

CUSTOM AND EXCISE DUTIES AND INFRASTRUCTURAL DEVELOPMENT IN NIGERIA (1997-2021)

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ABSTRACT

Every country strives for infrastructural development and to achieve this, they need revenue, and thus engage in revenue mobilization. Thus the study examined custom and excise duties and infrastructural development in Nigeria from 1997 - 2021. The specific objectives of the study examined the relationship between customs duties and infrastructural development in Nigeria. Also evaluated the relationship between excise and infrastructural development in Nigeria. And examined the moderating influence of real exchange rate in the relationship between custom and excise duties and infrastructural development in Nigeria from 1997 - 2021. The study adopted ex-post facto designs. The population and sample size of the study was the entire 36 states and the federal capital territory of Nigeria, covering twenty-six (25) years. The instrument of the study was annual time series data. The formulated research questions were analyzed with descriptive statistics. The hypotheses were tested using the least square panel data regression analysis with the aid of E-view (10). The findings of the study showed that there is significant relationship between customs duties and infrastructural development in Nigeria. There is no significant relationship between excise duties and infrastructural development in Nigeria. And also, real exchange rate does not have moderate influence in the relationship between custom and excise duties and economic development in Nigeria from 1997 – 2021. In line with the findings the study recommend that government should focus more on customs duties as a means of boosting the infrastructural development in Nigeria. Thus, adequate training and development of staff and other computerized revenue collection methods should be swiftly introduced in order to boost revenue generation. Nigeria's excise duties are in dire need of reforms and full implementation so that various loopholes that have served as conduit pipes for free outflow of revenue to individuals can be blocked. Also, corrupt, fraudulent, and other financial malpractice officers should be sacked or be punished. Finally, since the real exchange rate is found to have an insignificant and negative impact on the economy, reforms should be made to customs and excise duties and they should be more strictly adhered to as one of the mainstays of revenue generation in the country.

Keywords: custom duties and excise duties, infrastructural development and real exchange rate.

INTRODUCTION

The growth and development of any nation is anchored on social infrastructure. Infrastructure is very important to a country's developmental prospect. The adequacy of infrastructure may determine a country's success or failure in diversifying production, coping with population growth, reducing poverty, improving welfare of citizens (Mobolaji & Wale 2012). The infrastructure development responsibility is shouldered by the government of every nation, particularly in the developing nations of Africa, is enormous. Onyemaechi (2012), profess that, every country strives for infrastructural development and to achieve this, they need revenue, and thus engage in revenue mobilization. Taxation is a process of raising revenue for running government activities. Government activities involve generating funds and using them to provide security, social amenities, infrastructure, etc., for the citizens of the country (Akhor, 2014). However, over the years, it has been observed that the Nigerian tax system has inherent problems in its tax revenue collection structure which might have affected infrastructural development. Odusola (2006),

opined that the Nigerian tax system is concentrated on company income tax and petroleum profit tax, value-added tax, while broad-based like the customs duties, excise duties, stamp duties, and luxury taxes revenue are of decline or less concentrated on.

Customs duties is levied when goods are transported across borders between countries. It is the tax that governments impose on export and import of goods. They are part of indirect taxes (Monogbe & Okah, 2015). The tax is administered by the Nigerian Custom Services (NCS). It is believed that duties on imports are against the principle of comparative cost, thereby restricting the full development of international trade. Import duties are also used to protect young industries in the country. The burden of export duties is passed on to the foreign country in the form of increased prices. The burden of import duties falls on the consumers of the goods and services that they are levied on (Eyisi, et al., 2017).

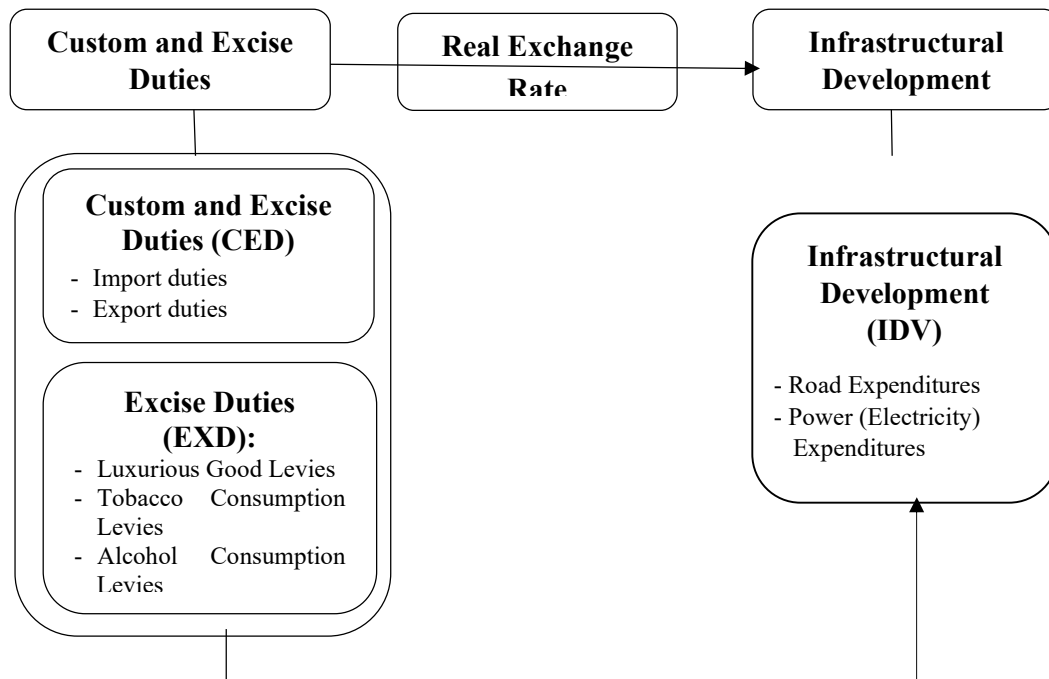
Excise duties used to be called the orphans of tax policy, because they received relatively little attention in the tax literature. According to Fasoranti (2013), excise duties are commodity taxes levied on special and luxurious goods manufactured within or imported into the country. They are charged either as a percentage of the value of import or a fixed amount on specific quantity. This indirect tax serves as a purpose to discourage the consumption of certain goods Excise duties in Nigeria have increased considerably over the past few years, raising concerns on the effect this may have on the economy. However, these increases are welcomed by those concerned about the costs of externalities associated with excessive alcohol consumption, including productivity loss, foetal alcohol syndrome, liver cirrhosis, traffic accidents, etc. Excise duty is applicable on beer and stout, wines, spirits, cigarettes, and homogenised tobacco manufactured in or imported into Nigeria at various percentages.

Statement of Problem

The economy is dwindling day by day, due to the unsuitable state of roads, power, and other essential public infrastructures, coupled with exchange rate fluctuations over the years (Dickson & Osemwengie, 2013). This condition discourages economic growth and consequently makes the development objectives of the country far from a reality. Thus, Nigeria is in dire need of a stable and sufficient revenue source basically of customs duties (CUD) and excise duties (EXD), which can be easily generated and are easier to collect and less prone to tax evasion and avoidance.

Hence, this study is motivated to fill the following gaps; Firstly, by separating custom duties and excise duties to statistically ascertain their parallel contributions as macroeconomic propellers. Secondly, by introducing the real exchange rate as a moderating variable. And finally, the study uniquely provides an analytical scope that covers 25 years' time lag (1997-2021) to solve the problem of insufficient empirical analytical data.

Conceptual Framework



Source: Researcher's Conceptual Framework, 2022.

Aim and Objectives of the Study

The aim of this study is to examine custom and excise duties and infrastructural development in Nigeria from 1997 - 2021. Specifically, the study attended to the following objectives:

1. To examine the relationship between customs duties and infrastructural development in Nigeria.
2. To evaluate the relationship between excise duties and infrastructural development in Nigeria.
3. To examine the moderating influence of real exchange rate in the relationship between custom and excise duties and infrastructural development in Nigeria from 1997 - 2021.

Research Hypotheses

- H0₁: There is no significant relationship between customs duties and infrastructural development in Nigeria.
- H0₂: There is no significant relationship between excise duties and infrastructural development in Nigeria.
- H0₃: Real exchange rate does not have moderate influence in the relationship between custom and excise duties and infrastructural development in Nigeria from 1997 - 2021.

Review of Related Literature

Conceptual Reviews

Customs Duties

Customs duties in Nigeria are the oldest form of modern taxation and is one of the types indirect taxes and are divided into import duties or export duties. Their introduction dates back to 1860 known as import duties, which represents taxes on imports into Nigeria, charged either as a percentage of the value of imports or as a fixed amount of contingent on quantity. Import duties

are the country's highest yielding indirect or expenditure tax. Prior to the introduction of Structural Adjustment Programme (SAP) in 1986, customs duties were as high as 300 percent but currently range between 2 percent and 75 percent. The point of customs duties is primarily to protect domestic production by making imported goods more expensive (Ikeokwu & Leyira, 2019).

Customs duty is a tax levied on imports and exports by the customs authorities of a country to raise revenue for the state and/or to protect domestic industries from more efficient or predatory competitors from abroad. Customs duty is based generally on the value of goods or upon the weight, dimensions, or some other criteria that will be determined by the state. Customs and excise duties are the oldest forms of modern taxation and are otherwise known as import duties. They are charged either as a percentage of the value of import or a fixed amount on specific quantity (Fasoranti, 2013). Custom duties are commodity taxes on imports and exports. According to Ayodele (2006), the tax is administered by the Nigerian Custom Services (NCS). It is believed that duties on imports are against the principle of comparative cost thereby restricts the full development of international trade. Import duties are also used in protecting infant industries in the country. The burden of export duties is passed on to the foreign country in form of increased prices. The burden of import duties falls on the consumers of the goods and services that it is levied on. Customs duty is beneficial for many reasons. For instance, it ensures a country's economic stability, jobs, environment, among others. It regulates the movement of goods in and out of the country. It keeps a check on restricted items.

Excise duties

Excise duty is a tax charged on manufactured goods, levied at the time of manufacture. It is also a form of indirect tax on the sale or consumption of certain goods, products, services, or activities such as tobacco, alcohol, narcotics, gambling, etc., mainly to discourage their use and consumption. Excise duty has been revoked on a lot of manufactured goods, except for products which are harmful, such as bleaching creams, alcohol, tobacco, cigarettes, etc. However, there have been several amendments to the administration, rates, and list of goods charged with excise duty since the introduction of excise duty in 1962 (Peter & Ikechi, 2021).

Historically, excise duty has been referred to as "sin tax" because of the categories of goods they are levied on, and, in a way, it was not really a focus for revenue generation by the government. However, due to the recent fall in the price of crude oil, the government has continuously focused on non-oil revenue sources to support the budget and boost economic growth and development (Omes, 2020).

Excise duties, introduced in 1962, are an ad valorem tax on the output of manufactured goods as enforced by the Customs and Excise Act of 1962 and 1965 and the Customs and Excise Tariff Decree of 1995. The Customs, Excise Tariff (Consolidation) Act 1995-part III section I stipulates that goods manufactured in Nigeria and specified in the fifth schedule to this Act shall be charged with duties excise at the rates specified under the duty column in the said schedule. As implied by these examples, excise systems can be defined as comprising all selective taxes or duties, related levies and charges on tobacco, alcohol, bleaching creams, gambling, petroleum products, motor vehicles, and other specific goods, services, and activities. Excise duties are commodity taxes levied on goods manufactured within the country. They are charged either as a percentage of the value of the import or a fixed amount for a specific quantity. This indirect tax not only serves the purpose of raising revenue for the country, but also serves to discourage the consumption of certain goods (Fasoranti, 2013).

The two main methods of charging are specific rates, based on quantity, and ad valorem rates, based on value. Which is better is controversial, and may differ depending on the product and the details of the implementation of the charging method. Conventional policy generally advocates that all excises be levied on an ad valorem basis rather than on a specific basis, because this protects the base of the tax from inflation. This is particularly important in countries with high rates of inflation. "Nevertheless, the real value of revenues may be maintained under a specific-rate excise tax if there are regular adjustments to the rate to reflect inflation. It may be argued

that with periodic adjustments for inflation, revenues under a specific-rate system will still lag during the periods between adjustments, but that the lag can be mitigated by introducing "automatic" adjustments to the specific rates when inflation reaches a certain threshold (Omesì & Maccarthy, 2021).

Excise duty is applicable on beer and stout, wines, spirits, cigarettes, and homogenised tobacco manufactured in or imported into Nigeria at 20%.

Excise duties on tobacco and alcoholic beverages have been increased effective from 4 June 2018. The new regime applies only to tobacco and its products (such as cigarettes) and alcoholic beverages (beers and stouts, spirits, and wines) as follows:

Tobacco: For 2018, in addition to the 20% ad valorem rate, a specific rate of NGN 1 will be paid on each cigarette stick (NGN 20 per pack of 20 sticks). In 2019, the specific rate increased to NGN 2 per stick (NGN 40 per pack of 20 sticks). In 2020, the specific rate increased to NGN 2.90k per stick (NGN 58 per pack of 20 sticks).

Beer and stout: With respect to alcoholic beverages, no ad valorem rate is applicable. In 2018, NGN 0.30k per centilitre (cl) is payable on beer and stout. In 2019 and 2020, NGN 0.26k per cl was payable.

Wines: In 2018, NGN 1.25k per cl is payable on wines. In 2019 and 2020, NGN 1.50k per cl was payable.

Spirits: In 2018, NGN 1.50k per cl is payable on spirits. In 2019, NGN 1.75k per cl was payable. In 2020, NGN 2.00k per cl was payable.

Excise duty will not apply to imported excisable goods not produced in Nigeria and imported raw materials not available in Nigeria.

Further, the amendments to the Finance Act 2020 also included telecommunication services as an excisable service. It is important to note that prior to the Finance Act 2019, the government had previously issued a Circular referenced: 17642/II/172 and dated 6 March 2018, announcing an increase in the excise duty rates on tobacco and alcoholic beverages with an effective date of 4 June 2018. The most recent change to the excise duty regime was the introduction of excise duty on telecommunication services provided in Nigeria. This has generated much criticisms from relevant stakeholders in the telecommunications industry as this would create an additional tax burden on telecommunication service providers (Peter & Ikechi, 2021).

Real Exchange Rate

An exchange rate is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in relation to another currency. Exchange rates are determined in the foreign exchange market which is open to a wide range of different types of buyers and sellers, and where currency trading is continuous. Exchange rates are determined in the foreign exchange market, which is open to a wide range of buyers and sellers where currency trading is continuous. The spot exchange rate refers to the current exchange rate. The forward exchange rate refers to an exchange rate that is quoted and traded today, but for delivery and payment on a specific future date. Meanwhile, the real exchange rate (RER) compares the relative price of two countries' consumption baskets. You may be interested in getting more information than the relative price of two currencies, or the nominal exchange rate. For example, you may want to know what one dollar can buy in the Nigeria countries or what one euro can buy in the United States. Basically, the real exchange rate can be defined as the nominal exchange rate that takes the inflation differentials among the countries into account. Its importance stems from the fact that it can be used as an indicator of competitiveness in the foreign trade of a country. The importance of the real exchange rate for a Central Bank is related with the effects of the real exchange rates on the Central Bank balance sheet and, in turn, with its ability to conduct a prudent monetary policy. Any changes in the real exchange rates would lead to fluctuations in short term capital flows. These fluctuations would then have an affect on the Central Bank's net foreign assets. The changes in the volume of net foreign assets would lead to changes in the volume of currency in circulation on the liability side of the balance sheet. Thus, the changes in the volume currency

in circulation would necessitate the management of the liquidity fluctuations in the economy through the utilization of the monetary policy tools by the Central Bank, whose final objective is price stability. Because of the important role it plays in an economy as mentioned above, the real exchange rate has been one of the most debated issues both in theory and the practice. This study aims at summarizing the existing definitions, calculation methods and interpretations of the real exchange rates. Within this context, the first part of the study will introduce different definitions of the real exchange rates. The calculation methods will be discussed in the second part. Finally, several points that should be taken into account in the interpretation of the real exchange rate movements will be highlighted.

The purchasing power of two currencies relative to one another. While two currencies may have a certain exchange rate on the foreign exchange market, this does not mean that goods and services purchased with one currency cost the equivalent amounts in another currency. This is due to different inflation rates with different currencies. Real exchange rates are thus calculated as a nominal exchange rate adjusted for the different rates of inflation between the two currencies. The rate at which the currency of one country would be changed for another if differences in prices and wages between the two countries are taken into account. Real exchange rates are used to compare the values of currencies over time when considering the different rates of inflation in different countries. The real exchange rate measures the price of foreign goods relative to the price of domestic goods.

Mathematically, the real exchange rate is the ratio of a foreign price level and the domestic price level, multiplied by the nominal exchange rate.

Formally:

$$R = (E \cdot P^*) / P$$

Where:

R: real exchange rate

E: nominal exchange rate

P*: foreign price level

P: domestic price level

While the nominal exchange rate measures the relation between the value of two currencies.

Infrastructural Development

Infrastructure is generally seen as those basic and essential services that should be in place if development must take place. They are the basic systems that undergird the structure of the economy. Oisasoje and Ojeifo (2012), describe infrastructure as those specific elements that serve as catalyst for development, as well as improvement in welfare of citizens. Infrastructures are the basic essential facilities and services that should be put in place for development (Idaeho & Adeshina, 2021). It facilitates and accelerates economic development, such that where there are no infrastructures, economic development and growth would be difficult to achieve (Nedozi, et al., 2014). Economic development or growth is virtually impossible without a thriving infrastructure sector.

Waziri et al. (2014), note that infrastructure development is the construction and improvement of foundational services with the goal of sparking economic growth and quality of life. Infrastructural development holistically can be seen as sustained rates of growth of income per capita. Todaro & Smith (2011), is of the view that infrastructural development can be facilitated and accelerated by the presence of physical, social and economic infrastructures. If these facilities and services are not in place, development will be a near impossibility (Migap 2014). According to Fidelis, et al. (2014), traffic congestion, erratic power supply, inaccessible roads and networks, poor telecommunication services, poor drinking water etc. are all features of the nature of the existing infrastructural in Nigeria. Alabi and Ocholi (2010), in describing Nigerian roads, observed that the roads the lowest in Africa in terms of density. They further assert that 31% of the roads are paved as compared to 50% in the middle income countries. Recently, infrastructural development has

been given central attention in the current development policy vision 20: 2020 of the federal government of Nigeria (Adesoye, 2014). To achieve this, the governments will require a large influx of revenue and this can be gotten through taxation.

The contribution of infrastructure to an economy, especially its industrial sector, cannot be overstressed; this is because, it makes productivity more of a breeze through promotion of investment, movement of products, people and services, and facilitation of information and communication, all these, being salient factors for economic diversification (Orji et al. 2017). However, the deplorable situation of most of the infrastructural facilities in Nigeria (as well as their lack of maintenance) especially of the roads, electric power, and water, tend to go against these values of infrastructure, mostly due to inadequate funding from government for maintenance of these facilities, careless use, vandalization, corruption, and delays in construction. Poor infrastructure leads to low productivity because producers of goods and services are discouraged because of higher cost of production, and sometimes, overall inability to get goods to the points of sale. Orji et al (2017) held further that poor infrastructure leads to lower generation of income and inadequate supply of electric power from 1996-1998 can be listed as one of the factors that led to the decline in industrial output (162.9 in 1990, down to 131.8 in 1998) and manufacturing capacity utilization (73.3% in 1981, down to 32.4% in 1998) (CBN, 2019).

Influence of Real Exchange on Custom and Excise Duties and Infrastructural Development

Exchange rate is involved in the flow of goods and services in any nation. In Nigeria there were a lot of policies measure put in place to control excessive demand for foreign exchange due to experiences in the late 1970s and early 1980s. The objectives were to preserve the value of the domestic currency, maintain a favourable external reserves position, and ensure external balance without compromising the need for internal balance and overall goal of macroeconomic stability and infrastructural development (CBN, 2015).

The real exchange rate measures the relative price of goods. A price index compares the prices of goods in a period of time, in relation to another period of time, usually called the base period. If we choose another base period, the price index will also change. This is why, the absolute value of the real exchange rate has no meaning if we do not compare it's value with the value of the real exchange rate in another period of time.

There are several price indexes that can be taken for the calculation of the real exchange rate: the consumer price index, the GDP deflator, the tradable goods price index, etc. The exchange rate of a currency expressed in constant price terms to make allowance for the effects of inflation. For example, where a country experiences a higher rate of domestic inflation than its trade competitors, then its exports will become more expensive than those of competitors' exports and its imports cheaper than domestic products, unless its exchange rate depreciates to offset fully the inflation differential. In situations where exchange rates are fixed by international agreement or determined by market forces that do not reflect relative inflation rates, then nominal exchange rates can differ significantly from real exchange rates. A country's real exchange rate is the more important measure of that country's international competitiveness and thus affects its value of currency and relative revenue to be generated and expenditure by government.

Trade policy in Nigeria has experienced extreme policy fluctuations since 1960s (Adenikinju, 2005). Tariffs have been used to increase fiscal revenue several times, protect the domestic industries from competition and limit imports to secure foreign exchange. Also, to limit importation of particular items, different forms of non-tariff barriers such as prohibitions, licensing schemes and quotas were used. Trade policy was also used to promote manufactured exports and improve the ties in the domestic economy to increase and stabilize exports revenue and brought down the dependency of the economy on the oil sector (Olaniyi, 2005). Exchange rates have effects on the volume of imports and exports as well as country's balance of payments position (Hossain, 2002). Azeez, Kolapo & Ajayi (2012), also took note and affirmed that exchange rate is called exchange rates volatility when there is deviation of

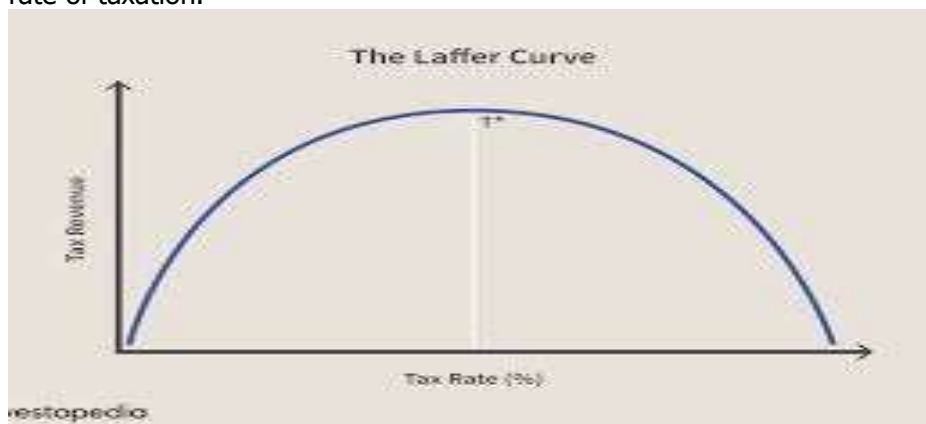
exchange rates over a period of time from the equilibrium. Aliyu (2011) noted that appreciation of exchange rates results in increased imports and reduced exports while depreciation expand exports and discourage imports.

Exchange rate on business directly effects on the global trading and production structure, the ongoing process of globalization may have important implications for the interaction of exchange rates and the overall production of good especially in developing country in order to generate excise duties. Change in the exchange rate influence of the economy can have powerful effects on the macro economy affecting variables such as the demand for exports and imports; real GDP growth, inflation, public infrastructure, business profits and jobs. With most variables in economics, there are time lags involved. The impact of public infrastructure development depends in part or whole of the changes in the currency (real exchange rate) is short-term or long-term.

Theoretical Framework

Arthur Laffer Curve Theory 1974

Economist Arthur Laffer developed it in 1974. The Laffer Curve is an economic theory that describes the potential impacts of tax rates on government spending, revenue, and long-term macroeconomic performance and growth. The Laffer Curve is a theoretical explanation of the relationship between tax rates set by a government and the tax revenue collected at that tax rate. The theory state that there is a relationship between rates of taxation and the resulting levels of the government's tax revenue and foster economic development. The Laffer curve assumes that no tax revenue is raised at the extreme tax rates of 0% and 100%, and that there is a tax rate between 0% and 100% that maximizes government tax revenue. The shape of the curve is a function of taxable income elasticity i.e., taxable income changes in response to changes in the rate of taxation.



Source: Laffer Curve Theory, 1974

The Laffer curve is typically represented as a graph that starts at 0% tax with zero revenue, rises to a maximum rate of revenue at an intermediate rate of taxation, and then falls again to zero revenue at a 100% tax rate. However, the shape of the curve is uncertain and disputed among economists (*Tucker, 2010*). https://en.wikipedia.org/wiki/Laffer_curve_-_cite_note-1 Under the assumption that the revenue is a continuous function of the rate of taxation, the maximum illustrated by the Laffer curve is a result of Rolle's theorem, which is a standard result in calculus. The Laffer curve has also been extended to taxation of goods and services (custom and excise duties). In their 2018 Econometrica paper, Miravete, Seimb, and Thurk, show that in non-competitive markets, the strategic pricing response of firms is important to consider when estimating the Laffer curve (Miravete, Seimb & Thurk, 2018). The authors show that firms increase their prices in response to a decrease in the Ad valorem tax (custom and excise duties), leading to less of a quantity increase than would otherwise be expected. The net effect is to flatten the Laffer curve and move the revenue maximum point to the right.

Reason for the Adoption of Arthur Laffer Curve Theory 1974

The Laffer curve theory is practically applied on Ad valorem tax goods and services by individuals and firms, which hypothetically explain the principle of indirect taxes and macroeconomic performance through government revenue generation. In Nigeria, revenue on custom duties and excise duties have continuously increased over the years till date, ensuring that indirect taxes as generated substantial amount for macroeconomic performance that increase will public infrastructure development in the nation.

Secondly, the Laffer curve strongly explain the principle of elasticity and incidence of tax, the more the quantity of goods and services produced or imported the more the revenue generated by government for macroeconomic performance on certain levels and vice versa. If all things being equally with the real exchange rate of the country. Today, Nigeria is indeed in dire need of effective and efficient tax system in order to generate enough revenue that will stimulate public infrastructure development (Oji, 2000). Which basically customs duties (CUD) and excise duties (EXD), can generate, and are easier to collect and less prone to tax evasion and avoidance. The revenue collected from these sources will support the government achieve her projects and to enhance macroeconomic performance; in terms of increase in public infrastructure development. Finally, the Laffer curve assumes that no tax revenue is raised at the extreme tax rates of 0% and 100%, and that there is a tax rate between 0% and 100% that maximizes government tax revenue. Thus, at extreme customs and excise duties rate of 0% and 100%, public infrastructure development will be slow or unachievable, while at a tax rate between 0% and 100% that maximizes government tax revenue and public infrastructure development will be successful or attainable.

Empirical Reviews

Ayeni and Afolabi (2020), study examined the dynamic relationship between tax revenue, infrastructural development and economic growth in Nigeria, using an annual secondary time series data from 1981 – 2018. Regression analysis was used. Findings from the impulse response results show that while tax revenue influences economic growth and infrastructure, infrastructure does not influence economic growth, but significantly influence tax revenue collected.

Gerald et al. (2016), aimed at establishing the role of customs and excise duties on women cross-border traders of Beitbridge, Chirundu, and Nyamapanda. The research is a case study approach and questionnaire. The research findings show that customs and excise taxes play a role in women cross-border traders if they are fair and simple to understand. Unfortunately, this is not the case in Zimbabwe because the customs and excise taxes on women cross-border traders were found to be negative on profitability and sustenance and do not help women cross-border traders at all. In addition, the customs and excise taxes were found to encourage underhand dealings such as corruption and smuggling. This includes corruption by local and foreign customs officials, delays in goods clearance and restrictions on goods imported. In addition, findings suggest that customs and excise duty information is not easily accessible as well. Thus, the study recommended the implementation of measures that encourage registration of cross-border women traders to allow for preferential or exemption from customs and excise duties using particular thresholds, as well as the implementation of trade facilitation policies and anti-corruption measures, and improvement in the accessibility of taxation information.

Okoror et al (2019), study examined empirically, the impact of company income tax on infrastructural development in Nigeria. This study adopts an ex-post facto research design. In this study, secondary data was adopted. The data covers the period 1981-2017. Dynamic Least Squares for co-integrated regression was used. The results reveal that the coefficient is positive and statistically significant at 5% level. Therefore, we reject the null hypothesis that CIT has no positive and significant impact on Infrastructural development in Nigeria. The study recommends that government should focus on Improving and stimulating Company Income tax revenue. The positive relationship between Company Income Tax and Infrastructural development is an

indication that a higher company Income tax will lead to increased infrastructural development in Nigeria hence efforts should be geared towards expanding the tax base, ensure transparency in collections proper utilization

Ihenyen and Mieseigha (2014), examined taxation as an instrument of economic growth in Nigeria. Using annual time series data sourced from the Central Bank of Nigeria (CBN) statistical bulletin during the period 1980 through 2013, a linear model of Corporate Income Tax (CIT), value added tax (VAT) and economic growth (GDP) was estimated using the ordinary least square (OLS) technique. The empirical result suggests that the hypothesized link among corporate income tax, value added tax and economic growth indeed exist in the Nigerian context. Thus the result offer tantalizing evidence that taxation is an instrument of economic growth in Nigeria. This conclusion points to the need for additional measures by government in ensuring that taxpayers do not avoid and evade tax so that income can be properly redistributed in the economy. In addition, regulatory authorities charged with the sole responsibility of collecting tax should further be strengthened to enforce compliance by taxpayers. Above all, the tax collected should be properly distributed so that economic growth can be properly harnessed.

Inyiama and Ubesie (2016), examine the effect of value added tax and customs and excise duties on Nigeria's economic growth. Secondary sources were explored in data gathering while a simple regression technique was employed in data analysis for test of the study hypotheses. Furthermore, correlation analysis was applied to the assessment of the relationship between non-oil revenue sources and Nigeria's gross domestic product. The outcome reveals that all the non-oil tax revenue affects Nigeria's gross domestic product. On the side of the relationship between the variables studied, the strength of their relationship is very high for all the variables. The researcher concludes that value added tax and customs and excise duties are some of the major contributors to Nigeria's gross domestic product. The revenue sources could be used to predict the value and status of the nation's gross domestic product as indicated by the strength of the relationship between the variables. The federal, state and local authorities therefore could finance a reasonable proportion of their capital and recurrent budgets through non-oil tax revenue.

METHODOLOGY

The study adopted ex-post facto designs. The population and sample size of the study is the entire 36 states and the federal capital territory of Nigeria. Covering twenty (25) years (1997-2022) federal government of Nigeria indirect taxes and economic development index in Nigeria. The instrument of the study was secondary data. The hypotheses were tested using the least square panel data regression analysis with the aid of E-view (10).

Model Specifications

To explore the relationship between the use of custom and excise duties and infrastructural development in Nigeria. The research analyzes were therefore driven by a functional relationship for variables, namely the independent dimension variable custom duties (CUD) and excise duties (EXD). Whereas the dependent variable infrastructural development (INFD)

Hence: The model is specified as:

$$\psi = a_0 + b_1x_1 + E_t \dots 1$$

Where:

a = constant term for the independent variables

ψ = index of outcome variable

b = index of predictor variable

e = error level

x = coefficients

f = function

Thus:

The first hypothesis test model; the relation between custom duties and infrastructural development: $IFND_{it} = a_0 + b_1(CUD)_{it} + e(.05).....(1)$

The second hypothesis test model; the relation between excise duties and infrastructural development: $INFD_{it} = a_0 + b_1(EXD)_{it} + e(.05).....(2)$

The third hypothesis test is a partial correlation of moderator variable matrix of Real exchange rate (RER), custom and Excise Duties (CED) and infrastructural development (INFD).

In order to reduce the base of the independent variable to match the dependent variable, a logarithm transformation of the values shall be made. Hence the final econometric equations as shown below:

$$NLIND_{it} = a_0 + c(NLCUD) + e.....(3)$$

$$NLIND_{it} = a_0 + c(NLEXD) + e.....(3)$$

Where;

$NLIND$ = Natural logarithm of Infrastructural Development

$NLCUD$ = Natural logarithm of Custom Duties

$NLEXD$ = Natural logarithm of Excise Duties

Time Series Property of the Data and Diagnostic Tools

In view of the fact that this study will use time series data and inherently it might exhibit some strong trends, the non-random disposition of the series might undermine the use of some of econometrics tests such as F and t tests. This is because they can cause rejection of a hypothesis which would have otherwise not been rejected and visa. This study intends to conduct stationarity or unit root test, multicollinearity test, and autocorrelation to mitigate such situations.

Analyses and Interpretation

Descriptive Statistics

In order to achieve the specific objectives earlier stated in chapter one of this study, the descriptive statistics of the data employed was initially examined critically. The description statistics of data series gives relevant information about sample statistics such as mean, median, minimum, maximum value, skewness, kurtosis and Jarque-Beta statistics.

Table 1 Descriptive Statistics

	CUD	EXD	INFD	RER
Mean	177.9154	98.10277	6.01E+08	104.8237
Median	113.7300	59.23333	2.10E+08	118.5460
Maximum	668.6700	334.3333	2.50E+09	306.9210
Minimum	1.150000	0.576667	127.8800	0.890000
Std. Dev.	218.9673	117.4864	7.83E+08	92.11265
Skewness	1.317501	1.145224	1.462500	0.698067
Kurtosis	3.309042	2.765133	3.794248	2.759743
Jarque-Bera	10.26483	7.731080	14.92798	2.926745
Probability	0.345902	2.020952	0.000573	0.231454
Sum	6227.040	3433.597	1980660.	3668.829
Sum Sq. Dev.	163018.7	469304.2	5.17E+11	288481.2
Observations	25	25	25	25

Source: Researcher's E-view (v.12) computation Result, 2022

The table shows the descriptive statistics of the data collected for the predator means variables of the study value of custom duties (CUD), exercise duty (EXD) are 177.9154, and 98.10277 respectively. The maximum and minimum values of custom duties (CUD) were 668.6700 and 1.150000, and exercise duty (EXD) was 334.3333 and 0.576667. On the other hand, the standard deviation values of 218.9673 and 117.4864 signify that the data deviates from the mean

values of the three study dimensions, which implies that there is a wide dispersion of the data from the mean because the standard deviation is close to the mean.

The table also indicates the two measures of the criterion variable of the study that infrastructure development has a mean value of 6.01E+08. The maximum and minimum values of infrastructure development (INFD) was 2.50E+09 and 127.8800. On the other hand, the standard deviation values of 6765977. and 7.83E+08 signify that the data deviates from the mean values of the two study measures, which implies that there is a dispersion of the data from the mean because the standard deviation is close to the mean. Also on the other hand, the table also indicates that the moderator variable of the study, exchange rate (RER), has a mean value of 56590.29. Also, the median value of 28958.00, the maximum and minimum values of 756983.0 and 14954.00. On the other hand, the standard deviation value of 123371.7, which signifies that the data deviates from the mean values of the two study measures because the standard deviation is close to the mean.

Stationary (Unit Root) Test

In order for data collected for the study are fit for analysis, the stationarity or unit root test was conducted on the study variables data. Using the popular Augmented Dickey Fuller (ADF) unit root test due to the fact that the data involves 25 years' time series. According to Gujarati & Porter 2009, the unit root test is performed to ascertain that the time series data are stationary for co-integrated.

Table 2 Summary Stationary Test Result

Variables	Order of Diff. & Intercept	ADF Statistics	Test critical values at		Probability
NLCED	First difference and individual intercept	-5.627271	1%	-3.737853	0.0002
			5%	-2.991878	
			10%	-2.620542	
NLEXD	First difference and individual intercept	-3.809971	1%	-3.737863	0.0085
			5%	-2.991878	
			10%	-2.636542	
NLINFD	First difference and individual intercept	-5.439765	1%	-3.679202	0.0001
			5%	-2.987767	
			10%	-2.622989	

Source: Researcher's E-view (v.12) computation Result, 2021

From the above table, all the variables are stationary since the ADF values are greater than the corresponding critical values and the probability is less than 0.05 for all variables. Therefore, the data becomes stationary at first difference integrated of order 1 that is 1(1), for {(custom duties (NLCED) and excise duties (NLEXD), and infrastructural development (INFD) at second difference and individual intercept and trend 1(2).

Diagnostic tests of Data

Table 3: Summary of Diagnostic tests of Data

S/N	Test	F-statistics		P-value	
		Model1	Model2	Model1	model2
1	Autoregressive conditional heteroscedasticity: ARCH LM test	0.002146	0.150756	0.9633	0.0743

Source: Researcher's Statistical Computation from E-view (v.10), 2021

The table 4.4 above the serial correlation test, the null hypothesis of no serial correlation between the variables was not rejected since the p value is greater than 5% as shown in the table. Lastly the null hypothesis of no heteroscedasticity was not rejected too because the p-value is greater than 5% as shown in the table. Therefore, the diagnostic tests indicate that the residuals are normally distributed, homoscedastic and serially uncorrelated.

The First Model: The first hypothesis test model; the relation between custom duties and infrastructural development: $INFD_{it} = a_0 + b_1(CUD)_{it} + e (.05).....(1)$

Table 4

Dependent Variable: *INFD*

Method: "Least Squares

Date: 06/009/22 Time: 2:16

Sample: 2011 2020

Included observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>CUD</i>	5.743965	1.409350	2.243306	0.0307
<i>C</i>	5.005327	4.048407	6.062741	0.3460
R-squared	0.738301	Mean dependent var		3.40297
Adjusted R-squared	0.714100	S.D. dependent var		0.10827
S.E. of regression	92.48529	Akaike info criterion		5.20964
Sum squared resid	76.23004	Schwarz criterion		4.26127
Log likelihood	-59.75332	Hannan-Quinn criter.		4.52872
F-statistic	1.305325	Durbin-Watson stat		1.94800
Prob(F-statistic)	0.006298			

Source: E-view (v.11) Analyzed Researcher's Result, 2022

From the table output above, the coefficient of custom duties (*CUD*) and infrastructural development (*INFD*) is 5.743965. This value implies that for every unit effect of infrastructural development (*INFD*) is predicted to be accompanied by a 5.743965-unit contribution of custom duties (*CUD*).

The T-statistics is below 1, which is not sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of custom duties is 0.0307, which means the relationship between custom duties and infrastructural development is statistically significant at the 5 percent significant level.

The result also showed that the R^2 , which measures the goodness of fit, is 0.738301, meaning that 73 percent of the variation in the infrastructural development can be explained by the dimension of the independent variables (custom duties). The result indicates that the model is proper and adequate for the study. The model's goodness of fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 1.305325 and 0.006298 respectively". The Durbin-Watson statistics of 1.94800 also indicate the absence of serial autocorrelation.

The second hypothesis test model; the relation between excise duties and infrastructural development: $INFD_{it} = a_0 + b_1(EXD)_{it} + e (.05).....(2)$

Table 5

Dependent Variable: INFD
 Method: Least Squares
 Date: 06/009/22 Time: 2:29
 Sample: 2011 2020
 Included observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AF	1.204574	2.123104	2.182151	0.1051
C	11.75079	2.922195	3.746295	0.0263
R-squared	0.611742	Mean dependent var		9.041374
Adjusted R-squared	0.590542	S.D. dependent var		1.047291
S.E. of regression	1.042874	Akaike info criterion		3.372931
Sum squared resid	57.40980	Schwarz criterion		3.054280
Log likelihood	-54.75770	Hannan-Quinn criter.		3.733087
F-statistic	0.053720	Durbin-Watson stat		2.180430
Prob(F-statistic)	0.000018			

Source: E-view (v.11) Analyzed Researcher's Result, 2022

From the table output above, the coefficient of excise duties (*EXD*) and infrastructural development (*INFD*) is 1.204574. This value implies that for every unit effect of infrastructural development (*INFD*) is predicted to be accompanied by 1.204574 unit contribution of excise duties (*EXD*).

The T-statistics is below 1, which is sufficient statistical evidence of significant @ 1% T-stat confidence level. The Prob value of audit fee is 0.1051, which means the relationship between excise duties and infrastructural development is not statistically significant at the 5 percent significant level.

The result also showed that the R^2 , which measures the goodness of fit, is 0.611742, meaning that 61 percent of the variation in the infrastructural development can be explained by the dimension of the independent variables (excise duties). The result indicates that the model is proper and adequate for the study. The model's goodness of fit and appropriateness is also supported by the outcomes of F-statistics and probability of F-statistics of 0.053720 and 0.000018 respectively". The Durbin-Watson statistics of 1.94800 also indicate the absence of serial autocorrelation.

Analysis on the Moderating Variable

Partial Correlation Model for H_{03} : The third hypothesis test is a partial correlation of moderator variable matrix of Real exchange rate (RER), custom and Excise Duties (CED) and infrastructural development (INFD).

H_{03} : Real exchange rate does not have moderate influence in the relationship between custom and excise duties and economic development in Nigeria from 1997 - 2021.

Table 6

Partial Correlations				
Control Variables			CED	INFD
RER	CED	Correlation	1.000	.542
		Significance (2-tailed)	.	.137
		df	0	25
	INFD	Correlation	.542	1.000
		Significance (2-tailed)	.000	.
		df	25	0

Source: Researcher's Statistical Result from SPSS V.23

From the output of the partial correlation explains that, real exchange rate bears a significant influence on the relationship between custom and excise duties and infrastructural development. The correlation coefficient of 0.542 means that, real exchange rate does not positively influence the interplay of custom and excise duties and infrastructural development as depicted by the probability level of 0.137 which is lesser than the chosen alpha level of 0.05, thus leading to the rejection of the null hypothesis and accepting the alternative hypothesis. Hence, there no significant moderating influence of real exchange rate in the relationship between custom and excise duties and infrastructural development in Nigeria.

CONCLUSION

The economic growth of a nation is dependent on a stable means of revenue. For the government to carry out its duties, revenue has to be generated. Hence findings of the study were that there is significant relationship between customs duties and infrastructural development in Nigeria. There is no significant relationship between excise duties and infrastructural development in Nigeria. And also, real exchange rate does not have moderate influence in the relationship between custom and excise duties and economic development in Nigeria from 1997 – 2021. Thus the study concludes that the conventional perception is that international trade contributes to higher economic growth and other economic development indices (infrastructural development) both in the short run and the long run through the provision of international trade or foreign trade activities using foreign exchange rates. It thus suggests that international trade is the growth engine, particularly in the developing countries. However, most developing countries are not achieving these benefits from trade as a result of their volatile exchange rates. Effective policy measures to tackle these are very important for the development of Nigeria, given its large number of imported and exported products and services that it can trade. The government of Nigeria has not effectively and efficiently utilized the customs and excise duty revenue to improve the macroeconomic development of the country because of the persistent rise in the exchange rate. The populace needs assurance that their money is being put to use for their betterment through infrastructural development, employment, etc. for a better real exchange rate.

RECOMMENDATIONS

1. The government should focus more on customs duties as a means of boosting the infrastructural development in Nigeria. Thus, adequate training and development of staff and other computerized revenue collection methods should be swiftly introduced in order to boost revenue generation.
2. Nigeria's excise duties are in dire need of reforms and full implementation so that various loopholes that have served as conduit pipes for free outflow of revenue to individuals can be blocked. Also, corrupt, fraudulent, and other financial malpractice officers should be sacked or be punished.
3. Finally, since the real exchange rate is found to have an insignificant and negative impact on the economy, reforms should be made to customs and excise duties and they should be more strictly adhered to as one of the mainstays of revenue generation in the country.

Scholarly Contributions

1. The introduction of the real exchange rate as an economic factor or moderator of the study.
2. Separating custom duties and excise duties to statistically ascertain their parallel contributions as macroeconomic propellers

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