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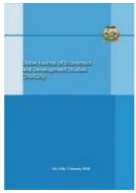

POTENTIAL OF TRADE FACILITATION AS A KEY FACTOR IN ACHIEVING SUSTAINABLE NIGERIA'S INDUSTRIAL TRANSFORMATION WITHIN THE AFRICAN CONTINENTAL FREE TRADE AREA (AFCFTA)

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Abstract
Nigeria's improved business environment could lead to it becoming a competitive producer, enhancing the benefits and competitiveness for both local and foreign businesses. This article explores the impact of trade facilitation on Nigeria's economic transformation, focusing on customs environment and manufacturing business performance, considering the potential of the Africa Continental Free Trade Area. The study used a questionnaire survey and annual reports to gather primary and secondary data from 43 manufacturing businesses listed on the Nigerian Stock Exchange (NSE) list for over 10 years and regularly importing goods through Lagos Seaports. Results showed a significant relationship between business performance and customs clearance time. The study reveals a significant correlation between business performance and customs clearance time, affecting turnover, cost of sales, and profit in manufacturing enterprises. The adjusted R-squared analysis indicates that customs clearance time significantly influences turnover, cost of production (sales), and profit variations by 79.9%, 77.04%, and 77.48%, respectively in the long-run. Improving the customs environment could enhance Nigeria's competitiveness in the Africa Continental Free Trade Area.

Keywords: Industrial, transformation, trade facilitation, customs.
JEL Classification: L95; L91; L98

Introduction

The Manufacturers Association of Nigeria in 2022 predicts a 15% manufacturing sector growth, 20% GDP contribution, 15% export growth, 10% increase in manufacturing share, and 20% increase in manufacturing employment for the next decade. The goals of transforming a weak, primary/commodity-based economy into a secondary, manufacturing-based economy require a radical structural transformation. Umoru and Eborieme (2013) found that Nigeria's industrial sector has not fully transformed despite its commitment to economic transformation through various industrial strategies. The Nigerian Industrial Revolution Plan, Import Substitution Policy, indigenization strategy, amended Companies Act, Structural Adjustment Program, Cassava Bread Strategy, and National Automotive Policy were established to transform the Nigerian industrial sector. The goals were truncated due to poor implementation and a lack of political will. Nigeria's adoption of the African Continental Free Trade Area Agreement (AfCFTA) in 2019 aims to boost the country's economy and standard of living by eliminating taxes, promoting free movement, and creating a competitive trade environment. Nigeria's improved business environment could boost its competitiveness, benefiting both local and foreign businesses through trade facilitation.

The dynamic manufacturing sector in Nigeria can facilitate connections between industries, promote economic empowerment, and diversify growth (Victoria, 2019 and Ekpo, 2020). To harness its potential, a more attractive business environment and an efficient customs environment are essential (Ibrahim, 2011). The efficient customs environment in Nigeria's heavily import-dependent manufacturing sector may impact the performance of the sector, affecting the speed and efficiency of customs clearance procedures. Nigerian firms for instance, imported raw materials worth N570.6 billion in 2020, increasing to N710.2 billion in the third quarter and N715.7 billion in the fourth quarter. In the first quarter of 2023, imports increased to N555.4 billion. Shipping is the primary mode of transporting raw materials, handling 95% and 99% of Nigeria's foreign trade. Thus, the performance of the manufacturing sector may be impacted by an efficient customs environment, which can enhance the speed and efficiency of customs clearance procedures.

Numerous studies have been conducted to comprehend the correlation between custom environment and industrial transformation.

Anton's (2013) study found a 1.6% decrease in imports due to a 10-day delay in customs clearance, suggesting a relationship between clearance time and imported inputs, suggesting further study of other firm activities. Carballo, Graziano, Schaur, and Volpe-Martincus' (2014) study found that port-of-entry disruptions in clearance processes impact firm-level importation in Peru. Small enterprises face a 0.7% increase in cost of a single day of delay, while big

enterprises face a 0.9% increase. Further research is needed to understand these effects.

Martincus *et al.* (2015) studied the effects of customs delays on Uruguay's exports using a unique dataset from 2002-2011. The study found that delays negatively impact businesses' exports, with sales to recent customers having additional effects. The research aligns with Anton's previous work. Sholihah, Bahagia, Cakravasitia, and Samadhi's (2017) study on cargo clearance at Inland Container Terminal found that inter-organizational system architecture is used for document creation, customs clearance, and hinterland transportation and management. However, the study did not extend its benefits beyond terminal activities in document preparation, customs clearance, and inland transportation.

Nguyen *et al.* (2021) conducted a study in Vietnam, focusing on the drivers and barriers of e-customs implementation. They found that national culture and relative advantages are key drivers, while compatibility and convenience of use are obstacles. The study improved Vietnamese business performance. Oni *et al.* (2023) found that older employees with cargo clearance experience are less likely to experience delays during container clearance at Lagos seaports. The study suggests that customs and import operations personnel should receive ongoing training to stay updated on container clearance innovations.

The studies reviewed did not examine the long-term effects of standard time and seaport cargo clearance delays on manufacturing performance in Lagos and Ogun State, but variations between standard and actual clearance time offer potential insights. Understanding the long-term dynamics between cargo clearance processes and business performance is crucial. Furthermore, a comprehensive analysis of clearance time effects on manufacturing performance is needed, considering the custom clearance system at Lagos seaport, which includes seven stages including: processing of e-Form-M, processing of pre-arrival assessment report (PAAR), duty assessment, payment, examination, customs release, and delivery. This article examines the impact of custom environment on industrial performance, focusing on standard time and delays in seaport cargo clearance, considering the potential of the Africa Continental Free Trade Area.

The paper is divided into five sections. The author provides a detailed background and motivation for the article in the introduction section. The author reviews studies on the correlation between cargo clearance time, delays, and manufacturing business performance. Section three outlined the methodology. Section four presents the findings and related discussions. Section five presents the results and suggestions.

Literature Review

Importance of manufacturing to Economic development

The industrial sector in Nigeria is crucial for economic development, according to various studies (Ibrahim, 2011; Umoru and Eborieme, 2013; Adofu *et al*., 2015; Victoria, 2019; and Ekpo, 2020). It serves as a growth engine, reducing unemployment, halting rural-urban migration, and reducing poverty. High productivity is necessary for economic growth and people's standards of life. Manufacturing is more dynamic than other sectors, promoting effective connections with other sectors. It is a tool for empowering and diversifying the economy for growth and development (Ekpo, (2020).

Relationship between customs environment and industrial development

Holzner and Peci's (2009) study on customs procedures in Kosovo found a positive relationship between formal customs instruments and economics for medium-sized and smaller businesses. However, the study was qualitative, cross-sectional, and focused on turnover, neglecting other indicators like cost of production growth, and profit. Additionally, it analyzed a one-year database, which requires a longer period for performance. Martincus, Carballo, and Graziano (2015) found that a 10% increase in customs delays leads to a 4% decline in exports, resulting from higher costs for exporters and buyers, reducing foreign sales and exposure to affected firms. Similarly, Hornok and Koren (2015) analyse the impact of administrative per-shipment costs on trade volumes. Employing Spanish shipment-level export data for the period 2006–2012, the authors find that a 50% reduction in per-shipment costs is equivalent to a 9% reduction in tariffs.

Nguyen *et al.* (2021) conducted a study in Vietnam, focusing on the drivers and barriers of e-customs implementation. They found that national culture and relative advantages are key drivers, while compatibility and convenience of use are obstacles. The study improved Vietnamese business performance. Omoke and Opuala-Charles (2021) studied the relationship between trade openness and Nigeria's economic growth from 1984 to 2017. They found that import trade negatively impacts economic growth, while export trade positively. The study suggests that improving governance is crucial for promoting economic growth, as trade openness benefits from strong institutions and good governance. The study by Shido-Ikwu *et al.* (2023) examines the impact of international trade on Nigeria's economic growth from 1981 to 2019, finding no significant correlation. The authors recommend encouraging exports and discouraging imports through subsidies and tax concessions.

Methodology

Theoretical Framework and Model Specification

The Logistics Value Chain Model

This study utilizes the Logistics Value Chain Model, a tool utilized by business organizations to design and plan value-added activities in the logistics process (Zhou, 2013 and Chopra and Meindl, 2007). The enterprise's value chain comprises external logistics activities like delivery of raw materials and finished goods, as well as internal logistics activities like production and selling. Logistics value chain exists in the relationship of logistics process, from upstream to downstream (Zhou, 2013). Container clearance logistics in seaports are a crucial part of the intrinsic logistics activities in the maritime transport logistics value chain. The Logistics Value Chain Model suggests a significant relationship between container clearance logistics time in seaports and firm performance.

Estimation Techniques

The model here was developed to investigate the effect of customs logistics or clearance time on manufacturing business performance in the Nigerian manufacturing industry. The empirical model was stated as:

$$mbp_{i,t} = \sigma_0 + \pi_1' frm_{i,t} + \pi_2' paar_{i,t} + \pi_3' acd_{i,t} + \pi_4' pcd_{i,t} + \pi_5' ex_{i,t} + \pi_6' cr_{i,t} + \pi_7' dlv_{i,t} + \upsilon_{i,t} \ldots\ldots\ldots(1)$$

Where: *mbp* denotes a vector of manufacturing business performance measured by turnover, cost of sales and profits; *frm* is a vector of Form M processing regarding standard time and delay; *paar* denotes a vector of PAAR processing concerning standard time and delay; *acd* is a vector of assessment of custom duty as regards standard time and delay; *pcd* denotes a vector of payment of custom duty with regard to standard time and delay; *ex* represents container examination as to standard time and delay; *cr* is a vector of custom release in view of standard time and delay; *dlv* denotes a vector of container delivery as to standard time and delay; σ_0 is a constant; $\pi_1', \pi_2', \pi_3', \pi_4', \pi_5', \pi_6', \pi_7'$ are vector of container clearing time's parameters, *i* is surveyed companies; *t* is time; and υ is disturbance term.

Data and Variable Description

The study focuses on manufacturing sectors in Lagos and Ogun States, Nigeria. Lagos and Ogun States share 75% of manufacturing investments in Nigeria between 2014 and 2017 (MAN, 2020). The study population consists of 43 publicly quoted manufacturing companies listed on the Nigerian Stock Exchange (NSE) (2020) and which regularly import containers through Lagos Seaports. These companies are those located at Ilupeju, Agbara, Ewekoro, Ikeja, Ikorodu, Isolo, Oregun Ota and Shagamu: (which constitute the major industrial estates in Lagos and Ogun States). Structured questionnaires were administered to the 43 firms, but only 23 were actually filled out and returned. The study also collected

secondary data from the annual reports of the sampled companies. The data were analyzed using both descriptive and inferential statistics.

In this article, trade facilitation constitutes the independent variable while economic transformation constitutes the dependent variable. Trade facilitation was measured using the customs clearing (logistics) time at Lagos seaports (Oni and Ojekunle, 2022). According to a Delloitte (2017) report, over 80% of the total seaport costs paid by manufacturers at the Nigerian seaports are related to customs logistics alone at the Lagos seaport. Similar to this, Cotecna (2021) found that delays result in costs while clearing goods in Nigerian seaports, which takes two to three weeks as opposed to the 48-hour norm set by the United Nations (Carballo *et al.,* 2014). Therefore, a good trade facilitation indicator to use in a customs environment is the amount of time used for customs clearance at each of the seven steps of the process. Based on the relationship between economic development and the manufacturing sector's contribution to the country's gross domestic product (GDP), the study's dependent variable evaluated turnover, cost of sales, and shippers' (firms') profits as indicators of economic transformation (Ekpo, 2020).

Description of the Container Clearance Procedures in Lagos seaport

The field investigation was used to identify seven phases in the cargo clearance procedure at Apapa and Tin Can Island Seaports. Four factors, including the steps needed, the number of agencies engaged, the amount of documents involved, and the style of operation (manual or electronic), were measured for each stage. The container clearance system has seven stages, which are: Processing of e-Form M; Processing of the Pre-Arrival Assessment Report (PAAR); Duty Assessment; Duty Payment; Examination; Customs Release; and Delivery.

Table 1: Lagos seaports' container clearance procedures

S/N	Process Description	Average Number Of Required Steps	Average Number Of Govt. Agency Involved	Average Document Requirements	Mode Of Operation (Manual Or Electronic
1	Processing of e-FORM M	3	4	4	100 % electronic
2	Processing of PAAR	3	3	6	100 % electronic
3	Assessment of Duty	2	2	4	95 % electronic
4	Payment of Duty	2	2	3	100 % electronic
5	Examination	3	6	8	74 % manual
6	Customs Release	3	4	7	70 % electronic
7	Delivery	3	5	7	65 % electronic
8	Total	19	26	39	

Source: Field survey, 2022**.**

Table 1 show that the average number of steps required to clear a container in Apapa and Tin Can Ports is 19. The container clearance process involves a total of 39 documents and 26 government agencies. The first two stages of operation, processing e-form M, Pre-Arrival Assessment Report (PAAR), and Payment of Duty, are fully automated. The automation rate for duty assessment is 95%. The automation levels for Customs release, delivery, and examination are 74, 70, and 65 percent, respectively.

Effects of Container Clearance Timing on Manufacturing Business Performance

This section of the research study presents the estimation results of the effects of container clearance timing on manufacturing business performance in Lagos and Ogun states, Nigeria. Prior to the estimation findings of short run and long run estimates, the study presented the results of descriptive statistics and correlation analysis accordingly.

Summary Statistics

In this sub-section, the descriptive statistics of the indicators of container clearance timing and manufacturing business performance are presented in Table 2. The results in the table reported mean, maximum, minimum, standard deviation, Kurtosis and skewness values of variables understudied. Regarding the averages of shippers' business performance variables, the mean value of turnover, cost of sales and profit are **₦62,359,843,188, ₦46,656,350,909** and **₦25,497,368,514** respectively. It is noted that the average profit of the sampled firms over the periods understudied shows an improved performance in the business activities of the manufacturing industry. However, there is high variation among the series of the variables as their respective standard deviation is greater than the mean values. Also, the three indices of shippers' business performance are rightly skewed seeing that the skewness values are positive. As for Kurtosis, none of the series is normally distributed as profit is leptokurtic while turnover and cost of sales are platykurtic respectively.

Concerning the variables of containing customs clearance time, standard time and delay were considered across the seven clearing processes i.e. Form M processing, PAAR processing, assessment of custom duty, payment of custom duty, container examination, customs release and delivery of container. The average of standard time and delay of Form M processing is 25.04 hours and 60.57 hours, where the maximum are 48 hours and 20 hours and the minimum are 24 hours and 24 hours respectively. Also, the average hours in standard time and delay for the processing of PAAR are 34.44 and 81.43 correspondingly. Their respective maximum values are 72 hours and 144 hours and the minimum values are 24 hours and 48 hours. For assessment of custom duty, the mean of its standard time and delay is 24 hours and 50.4 hours whereas the maximum hours are 24 and 96, and the minimum hours are 0 and 24 respectively.

Table 2: Descriptive Statistics

Variables		Mean	Std Dev.	Maximum	Minimum	Kurtosis	Skewness	Obs.
Business Performance	Turnover	62359843188	70248911210	2.8404E+11	1460728000	1.749	1.541	230
	Cost of sales	41821513216	46656350909	2.004E+11	604670000	1.795	1.500	230
	Profit	20431789321	25497368514	1.2815E+11	684666000	3.859	1.963	230
Processing of Form M	Standard Time	25.044	4.9050	48	24	18.471	4.507	230
	Delay	60.571	26.373	120	24	0.216	1.031	210
Processing of PAAR	Standard Time	34.435	15.581	72	24	0.279	1.211	230
	Delay	81.143	27.254	144	48	-0.479	0.595	210
Assessment of Custom Duty	Standard Time	24	0	24	24	-	-	230
	Delay	50.4	28.367	96	0	-0.496	-0.749	200
Payment of Custom Duty	Standard Time	26.087	6.777	48	24	6.767	2.951	230
	Delay	46.588	30.302	96	0	-1.049	-0.424	170
Examination	Standard Time	51.130	28.639	120	24	1.674	1.612	230
	Delay	57.818	33.754	120	0	-0.462	0.039	220
Customs Release	Standard Time	39.652	15.226	72	24	-0.668	0.446	230
	Delay	78	42.956	192	0	0.528	0.681	200
Delivery	Standard Time	32.348	15.226	72	24	1.353	1.624	230
	Delay	69.714	31.415	120	0	-0.484	-0.081	210

Source: Author's computation (2022).

Further, the average value of custom duty payment' standard time and delay stand at 26.09 hours and 46.59 hours while their maximum hours are 48 and 96, and the minimum values are 24 and 0 respectively. As for the examination of container, the mean of standard time and delay is 51.13 hours and 57.82 hours while the maximum is 120 hours and their minimum hours are 24 and 0 respectively. With regards to customs release, the averages of standard time and delay are 39.65 and 78 correspondingly. The maximum hours showed 72 and 192 while the minimum hours are 24 and 0 respectively. Considering the delivery of container, the mean of standard time and delay stands at 32.35 hours and 69.71 hours, whereas the maximum hours are 72 and 120, and the minimum hours are 24 and 0 correspondingly. As well, the maximum and minimum values show that there is large variation between the series of container clearance timing which is further indicated in standard deviation value. Additionally, the data is not normally distributed owing to the fact that the Kurtosis values are not equal 3. Three

variables are leptokurtic while the remaining series are platykurtic. Equally, most of the series are positively skewed while only three variables are skewed leftward.

Correlation Matrix

In Table 3, it shows the partial correlation coefficients of the relationship between container clearance timing and manufacturing business performance. The correlation coefficients of container clearance timing and manufacturing business performance indicators have positive and negative values at varying magnitude. Specifically, the standard time of PAAR processing, custom duty assessment, custom duty payment, examination and delivery have negative correlation with turnover, cost of sales and profit while their delay timing are negatively associated with shippers' business performance variables. Also, standard time and delay of customs release have positive level of association with turnover, cost of sales and profit respectively. However, Form M processing's delay has a negative correlation with turnover, cost of sales and profit. As for Form M processing's standard time, it positively associated with turnover and cost of sales but negatively related with profit.

Table 3: Correlation Matrix

		Turnover	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Cost of sales(1)		0.886	1															
Profit(2)		0.854	0.790	1														
Processing of Form M	Standard Time(3)	0.017	0.060	-0.063	1													
	Delay(4)	-0.254	-0.258	-0.227	-0.107	1												
Processing of PAAR	Standard Time(5)	-0.116	-0.092	-0.154	0.515	0.026	1											
	Delay(6)	0.220	0.258	0.136	0.320	0.414	0.174	1										
Assessment of Custom Duty	Standard Time(7)	-0.264	-0.197	-0.157	0.069	0.032	0.213	0.013	1									
	Delay(8)	0.300	0.326	0.233	0.175	-0.459	0.259	0.080	0.310	1								
Payment of Custom Duty	Standard Time(9)	-0.218	-0.229	-0.186	-0.066	-	0.507	-	0.091	-	1							
	Delay(10)	0.429	0.443	0.370	0.210	-0.525	0.289	-0.024	-0.194	0.893	-	1						
Examination	Standard Time(11)	-0.271	-0.293	-0.213	-0.202	0.030	0.321	-0.245	-0.267	-0.194	0.744	-0.267	1					
	Delay(12)	0.084	0.100	0.044	-0.064	-0.571	0.215	-0.354	0.141	0.507	0.020	0.591	-0.072	1				
Customs Release	Standard Time(13)	0.242	0.262	0.194	0.454	-0.336	-0.267	0.287	0.087	0.102	-0.318	0.071	-0.344	-0.263	1			
	Delay(14)	0.250	0.275	0.189	0.225	-0.013	0.226	0.726	0.242	0.442	-	0.261	-0.519	-0.104	0.281	1		
Delivery	Standard Time(15)	-0.199	-0.216	-0.156	-0.117	0.267	0.585	0.048	-0.131	0.102	0.318	-	0.171	0.093	-0.566	0.259	1	
	Delay(16)	0.097	0.079	0.125	0.016	0.168	0.302	0.250	0.134	0.235	-	0.303	0.206	0.016	-0.440	0.224	0.498	1

Source: Author's computation (2022).

Further, the findings of the correlation coefficients of the indicators of manufacturing business performance are strongly related. Also, the correlation among the series used to measure container clearance timing is relatively low which varies between positive and negative coefficients. Even though the direct correlation among manufacturing business performance indicators is strong, the chances of running into multicollinearity are avoided as the variables are not estimated in the same regression equation. Therefore, the problem of multicollinearity is avoided in the empirical analysis. All the same, the estimation results of the correlation analysis are just preliminary analyses that are being put through confirmation in section 4.5.3 after considering the other determinants of container clearance timing jointly.

Short-Run and Long-Run Estimates

Furthermore, the study provide the empirical estimates of both the short run and long run effects of container clearance timing on manufacturing business performance in Lagos and Ogun state, Nigeria using the error correction model (ECM) estimation approach in this section. As regards the optimal lag lengths selection, the lag length of the variables were selected using the Akaike Information Criterion (AIC) after setting it at three in order to ensure sufficient degree of freedom. More so, Tables 4 and 5 present the result of short-run and long-run parameter estimates respectively. From Table 3, the parameter estimates of the error correction terms are found to be negative all the models of manufacturing business performance indicators. In magnitude terms, the coefficients of the error correction terms of turnover, cost of sales and profit models in the short run are -0.063, -0.060 and -0.130 respectively. Correspondingly, the probability value of the error correction term is less than 5% level for profit model, and greater than 5% for cost of sales and turnover models. The error correction term values imply that the empirical models of manufacturing business performance in terms of turnover, cost of sales and profit correct its short-run disequilibrium by at 6.28%, 6.02% and 13.03% speed of adjustment in order to return to the long run equilibrium. The results further confirm that there exist a long-run relationship between container clearance timing and manufacturing business performance in Lagos and Ogun state, Nigeria. Thus, it confirmed that the models' equilibrium nature is valid in the long run

.Table 4: Short-Run Estimates

Variables		Dependent Variables: Shippers' Business Performance		
		Δ(log(turnover))	**Δ(log(cost of sales))**	**Δ(log(profit))**
Δ(Processing of Form M)	Standard Time	0.0194***(0.0073)	0.0267**(0.0109)	0.0197**(0.0092)
	Delay	0.0006(0.0011)	0.00003(0.0011)	0.0026(0.0021)
Δ(Processing of PAAR)	Standard Time	-0.0059*(0.0032)	-0.0081*(0.0048)	-0.0048(0.0038)
	Delay	0.0009(0.0014)	0.0008(0.0014)	-0.0012(0.0023)
Δ(Assessment of Custom Duty)	Standard Time	-16.35(18.524)	-12.378(18.114)	-49.329(32.340)
	Delay	0.0019**(0.0010)	0.0013(0.0010)	0.0030**(0.0015)
Δ(Payment of Custom Duty)	Standard Time	0.0045(0.0053)	-0.0017(0.0076)	0.0091(0.0081)
	Delay	-0.0026**(0.0012)	-0.0020*(0.0012)	-0.0050**(0.0020)
Δ(Examination)	Standard Time	0.0001(0.0008)	0.0007(0.0010)	0.00001(0.0010)
	Delay	0.0010(0.0008)	0.0013*(0.0008)	0.0013(0.0014)
Δ(Customs Release)	Standard Time	-0.0019(0.0019)	-0.0032*(0.0018)	-0.0023(0.0033)
	Delay	-0.0006(0.0007)	-0.0007(0.0008)	0.0004(0.0011)
Δ(Delivery)	Standard Time	-0.0004*(0.0027)	0.0033(0.0035)	-0.0058*(0.0035)
	Delay	-0.0010***(0.0006)	-0.0020***(0.0008)	-0.0005(0.0009)
Error Correction Term(-1)		-0.0628(0.0233)	-0.0602*(0.0233)	-0.1303***(0.0282)
Constant		391.9(444.5)	296.7(434.7)	1183.5(776.0)
Adjusted R-squared		0.2597	0.2527	0.1943
F-Statistics		1.8724	1.7641	2.4291
Prob.(F-Stat)		(0.0281)	(0.0423)	(0.0029)

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.
Source: Author's computation (2022).

Concerning the short-run coefficients in Table 3, the result shows that standard time in Form M processing positively and significantly influences manufacturing business performance in terms of turnover, cost of sales and profit respectively. In magnitude, the results show that with 10% changes in standard time in Form M processing, there will be an increase in turnover, cost of sales and profit changes by 0.19%, 0.27% and 0.20% respectively. However, the delay in Form M processing has positive effect on business performance but not significant statistically at 5% level. As regards PAAR processing, standard time has negative effect on manufacturing business performance but only significant statistically for turnover and cost of sales at 10% level. The impact of delay in PAAR processing

on business performance indices is not confirmed statistically. Yet, the standard time in custom duty assessment negatively influence turnover, cost of sales and profit, albeit not significant at 5% level. Delay in custom duty assessment significantly influence turnover and profit positively at 5% level, but has statistical insignificant impact on cost of sales.

Table 5: Long-Run Estimates

Variables		Dependent Variables: Shippers' Business Performance		
		log(turnover)	**log(cost of sales)**	**log(profit)**
Processing of Form M	Standard Time	-0.1207***(0.0227)	-0.1076***(0.0263)	-0.1447***(0.0185)
	Delay	-0.0379***(0.0042)	-0.0428***(0.0048)	-0.0288***(0.0026)
Processing of PAAR	Standard Time	0.0388***(0.0091)	0.0368***(0.0105)	0.0396***(0.0080)
	Delay	0.0347***(0.0047)	0.0401***(0.0055)	0.0210***(0.0035)
Assessment of Custom Duty	Standard Time	-1232.5***(82.933)	-1276.4***(96.117)	-1103.8***(40.460)
	Delay	-0.0182***(0.0043)	-0.0178***(0.0050)	-0.0278***(0.0025)
Payment of Custom Duty	Standard Time	-0.0928***(0.0193)	-0.1109***(0.0224)	-0.0954***(0.0112)
	Delay	0.0369***(0.0047)	0.0390***(0.0054)	0.0471***(0.0032)
Examination	Standard Time	-0.0086**(0.0034)	-0.0084**(0.0040)	-0.0013(0.0020)
	Delay	-0.0205***(0.0026)	-0.0228***(0.0030)	-0.0202***(0.0015)
Customs Release	Standard Time	-0.0198***(0.0068)	-0.0270***(0.0079)	-0.0077*(0.0039)
	Delay	-0.0139***(0.0027)	-0.0167***(0.0031)	-0.0065***(0.0022)
Delivery	Standard Time	0.0259***(0.0080)	0.0277***(0.0093)	0.0334***(0.0078)
	Delay	-0.0072**(0.0028)	-0.0097***(0.0033)	-0.0015(0.0017)
	Constant	29611.4***(1990.4)	30665.6***(2306.8)	26520.9***(971.0)
Adjusted R-squared		0.7999	0.7704	0.7748
F-Statistics		66.412	55.87	235.65
Prob.(F-Stat)		(0.0000)	(0.0000)	(0.0000)

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

Source: Author's computation (2022).

Furthermore, standard time in custom duty payment has an insignificant impact on manufacturing business performance in the short run. As for delay in custom duty payment, its adverse effect on turnover and profit is significant at 5% level but its negative impact on cost of sales is significant at 10% level. Concerning the standard time in container examination, its direct impact on business performance is not significant statistically at 5% level. However, delay in container examination only impacted significantly on cost of sales at 10% level but does not influence turnover and profit significantly at the conventional level. Meanwhile, delay in customs release has no significant impact on manufacturing business performance. Likewise, standard time in custom release has an insignificant impact on turnover and profit while its negative impact on cost of sales is significant at 10% levels. Also, the study shows that container delivery's standard time negative impact on turnover and profit is significant at 10% while the direct effect on cost of sales is not statistically confirmed. Delay in container delivery has an adverse and significant effect on both turnover and cost of sales but insignificant impacted on profit over the periods understudied.

Table 5 reports the long-run relationship between customs clearance timing and shippers' business performance of 23 manufacturing firms in Lagos and Ogun state, Nigeria for the periods of 2010-2019. The study found that standard time and delay in Form m processing negatively and significantly impacted on business performance of the sampled firms. Similarly, standard time and delay in custom duty assessment, examination, and customs release have an indirect influence on manufacturing business performance indicators like turnover, cost of sales and profit respectively. However, PAAR processing was found to positively impacted turnover, cost of sales and profit of the 23 sampled manufacturing firms over the periods, 2010-2019. In the case of standard time and delay in custom duty payment, the former indirectly influenced business performance variables while the latter had a positive impact on manufacturing business performance. All are statistically significant at the conventional level. As for container delivery, the standard time and delay were found to have a direct and an indirect impact on the three business performance variables respectively. To end with, the adjusted R-squared shows that customs clearance time explains about 79.9%, 77.04% and 77.48% total variations in turnover, cost of sales and profit correspondingly. In addition, the F-statistics show that there is overall significance relationship between container clearance timing and manufacturing business performance.

Discussion of Results and Suggestions

The study reveals a significant correlation between business performance and the time required for customs clearance. The study indicates a significant correlation between business performance and customs clearance time, affecting turnover, cost of sales, and profit in manufacturing enterprises over time. Standard and delay times have varying relationships with business performance variables, with Form M processing negatively impacting the performance of the sampled firms. Delays are predicted to decrease turnover, sales costs, and profit in the sampled

manufacturing enterprises. The study aligns with a 2015 study by Martincus, Carballo, and Graziano indicating a 10% increase in customs delays leads to a 4% decline in exports due to increased costs for exporters and buyers. The current study distinguishes itself from past studies by focusing on turnover, sales costs, and profit as performance indicators, unlike the previous focus on firms' export.

The study contributes to the literature by examining the long-term relationships between standard time and delays in seaport cargo clearance and manufacturing business performance. This perspective provides a more comprehensive understanding of the underlying dynamics. Improving the customs environment could enhance Nigeria's competitiveness in the Africa Continental Free Trade Area, as customs clearance time significantly impacts turnover, cost of sales, and profit of sampled firms. This study suggests the following action steps:

i. Customs administration in Nigeria should simplify the process of cargo clearance to reducing duplicity and overlapping of functions with aim of improving manufacturing business performance in Nigeria.
ii. A complete automation of the customs clearance process at Lagos Seaports and other ports in Nigeria is also recommended.

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