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**AN EMPIRICAL ANALYSIS OF THE IMPACT OF PRIVATE PORT OPERATORS IN
INTERNATIONAL TRADE DEVELOPMENT**

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Abstract

This study is to empirically investigate the impacts of private port operators in facilitating international trade in a developing economy as it is noted that no nation can achieve economic prosperity in isolation. The objective is to empirically analyze the contribution of private port operators on international trade using proxied variables on a simple linear regression analysis. The study shows that private port operators is statistically significant to international trade as international trade aids economic growth and development. The coefficient of determination is however high indicating that the linear mode is a good fit and that the independent variable which is private port operators are explained by the dependent variable. The study found out that the activities of private port operators has significantly improved the process of cargo handling and transshipment of goods over international waters in a developing nations.

Keywords: private ports, international trade, economic growth, linear regression cargo handling.

Introduction

Maritime transport is an integral of international trade development in any economy. The maritime sector had contributed positively in facilitating world trade. It is therefore obvious that international trade cannot survive without the role of the maritime sector. For any country to develop rapidly in terms of increase in Gross Domestic Product (GDP), then the maritime sector must play the role of exportable administrator (Vanguard News, 2017). Maritime transport had her strength on cross border trade. One of the wealth generated by the North Korean president which strategically positioned him as the third richest president in the world was as a result of her involvement in cross border trade. The United State of Africa on their wisdom understood the power of maritime transport and therefore uses it to weaken the relationship of the North Korea and her relationship to the outside world (North Korea and USA Nuclear War 2017- Vanguard News, 2017)). No nation can achieve economic development in isolation; hence there is need for cross border trade transactions. The ports in any nations is a strategic location in which imports and exports take place. This however, as led nations and private investors to support the effectiveness and profitability of shipping services. As a result, sea shipping is the significant mode by which must nations executes her worldwide exchange. (Ndikom 2011). Therefore the American understood that a country cannot leave in isolation with trade across the sea. The port is a state of transshipment for movement via sea and land. It is the centre of wide range of maritime exercises producing huge occupations and financial development. The port in connection to exchange serves as both door and terminal. As a door, it gives ship harbour interface, for example, digging, procurement of compartments and upkeep of navigational channels; ship port interface as far as stacking and off-stacking of cargoes (Ndikom 2012). Private port operators in one way or the other as contributed positively to international trade but the impact in which private port operators had contributed had not been empirically measured in developing nations hence this study investigate the impact of private port operators on international trade.

Globalization as also added value in the functionality of private port operators. There is numerous rebranding of shipping system as a result of the outcome globalization. The heightens rivalry between the extensive multi-national mechanical gatherings which are applying weight on the complete logistic chain, and the main boat proprietors, who are really reacting to those weights by setting up shipping lines in view of the real transshipment port focuses, now usually alluded to as centre points. With the developing move for privatization of the seaport everywhere throughout the world, generally the ebb and flow pattern in Nigeria, private segment cooperation and advancement of infrastructural offices of our seaports has expanded significantly in the course of the most recent couple of years.

Review of Literatures

One of the reasons for inadequate functionality of the port system in developing nations is the predominance of uncompleted contracts and non-challants attitude of government to see that the port system is a key for economic development and thus should not be manage frivolously. A lot of players are needed in the port system to make the port achieve it original aim of economic growth and development as well as playing a positive impacts to the betterment of the people. One of the player to achieve such aim and objective is the private port operators. The private port operators aid efficiency and eliminate bureaucratic controls to government obstruction and mediation and other open

administration society of undermining and trading off effectiveness and ideal efficiency (Qianwen Liu (2010)).

International trade has been noted for a trade between two or more countries. It is worried with imports and exports of products and administrations. It is for the most part completed by means of sea ports and airports. More than 80% of international trade exercises are done by means of sea ports. International trade assumes an indispensable part in international showcasing. The Ports therefore are highly important in aiding international trade. They play critical roles or interface between marine and land transportation. According to various researchers such as the work of Ogunsiji, (2011), the ports are part of international supply chain network. This however, show that International trade plays significant role in nation's economic development and growth through the port system. It generates goo revenue for any nations that involved in it as well as it promotes international relationships and exchange of ideas and technologies. International trade makes it possible for goods that are produced but needed in a country to be made available through a carrying system (port). The sea ports are ports or transit areas along the oceans, sea or waterfront where ships or vessels berth to offload or load cargos. This sea ports had help nations in building a good gross domestic product. This is because the sea ports are huge in international trade. They constitute the heft of marine transport framework. Most import products and export of merchandise are done through marine transport because of its idiosyncrasies. The major problems associated with private port system in a developing nations are malfunctioning port system, failure by the government or Ports Authority to use present data to plan for the future, uneven tariff, poor maintenance culture by developing nations, inconsistency of government policies in relation to ports activities or services.

Effective Private Port Ownership, Location and Internalization Advantages to International Development.

Effective ports management facilitates international trade. In a situation where the International trade cannot strive when delays occur in ports system; when ports are congested; where the channels are not navigable; where cargo handling facilities are absent; inadequate or obsolete; where there are poor security systems; where safety standard or level is zero, where haulage services are inefficient; where there are not enough container stack spaces or poor tariff system and inconsistent port policies, rules and regulations. Effective ports administration facilitate international trade by ensuring that there are adequate ports reception facilities and infrastructure. Again, effective ports management facilitate international trade by developing sound policies, rules and regulations for port operations. Effective ports management facilitates international trade by ensuring that the channels are navigatable through removal of wrecks and dredging of the canal (Ogunsiji, 2011).

In addition, effective ports management facilitate international trade by ensuring that ports are decongested and functional tugs are available for pilotage and the berths are in good condition for ships to berth. Conclusively, effective ports management facilities international trade by ensuring that the waiting time for vessels to berth does not exceed the internationally approved waiting time of 10 days, the ports are safe and security.

The ownership advantages encompass firms' specific 'competitive advantages' which firms must possess to allow them compete successfully in foreign market (Dunning, 2000). The port is a converging point of various international business line. As opined by

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Dunning (2000), private port ownership advantages are monopolistic in some line of businesses. As the port need to be globally competitive hence the need for adequate technology, scale economies and scope, international practical experience are required. Government alone in port operation may not be fully equipped to manage all access to all local market information, local language and culture, and connections to local authorities that trigger port operations. Private ports operators business is profit maximizing hence investors in private port business consider location advantage because location advantage is an attractions of importation of specific goods that a country can benefit from (Dunning, 2000:164). These advantages include those factors inputs located abroad such as the resources that are not marketable and cannot be transferred to another location (Rugman, 1981). In order to benefit from direct investment abroad, the investors would have to take the host country specific advantages into account (Dunning, 2000). These include market potential and size, input price different, physical distance, languages, culture and low cost of factors of production (Dunning, 1999, 2000). These are also referred to as immobile natural and created endowments present in the host country, which have to be used jointly with the competitive advantage of any inward foreign investor (Dunning, 2000:2).

Materials and Method

In order to empirically account for the impacts of private port operators in international trade in a developing nation, a parametric and non-parametric test were applied to test if the variables applied are statistically significant the bivariate analysis model for the study is hereby specified as follows and an extraction of data from Nigeria was used.

The models for this study is stated below:

$$FGDP = F(PPO)$$

$$\text{Log}(NGDP) = \beta_0 + \beta_1 \log(PPO)$$

Where:

NGDP= Gross Domestic Product divided by Net Export

PPO= Private Port Operators

β_0 = Intercept Parameter

μ = Stochastic Error Term

Log Linear Model Specification

$$\text{Log}(NGDP) = \beta_0 + \beta_1 \log(PPO)$$

Variables Entered/Removed^a

Mode	Variables Entered	Variables Removed	Method
1	PPO ^b	.	Enter

a. Dependent Variable: NGDP

b. All requested variables entered.

From the table above we can see that it is only two variables. This however, indicate the application of a simple linear regression analysis. The NGDP which is the nominal GDP divided by net export is regarded as the dependent variable and the Private Port Operators (PPO) is regarded as the independent variable.

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.335 ^a	.112	.023	.339159258

a. Predictors: (Constant), DPS

From the table above, the coefficient of determination (R^2) is 11.2%. This means that 11.2 percent of the explanatory variables are explained by the dependent variable.

Test of Hypothesis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.145	1	.145	1.264	.287 ^b
	Residual	1.150	10	.115		
	Total	1.296	11			

a. Dependent Variable: NGDP

b. Predictors: (Constant), PPO

One of the uses of Analysis of variance (ANOVA) is to test hypothesis if the variables in question is statistical significant. The P-value or Sig value is compared with that of 5% confidence interval. Since the Sig value above is .287 which is compared to 0.05 i.e $.287 > 0.05$ we reject the null and accept the alternative hypothesis that there is a significant relationship between private port operators and international trade.

Regression Results.

In regression analysis, the ultimate goal is the estimation of the relationship between dependent and independent variables. This goal can be achieved through the estimation of coefficients of each independent variable in a model. The sign of coefficients of independent variables indicate their relationship with the dependent variable, while the magnitude of the coefficients implies the responses of dependent variables to independent variables.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.488	.108		4.504	.001
	PPO	-.036	.032	-.335	-1.124	.287

a. Dependent Variable: NGDP

The regression result shows that PPO has a negative relationship with NGDP of 0.036. This indicate that one percent increase of PPO will lead to a corresponding fall on NGDP. However, since the model one is a simple linear regression its shows that there is a negative relationship of PPO and NGDP. This however, does not corroborate with the appriori expectation that private port operators as positive impacts on international trade.

Results and Discussion

The empirical analysis of private port operators to international trade (proxied by gross domestic product divided by net export) shows that there is still a lacuna of active private port operators in the port. This however, was justified by the negative relationship between PPO and NGDP in a developing economy. This negative relationship may arise as a result of technological gap in port management which developing economy may not be able to acquire. Also government expenditure has not significantly affected the private operator's impact in the port.

From the result using the Non-parametric test (ANOVA) shows that private port operators impacts is statistically significant to international trade development. This however, indicate that international trade and economic development is not distinct from efficient private port operations.

Based on findings, the researcher recommended that highly skilled and trained personnel are required to handle documentation in the port system so as to mark the port system efficient. Highly skilled and trained personnel with international experience as the port system is internationally driven are requisites to handle vessel investigation and security equipment and search and old security infrastructures need to be replaced with the modern security technology. Private port terminals need adequate knowledge and required training concerning information technology. Cargo examination needs modern technology in order to ease the stress of unlocking container before examination. The terminals needs modern technologies such as camera, remote sensing, information technology and x-ray radioactive sources and control tower or radio station whereby information can be disseminated to other department when necessary.

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