influence of formal and informal institutional factors on customs procedures for medium-sized and smaller businesses in Kosovo. A survey of 122 SMEs revealed a significant positive relationship between formal customs instruments facilitating import trade and economics. The study on customs procedures in Kosovo is qualitative, cross-sectional, and lacks specific business case studies. It focuses on turnover, neglects other indicators, and uses a one-year database, limiting performance evaluation.

Kwoli (2012) investigated the difficulties of adopting electronic customs procedures for facilitating trade. Using a stratified random sampling strategy on a sample size of 350 clearing and forwarding firms, the study employed a descriptive survey methodology. Descriptive statistics were used to examine the quantitative data, and the results revealed that although computerized customs procedures have a substantial influence on companies, the main issue was a lack of adequate skills to support the system. This study only relates custom electronic procedures to trade facilitation. The impact of custom electronic procedures on businesses is not clear.

In the same vein, Agbesi (2013) investigated how information and communication technology-(ICT) affected the clearance of cargo at Ghana's Tema and Takoradi ports. The study found that ICT improved city logistics efficiency by transforming logistics systems from old systems to modern systems. The study revealed that technology application results in transformation and efficiency in urban goods transport and that the efficiency of city transport is related to technology-ICT driven item clearing. However, this does not address the relationship between import clearance in seaports and the businesses that import their goods regularly through the port.

Kilibarda, Andrejic, and Popovic (2017) analyzed the efficiency of the logistics process in customs procedures in Serbia. The PCA-DEA approach with one input (labour) and eight outputs (number of realized custom procedures) was used. The outcome demonstrates that the proposed strategy is highly applicable. To maximize efficiency, the customs department must decrease the number of customs personnel while increasing the number of customs procedures. This study was unable to demonstrate a relationship between customs efficiency and business performance since its focus was solely on the efficiency of customs logistics procedures.

Nicholas's (2017) study on the Kenya-Uganda border revealed that the implementation of a cargo tracking system reduced transit times, increased border efficiency, and reduced costs for private businesses. The study, which was conducted overseas, also revealed that electronic freight tracking systems also reduced costs. Onogwu's (2018) study revealed a significant association between corruption and the effectiveness of the customs agencies in Nigeria, Benin, Chad, Ghana, and Cameroon, highlighting the significant connection between corruption and the efficiency of customs services. The study, a local one, primarily examined the efficiency and corruption of customs services in Nigeria, Benin, Chad, Ghana, and Cameroon.

Rhodalyn's (2018) study on Ghana's marine trade sector revealed that implementing single window systems enhances trade facilitation throughout the supply chain, enhancing competitiveness. The study at Tema Port revealed a strong positive correlation between the use of a single window system and improved cargo clearance, reducing transaction time and clearance costs. This study confirms the connection between single-window system installation and reduced port clearance costs, but further research is needed to understand its impact on business performance.

Bassa et al. (2020) studied the impact of automated IT-based clearance processes on Ghanaian enterprises and industrial distribution networks. The study revealed a positive correlation between IT-based port clearance, consumer purchase fulfilment, processing charges, and supply chain relationships, as well as business operations. The results of this study point to a connection between customer request fulfilment, IT-based port clearance, supply chain relationships, and transaction cost savings. Apart from the fact that it has a foreign base, the study's cross-sectional design precludes business-specific case studies. In addition to customer satisfaction, transaction costs, and supply chain interactions, an analysis of business operations concerning port clearance might take into account factors such as cost of sales, sales growth, turnover, and profits.

Research indicates that industrial operations and the logistical costs associated with material imports are connected. A larger body of research is needed to adequately comprehend the long-term effects of import clearance costs on Nigerian manufacturing enterprises, according to the literature. The industrial performance of Nigerian businesses that import materials is examined in this investigation in relation to the costs associated with inbound logistics.

METHODOLOGY

Theoretical Framework

This paper uses Akintayo's (2010) economic theory of production to explain how a manufacturing firm determines the proportion of its goods produced via production factors.

The theory is based on fundamental economic principles, focusing on the relationship among commodity prices, productive factors, and the quantities of these factors produced or used. Industrial production, including manufacturing, requires raw materials and other inputs, some of which are imported from foreign sources and are typically transported by sea due to their weight.

Manufacturers now bear the import clearance cost as part of their logistics expenses, alongside other inputs for producing manufactured goods. Firms' material imports increase in-bound costs, leading to higher production costs and consequently higher goods prices (Akintayo, 2010). Studies show that import clearance costs account for over 80% of Lagos seaports' logistics costs (Delloite, 2017). The reduction of import clearance costs in seaports could potentially enhance Nigeria's industrial performance. Manufacturers' import clearance cost is a crucial input for production, indicating a correlation between inbound logistics costs and business performance.

Following the theoretical framework, the hypothetical link between in-bound logistics costs and industrial performance is functionally stated is as follows:

$$idp_{i,t} = \varpi_0 + \theta_1' tccc_{i,t} + \nu_{i,t} \quad (1)$$

where: *idp* denotes a vector of industrial performance regarding firms' turnover(*tover*), cost of sales (*csales*) and profits (*profit*); *tcic* represents the total cost of container clearance; ϖ_0 is a constant, θ_1 represents the parameter, *i* represents surveyed companies; *t* represents time; and ν_i represents the disturbance term. By incorporating the measures of industrial performance into equation (1), the following equation becomes obtained:

$$tover_{i,t} = \varpi_1 + \theta_{1,1} tccc_{i,t} + \nu_{1i,t} \quad (2)$$

$$csales_{i,t} = \varpi_2 + \theta_{2,1} tccc_{i,t} + \nu_{2i,t} \quad (3)$$

$$profit_{i,t} = \varpi_3 + \theta_{3,1} tccc_{i,t} + \nu_{3i,t} \quad (4)$$

Data and Variable Description

This paper focuses on the relationship between inbound logistics costs as the independent variable and industrial performance as the dependent variable. The paper measured inbound logistics costs through import clearance costs in seaports (Shepa (2013), while it measured industrial performance by turnover, sales costs, and profits of manufacturing businesses (Holzer & Peci, 2009).The study collected data from 23 firms, that regularly import cargoes in containers via Lagos seaports through a structured questionnaire.

The firms selected for selection must have 20 annual import declarations, rely on imported manufacturing inputs, and be located in major Nigerian industrial clusters such as Ilupeju, Agbara, Oregun, and Apapa.

Empirical Results of the Effects of In-bound Logistics Costs on Industrial Performance

The paper estimates the impact of in-bound logistics costs on Nigerian industrial performance, via estimation tests such as descriptive statistics, correlation analysis, cross-sectional dependence, a unit root test, and a cointegration test.

Descriptive Statistics

This section provides descriptive statistics on the cost of import clearance in seaports and the performance of industry in the specified section. The findings, which include the average, maximum, minimum, standard deviation, kurtosis, and skewness values derived from our survey, are displayed in Table 4.1. The entire cost of clearing imported goods reached an average of N516,027,696; the highest and lowest amounts were N5,400,000,000 and N4,860,000, respectively. The standard deviation figure further demonstrates the wide range of variance between the series of total costs of import clearance, as do the maximum and minimum values. Furthermore, because the kurtosis value is greater than 3, indicating leptokurtic behavior, the data are not regularly distributed. Similarly, the series' skewness value of 2.9483 indicates that it is positively skewed.

Table 4.1: Descriptive statistics

	Variable Signs and Description			
	Total Cost of Container Clearance (tccc)	**Turnover (tover)**	**Cost of sales (csales)**	**Profit (profit)**
Mean	516027696	62359843188	41821513216	20431789321
Standard Deviation	946358887	70248911210	46656350909	25497368514
Minimum	4860000	1460728000	604670000	684666000
Maximum	5400000000	2.84E+11	2E+11	1.28E+11
Kurtosis	8.843678	1.748524	1.794938	3.859194
Skewness	2.948247	1.5408	1.499562	1.962812
Count	230	230	230	230

Source: Author's computation (2022)

For industrial performance indicators, the average of turnover, cost of sales and profit are ₦62,359,843,188, ₦46,656,350,909 and ₦25,497,368,514 respectively. The average profit of the sampled firms over the periods under study shows that there is improved performance in the business activities of the manufacturing industry. Additionally, the high variability in the series was revealed in their respective standard deviations. In Table 4.1, the descriptive statistics equally showed the skewness and kurtosis positions of the series.

Correlation Matrix

In Table 4.2, it shows the partial correlation coefficients of the relationship between total import clearance cost and industrial performance.

Table 4.2: Correlation Matrix

	Tcic	**Tover**	**csales**	**Profit**
Total Cost of Import Clearance (tccc)	1			
Turnover (tover)	-0.09597	1		
Cost of sales (csales)	-0.11007	0.88596	1	
Profit (profit)	-0.08188	0.85359	0.79045	1

Source: Authors' computation (2023)

The total import clearance cost and industrial performance metrics have negative correlation coefficients. The results revealed that there is a negative correlation between industrial performance variables and the total cost of import clearance. Similarly, -0.0960, -0.1101, and -0.0819 are the correlation coefficients of the import clearance cost with turnover, the cost of sales, and profit respectively. Turnover, the cost of sales, and profit have a high positive correlation with each other as industrial performance metrics. The industrial performance indicators have substantial positive correlation coefficients, but because the variables are not included in the same equation, multicollinearity is unlikely to occur. The empirical study thus avoids the multicollinearity issue. Nevertheless, after taking into account all of the factors that affect the import clearance cost collectively, the correlation coefficient values are merely preliminary assessments that are being confirmed in section 4.4.

Table 4.3: Cross-Sectional Dependence Test Results (d.f. = 253)

	Statistics	Probability
Model 1: profittccc		
Breusch-Pagan LM	1078.875	0.0000
Pesaran scaled LM	36.71461	0.0000
Pesaran CD	27.82166	0.0000
Model 2: tovertccc		
Breusch-Pagan LM	1368.116	0.0000
Pesaran scaled LM	49.57296	0.0000
Pesaran CD	31.33216	0.0000
Model 3: csalestccc		
Breusch-Pagan LM	1478.707	0.0000
Pesaran scaled LM	54.48931	0.0000
Pesaran CD	31.17949	0.0000

Source: Authors' computation (2023)

Cross-Sectional Dependence, Stationary and Cointegration Tests

The study's cross-sectional dependence test results, shown in Table 4.3, are reported in this section. Over a ten-year period (2010-2019), test statistics were obtained from the annual reports of 23 manufacturing firms that produced industrial goods. Table 4.3 presents the results of the Breusch-Pagan LM test for total import clearance cost and corresponding industrial performance (turnover, cost of sales, and profit). The Breusch-Pagan LM test results, which are based on the information presented in the table, validate the rejection of no correlation at conventional significance levels. Furthermore, at the 5% significance level, the statistical values strongly reject the null hypothesis of no association, and the Pesaran scaled LM test findings are asymptotically standard normal. The results of the conventional normal Pesaran CD test's test statistic results reject the no correlation assumption at the 5% level of significance, and its statistical values are substantially lower than those of the LM tests.

Cross-Sectional Dependence, Stationary and Cointegration Tests

Table 4.4: Panel Unit Root Test Results

Variables	Levels		1st Difference		Decision
	LLC	Breit	LLC	Breit	
Total Cost of Import Clearance (tcic)	-6.3465***	3.3965	-	-2.2978***	I(1)
Turnover (tover)	-1.9671**	1.4176	-	-3.6335***	I(1)
Cost of sales (csales)	-2.5050***	1.4406	-	-1.9767**	I(1)
Profit (profit)	-4.6104***	2.8721	-	-2.0324**	I(1)

Note: LLC denotes Levin, Lin & Chin (2002); Breit represents Breitung (2001); ***, ** & * denote the 1%, 5% & 10% significance levels, respectively.

Source: Authors' computation (2023)

Furthermore, we present the findings from the cointegration and panel unit root tests in Tables 4.4 and 4.5, respectively. Table 4.4 reports the unit root test results for the Breitung (2001) and Levin, Lin, and Chin (2002) approaches. The Levin, Lin, and Chin unit root test verifies that, at the 5% significance level, the no correlation assumption regarding the existence of a unit root for total import clearance cost, turnover, cost of sales, and profit was not accepted. The series are stationary at levels [I(0)] according to the unit root estimate approach. Later, the series are not stationary at levels, according to the application of the Breitung technique. They were therefore differentiated, and at the conventional level, the assumption that there was no association between the unit root of the variables was disproved. Therefore, it suggests that the series are stationary at first difference [I(1)] when Breitung methods are used. The analysis indicates that the series are stationary at first difference on the basis of the findings of Breitung (2001) and Levin, Lin, and Chin (2002) unit root tests.

Table 4.5: KAO Residual Test for Cointegration

	t-Statistics	Probability
Model 1: profit lccc		
ADF	-3.340810	0.0004
Residual variance	0.097473	
HAC variance	0.088539	
Model 2: tovertccc		
ADF	-3.265887	0.0005
Residual variance	0.041836	
HAC variance	0.046149	
Model 3: csalestccc		
ADF	-3.578991	0.0002
Residual variance	0.096016	
HAC variance	0.092301	

Source: Authors' computation (2023)

Additionally, we present the findings of Kao's (1999) KAO residual test for cointegration in Table 4.5. The table shows that, for the seven models, the assumption of no cointegration is rejected at the 5% level of significance when analyzed via the standard probability test criteria. The study's estimated models all have a long-term association between the regressand and the regressors, which is the implication. Thus, it validates the existence of cointegration, or a long-term correlation, between the overall cost of import clearance and the industrial performance metrics in Nigeria (turnover, cost of sales, and profit). Thus, the total cost of import clearance and Nigeria's industrial performance are correlated over the long term.

Short-term and long-term estimates

This part of the work uses the vector error correction model (VECM) estimation approach to show the empirical results of the short- and long-term effects of the overall import clearance cost on industrial performance in Nigeria. To choose the best lag lengths, the variables' lag lengths were chosen using the Akaike information criterion (AIC), which was first set at three

to provide a suitable degree of freedom. The results of the short-run and long-term parameter estimates are shown in Tables 4.6 and 4.7, respectively.

Table 4.6 shows the coefficients of the error correction terms that are statistically significant at the conventional level and are determined to be negative. To be more specific, the probability values of the error correction terms't-statistics are less than 1%, and their coefficients are negative. To return to the long-run equilibrium, it is implied that the empirical models of industrial performance in terms of turnover, cost of sales, and profit must correct its short-run disequilibrium at a speed of adjustment of 38.59%, 31.40%, and 61.68% respectively. This reaffirms the long-term correlation between Nigeria's industrial performance and the total cost of import clearance. Table 4.6 shows coefficients of error correction terms that are statistically significant at the conventional level and are determined to be negative. To be more specific, the probability values of the error correction terms' t-statistic are less than 1% and their coefficients are negative. In order to return to the long-run equilibrium, it is implied that the empirical models of industrial performance in terms of turnover, cost of sales, and profit must correct its short-run disequilibrium at a speed of adjustment of 38.59%, 31.40%, and 61.68%. This reaffirms the long-term correlation between Nigeria's industrial performance and the total cost of import clearance. Therefore, it confirmed that the equilibrium characteristics of the models remain valid in the long-run.

Table 4.6: Short-Run Estimates

	Dependent Variables		
Variables	Δ(log(turnover))	Δ(log(cost of sales))	Δ(log(profit))
Δ(log(Total Cost of Import Clearance)	0.0288	0.0249	0.0264
	(0.0253)	(0.0251)	(0.0359)
Error Correction Term(-1)	-0.3859***	-0.3140***	-0.6168***
	(0.0473)	(0.0465)	(0.0600)
Constant	0.0691***	0.0539***	0.0627***
	(0.0097)	(0.0106)	(0.0130)
Adjusted R-squared	0.2575	0.1952	0.3297
F-Statistics	3.9771	3.0813	5.2221
Prob(F-Stat)	(0.0000)	(0.0000)	(0.0000)

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

Source: Authors' computation (2023).

Regarding the short-run coefficients presented in Table 4.6, the outcome indicates that, although not statistically significant at the 5% level, the overall import clearance cost has a favourable effect on turnover, the cost of sales, and profit. The findings indicate that a 10% variation in the overall cost of clearing imports affects turnover, the cost of sales, profit, and by 0.29%, 0.25%, and 0.26%, respectively. Given its scale and scope, the total cost of import clearance has no appreciable short-term impact on industrial performance.

Table 4.7: Long-Run Estimates

	Dependent Variables		
Variables	log(turnover)	log(cost of sales)	log(profit)
log(total cost of import clearance)	0.2399***	0.1989***	0.1983***
	(0.0259)	(0.0348)	(0.0312)
Constant	19.537***	19.844***	19.235***
	(0.4914)	(0.6579)	(0.5900)
Adjusted R-squared	0.8633	0.8438	0.8375
F-Statistics	262.55	168.25	150.33
Prob(F-Stat)	(0.0000)	(0.0000)	(0.0000)

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

Source: Authors' computation (2023)

Table 4.7 reports the long-run relationship between total import clearance cost and the industrial performance of 23 manufacturing firms in Nigeria for the period of 2010-2019. The paper found that total import clearance cost positively and significantly affected the industrial performance of the sampled firms. In magnitude terms, a 10% increase in total import clearance cost will lead to a rise in turnover, cost of sales and profit by 2.4%, 1.99% and 1.98% respectively. The results show that the import clearance cost affects the turnover of the sampled manufacturing firms compared with the cost of sales and profit respectively in the long run. Additionally, the adjusted R-square shows that the total import clearance cost explains approximately 86.3%, 84.4% and 83.8% of the total variations in turnover, sales costs and profit respectively. Furthermore, the F-statistics show that there is an overall significant relationship between the import clearance cost and industrial performance.

Conclusion and Recommendation

This paper investigates the influence of in-bound logistics costs resulting from firms' material import on Nigeria's industrial performance. The study analyzed inbound logistics costs through the import clearance cost in seaports, and industrial performance by turnover, sales cost, and profit of manufacturing businesses. The study reveals that a 10% increase in total import clearance cost significantly impacts industrial performance, increasing turnover, sales costs, and profit by 2.4%, 1.99%, and 1.98% respectively. The study shows that, over time, the import clearance costs have a greater impact on manufacturing firms' turnover than do sales costs and profits.

Enhancing seaport clearance could boost industrial performance by lowering inbound logistics costs, as the import clearance costs have a substantial impact on turnover, sales costs, and profits in Nigeria. In terms of the economy, a rise in import clearance might drive up business expenses and possibly lead to inflation. It could also make seaports less appealing to exporters and importers, which could lead to a shift in trade to neighboring nations.

The results of the investigation are consistent with earlier studies, including one conducted by Holzner and Peci, (2009) which discovered that formal and informal institutional components of Customs operations have a major impact on turnover in small and medium-sized businesses. Based on the findings, the study suggests implementing the following measures:

i. The import clearance logistics operations should be streamlined
ii. Studies suggest that a single window system is recommended for efficient import clearance via the seaport.
iii. The country's trade policies should prioritize industrial production, especially manufacturing, as a key focus.
iv. The paper recommends investing in port infrastructure.
v. Promoting transparency and efficiency in port operations is a key objective.

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