

Customs and Excise Duties as Determinants of Economic Development of West African Countries

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ABSTRACT

The study focused on custom and excise duties and economic development of West African countries. Gross domestic product, per capita income and inflation rate were used to measure economic development. To achieve the objectives of the study ex-post facto research design was adopted. The population of the study is made up all the 16 West African countries while the sample size is made up of 10 West African countries that were purposively selected. The findings revealed that custom and excise duties have a positive and significant effect on gross domestic product of West African countries. However, custom and excise duties have a negative and no significant effect on per capita income and inflation rate of West African countries. The study recommends that West African countries should work toward harmonizing customs and excise duties. The study also recommends that West African countries should strengthen customs administration through digitalization, automation, and anti-corruption measures can significantly improve revenue collection, reduce delays at ports, and boost investor confidence. Efficient border processes also reduce transaction costs for businesses. This will in turn improve per capita income of West African countries.

Keywords: Custom and excise duties, economic development, Laffer curve theory, macroeconomic variables and Autoregressive Distributed Lag.

INTRODUCTION

Economic development remains a major policy concern in West Africa because the region continues to confront persistent challenges relating to poverty, unemployment, infrastructure deficits, low productivity, weak productive capacity, and vulnerability to external economic shocks. Although West African countries possess substantial natural and human resources, many economies remain characterized by a relatively narrow productive base, dependence on primary commodities, and limited domestic revenue mobilization. Consequently, governments in the region have increasingly emphasized fiscal reforms and improved domestic resource mobilization as essential components of sustainable economic development. Tax revenue serves as a critical instrument for driving and sustaining economic growth in any nation. It offers developing countries a stable and predictable fiscal environment that fosters growth and finances both social and physical infrastructure needs (Raji et al., 2025). Consequently, the potential of taxation as a stable and predictable driver of economic development remains largely untapped, contributing to fiscal deficits, increased reliance on debt, and constrained capacity for transformative investments (Orji, 2024).

West Africa, characterized by a rich diversity of cultures, abundant natural resources, and a growing population. Despite these endowments, the region faces significant hurdles such as poverty, unemployment, infrastructural deficits, and heavy reliance on primary commodity exports (George-Anokwuru, 2023). Taxation constitutes one of the principal instruments through which governments mobilize resources to finance public expenditure and influence economic activity. Within the tax system, customs and excise duties are particularly important in developing economies because they can generate revenue from international trade and the domestic consumption or production of selected goods. Customs duties are generally imposed on goods entering or, in some cases, leaving a country, whereas excise duties are imposed on particular goods, usually at the production, importation, or consumption stage. Beyond their revenue-generating function, these taxes can influence relative

prices, consumption patterns, domestic production, investment decisions, trade flows, and the competitiveness of firms.

In West Africa, the heavy administrative burden of managing exemptions, combating smuggling, and ensuring compliance often undermines the effectiveness of customs systems, leading to revenue leakage and inefficiencies. Moreover, poorly designed duties can distort markets, discourage trade, and hinder economic growth, particularly in a region striving to integrate into global value chains (Ewulum, 2024). These challenges are compounded by the structure of customs and excise duties, which can either facilitate or impede trade.

The African Continental Free Trade Area (AfCFTA), launched in 2021, represents a renewed push to reduce trade barriers and boost intra-African trade, with potential to increase GDP, create jobs, and enhance livelihoods. Yet, the success of such initiatives hinges on effective customs administration and the alignment of duty policies with development goals (Ese, et al., 2025). Customs duties, when strategically applied, can support industrialization by protecting infant industries and encouraging local value addition. Yet, excessive or poorly targeted duties can stifle innovation, increase production costs, and deter foreign investment, as seen in the challenges faced by export industries due to weak customs administration (George-Anokwuru, 2023).

Trade facilitation measures, such as simplifying border procedures and adopting IT-based systems like the Automated System for Customs Data (ASYCUDA), have shown promise in over 40 African countries, including those in West Africa. These reforms enhance efficiency, reduce corruption, and improve revenue collection. However, challenges such as inadequate infrastructure, limited access to finance, and weak institutions persist, hindering the region's trade potential. The World Bank estimates that sustained growth of 8-9% annually is needed to significantly reduce poverty, a target that remains elusive for most West African nations. Moreover, the interplay between customs duties and regional integration highlights the need for coordinated policies to enhance competitiveness and leverage the benefits of initiatives like AfCFTA (AfCFTA, 2022).

However, the impacts of customs and exercise duties on economic development remains a subject of debate, with varying implications for trade, industrialization, and overall growth. This study seeks to explore the multifaceted relationship between customs and excise duties and the economic development of West African countries, focusing on recent trends and empirical evidence.

Revenue generated from custom and excise duties contributed meaningfully to economic growth, government should strengthen customs administration, improve revenue collection efficiency, and intensify efforts to curb smuggling and other forms of revenue leakages in order to enhance the contribution of custom and excise duties to sustainable economic growth, (John-Akamelu, C. R. 2024)

The regional integration agenda has become even more significant following the implementation of the African Continental Free Trade Area (AfCFTA). The reduction of tariff and non-tariff barriers under continental and regional trade arrangements is expected to improve market access, encourage intra-African trade, facilitate regional value chains, and create opportunities for industrialization. Nevertheless, the extent to which these benefits are realized depends considerably on customs administration. Inefficient border procedures, inconsistent implementation of trade rules, inadequate infrastructure, and weak information systems can increase the cost of cross-border transactions and undermine the gains expected from tariff liberalization.

Recent ECOWAS initiatives illustrate the increasing emphasis on customs modernization and trade facilitation. For example, the Interconnected System for the Management of Goods in Transit (SIGMAT) has been developed to facilitate the exchange of customs information among West African customs administrations and improve the management of goods in transit. Such digitalization initiatives are intended to reduce delays, improve transparency, and strengthen the efficiency of customs procedures.

The fiscal importance of customs and excise duties is also evident at the national level. In Liberia, for example, recent fiscal reform proposals have included harmonizing excise taxes on domestically produced and imported goods, expanding the excise tax base, and reducing discretionary tax exemptions. The International Monetary Fund (IMF) has identified such measures as potential sources of additional revenue while emphasizing the need

to improve the efficiency and structure of the tax system.

Customs and excise duties are critical fiscal instruments employed by governments worldwide to generate revenue, regulate trade, and protect domestic industries. In West African countries, these duties play a pivotal role in shaping economic policies and influencing the trajectory of economic development. However, the impact of customs and excise duties on the economic development of West African nations is a complex and multifaceted issue, marked by both opportunities and challenges.

According to the World Bank (2023), trade taxes, including customs duties, account for a substantial portion of government revenue in countries like Nigeria, Liberia, Ghana, and Côte d'Ivoire, often exceeding 20% of total fiscal income. This reliance is driven by the region's dependence on imports for consumer goods, raw materials, and capital equipment, making customs duties a relatively stable and administratively feasible revenue source.

The Economic Community of West African States (ECOWAS) has made strides toward promoting free trade and economic cooperation through initiatives like the ECOWAS Trade Liberalization Scheme (ETLS). However, inconsistent application of customs duties, high tariff rates, and non-tariff barriers such as bureaucratic delays and corruption at border posts undermine these efforts (AfDB, 2022). These issues not only reduce the effectiveness of customs and excise duties as revenue tools but also hinder broader economic development goals. It is against these backdrops that this study examined the effect of custom and excise duties as determinants of economic development of West African countries. Therefore, the main objective of the study is to examine the effect of custom and excise duties on economic development of West African countries. The specific objectives include:

- (i) To examine the effect of custom and excise duties on gross domestic product of West African countries.
- (ii) To determine the effect of custom and excise duties on per capita income of West African countries.
- (iii) To assess the effect of custom and excise duties on inflation rate of West African countries.

REVIEW OF RELATED LITERATURE

Custom and Excise Duties

Customs duties are a substantial revenue stream for the government, as they are borne by importers of certain commodities. Fiscal income derived from taxes, tariffs, and duties imposed on cross-border trade activities, serving as a crucial component of government revenue and a tool for economic regulation (Forcha-Chigbo & Godwin, 2026).

The implementation of the AfCFTA will affect government revenue in member states and might require a switch from customs duties to other revenue sources, the transition from a tax revenue structure anchored by customs revenue to one dominated by income taxes and taxes on domestic consumption was a protracted and unplanned process. Along with the shift in the role of customs duties from revenue-generating to protective instruments, and extensive use of non-tariff barriers, these developments meant that import taxes became markedly less important tax handles during the course of the 20th century (Freitag & Siebrits, 2026).

Customs duties are imposed on imported commodities, whereas excise taxes are imposed on items produced domestically (Egbuhuzor & Tomquin, 2021). According to George-Anokwuru et al. (2020), a tax on a cost or outlay that can be transmitted, in whole or in part, to another person is known as an indirect tax. Customs duties are a substantial revenue stream for the federal government, as they are borne by importers of certain commodities.

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, in the context of Nigeria, 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.

Revenue generated from custom and excise duties contributed meaningfully to economic development, government should strengthen customs administration, improve revenue collection efficiency, and intensify efforts to curb smuggling and other forms of revenue leakages in order to enhance the contribution of custom and excise duties to sustainable economic growth, (John-Akamelu, C. R. 2024).

Economic Development

Economic development represents a sustained increase in the productive capacity of the economy and the continuous improvement in living standards through expansion in output, employment, and investment (Forcha-Chigbo & Godwin, 2026). According to Chukwudi et al. (2026), the effectiveness of public expenditure and the allocation of tax revenue are important in achieving improved socioeconomic outcomes. In this regard, economic development is measured by gross domestic product (GDP) which provides the total value of goods and services produced within a country's borders over a specific period (Obasuyi & Akode, 2026).

A strong idea of economic development has greatly developed beyond the more limited understanding of income growth to include multidimensional changes in human well-being, institutional quality, and structural change, this is because this systems-oriented perspective acknowledges the fact that development is not linear but an outcome of the interplay of various reinforcing factors (Oke et al., 2026).

Development in the economy refers to more than just growth. According to Li and Zhong (2021), the process through which a nation's population increases gradually from a low-income, traditional economy to a high-income, modern economy is known as economic development. Its scope includes the policies and legal frameworks that a nation implements to improve the social, political, and economic standing of its people.

Development in the areas of individual safety and liberation from social fear is necessary for intensive growth (Ajaikaye, 2022). Therefore, development needs to be a multifaceted process that includes significant adjustments to national institutions, public attitudes, and social structures in addition to accelerating economic growth, lowering inequality, and ending poverty. . The human development of a nation, which includes factors like health, road system, safety, level of agricultural mechanization, living standards, and education, is correlated with its economic development (Popa & Botos, 2021).

Effect of Custom and Excise Duties on Economic Development

The impact of customs and excise duties on economic development in West Africa is multifaceted, influencing revenue, industrialization, trade, and poverty alleviation. On the positive side, customs duties provide a stable revenue stream for governments. In Nigeria, for example, the Nigeria Customs Service (NCS) reported collecting over N2.14 trillion in 2023, funding infrastructure, health, and education programs. Similarly, Ghana's customs revenue supports public expenditure, with the Ghana Revenue Authority noting a 12% increase in collections in 2022 despite economic challenges. Excise duties on products like fuel and alcohol also contribute, with South Africa's 2024 budget proposing increases in excise duties on tobacco and alcohol by 4.7% and 6.7–7.2%, respectively, to boost revenue and address social costs.

One of the key difficulties confronting policymakers is planning and executing a tax framework that can create adequate income to fund public labour and products integrated or adapted to taxpayers' specific needs, while boosting private speculation and advancing sustainable economic development (Odoh et al., 2026). World Bank Enterprise Surveys (2023), found that African firms, including those in West Africa, perceive customs and trade regulations as obstacles, particularly in lower-income countries where corruption and political instability exacerbate delays and costs at borders. Custom and Excise Duties (CED) are taxes levied on goods imported, exported or produced inland, (Messina, 2024).

Regional integration efforts, such as the ECOWAS CET and the African Continental Free Trade Area (AfCFTA), aim to mitigate these issues by reducing intra-regional tariffs and promoting trade. Carnegie Endowment for International Peace (2024), highlighted the potential of AfCFTA to boost West African value chains, particularly in critical minerals and manufacturing, as a counter to China's Belt and Road Initiative.

However, inconsistent implementation, slow ratification of protocols, and poor infrastructure limit progress, as noted in International Development Research Centre (IDRC, 2023). For instance, ECOWAS faces challenges like delayed payments, low attendance at meetings, and weak enforcement of community decisions, undermining economic integration. Exemptions and duty relief schemes, while intended to spur investment, often lead to revenue losses and administrative burdens. According to **Odoh et al. (2026)**, key observations suggest in this manner that a decent tax structure assumes different functions in the economic development of any country. These functions include that the degree of tax assessment influences the degree of public reserve funds and consequently triggers the volume of assets accessible for capital development

Laffer Curve Theory

Economist Arthur Laffer developed the theory 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. However, the shape of the curve is uncertain and disputed among economists (Tucker, 2010).

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.

Empirical Review

Ese, et al. (2025) examined the impact of capital gains tax and customs and excise duties on economic growth in Nigeria, using the Auto-Regressive Distributed Lag model. The descriptive statistics showed that capital gains tax had a mean value of ₦6.74 billion, while customs and excise duties averaged ₦78.76 billion, reflecting variations in tax revenue contributions over time. The results states that capital gains tax contributed more to economic growth than trade-related taxes and in the short run, customs and excise duties had a negative effect on gross domestic implying that excessive trade taxation may hinder economic activity.

Raji, Bello-Olatunji and Jinad (2025) empirically examined the relationship between tax revenue and economic development in Sub-Saharan African countries, Using ADF tests, bounds testing and an Error Correction Model (ECM), the study found that the effect of CED differs across countries. The study's results therefore indicate that customs and excise duties do not have a uniform effect on economic development across the selected African economies. The positive lagged effects in Ghana contrast with the negative lagged effect in Kenya and the insignificant Nigerian result. This cross-country variation may reflect differences in trade structures, import dependence, tax administration, tariff regimes and the way customs revenue is translated into public expenditure.

John-Akamelu (2024) specifically investigated the effect of customs and excise duties on Gross Domestic Product (GDP) from 2001 to 2022. The findings revealed that customs and excise duties had a positive and statistically significant effect on Nigeria's economic growth. The study therefore concluded that revenue generated from customs and excise duties contributed meaningfully to Nigeria's economic growth.

George-Anokwuru (2023) examined the effect of customs and excise duties on economic growth in Nigeria within the period of 1980 to 2022. The result revealed that customs and excise duties contribute positively and significantly to economic growth in Nigeria both in the short and long runs. Also, in the long run, inflation rate has negative and significant relationship with economic growth in Nigeria but in the short run inflation rate has

positive and significant relationship with economic growth.

Maccarthy and Adamu (2022) examined custom and excise duties and infrastructural development in Nigeria from 1997 - 2021. 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.

Dritsaki and Katerina (2022) examined the relationship between tax revenues and three economic indicators namely change in gross domestic product, savings and investment in Greece during the period 1965-2002. They applied the seemingly unrelated regression (SURE) approach in order to determine the relationship between tax categories and economic indicators. Their results showed that a long run relationship exist between tax categories and economic indicators and are significant. Particularly, they found a robust negative relationship between customs duty and gross domestic product.

Sameti and Rafie (2020) analyzed the relationship between income distribution effects of tax and economic growth in Iran and some selected East Asian countries. They used panel data regression in the period 1990-2006. Their results denoted that the impact of customs duty on economic growth is negative and significant, but the ratios of tax on income, profits and capital gains have positive and significant effects on economic growth.

METHODOLOGY

Ex-post facto research design was used in carrying out study. *Ex-post facto* was used because the data for the study are already in existence and as such cannot be manipulated by the researcher.

The population of the study is made up of 16 West African countries. The sample size of ten (10) West African countries were selected based on availability and up to date data. The selected countries are; Nigeria, Ghana, Mali, Benin, Burkina Faso, Gambia, Guinea, Ivory Coast, Senegal and Togo. The data was obtained from the world development indicators, the World Bank, IMF world economic outlook database, African Statistical Year Book, CBN and FIRS for a period of 30 years covering 1996 to 2025. The methods that was adopted regarding data collection in this research include archival retrieval method, document investigation/analysis, and extensive library search, internet and website surfing. The data used in this study were collected based on the variables identified in the research objectives. The data for custom and excise duties (CED), Gross Domestic Product (GDP), Per Capita Income (PCI) and inflation rate (INFR) for all the countries from the sample size were accordingly obtained. The data were analyzed using descriptive statistics, Unit root test and autoregression distributive lag.

The model specification are:

Functional form

$$\Delta GDP = f(CED) \dots\dots\dots 1$$

$$\Delta PCI = f(CED) \dots\dots\dots 3$$

$$\Delta INFR = f(CED) \dots\dots\dots 2$$

In Econometric form;

$$\Delta GDP_t = \alpha_1 + \beta_1 LNCED_t + \mu_t \dots\dots\dots 4$$

$$\Delta PCI_t = \alpha_1 + \beta_1 LNCED_t + \mu_t \dots\dots\dots 5$$

$$\Delta INFR_t = \alpha_1 + \beta_1 LNCED_t + \mu_t \dots\dots\dots 6$$

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Table 4.1: Summary statistics of the macroeconomic variables used for the study (1996 - 2025)

	LNCED	GDP	PCI	INFR
Mean	4.633411	61.77492	0.931344	0.980483
Median	4.965726	1.820000	0.044508	0.033418
Maximum	6.783949	5343.890	99.19179	115.7143
Minimum	0.597695	-249.4710	-0.999998	-13.39683
Std. Dev.	1.304589	452.1838	7.678135	9.649076
Skewness	-0.705535	10.92760	11.43561	11.29024
Kurtosis	2.681387	126.9183	137.9426	134.2605
Jarque-Bera	25.46038	195278.5	234157.3	221739.9
Probability	0.000003	0.000000	0.000000	0.000000
Sum	1352.956	18285.38	279.4032	294.1449
Sum Sq. Dev.	495.2680	60318701	17627.17	27838.30
Observations	292	296	300	300

Source: E-view output extracted from appendix 1

The custom and excise duties (CED) as a mean value of 3.95%, which implies that the average CED rate across West African countries is about 3.95%. CED also has a median value of 4.42% which suggests the CED rates are slightly skewed left (confirmed by skewness), with more countries having CED rates slightly above the mean. The maximum and minimum values 4.60% and -0.61% respectively implies that there's a notable disparity, showing wide variation in CED policies. The standard deviation of 1.63% indicates a moderate variability in CED rates.

The Skewness value of -0.83 indicated a left skewness meaning that few countries have very low CED rates. Also, the Kurtosis value of 2.69 indicates a close to normal distribution (a kurtosis of 3), meaning CED data is relatively stable and not prone to outliers. Finally, the Jarque-Bera (JB) value of 35.71 with the respective probability value of 0.000 ($p < 0.05$) indicates that the distribution is statistically non-normal, though not drastically.

The Gross Domestic Product (GDP) has a Mean value of 61.77 which implies that on average, GDP appears low, but this is likely due to scaling or specific GDP measures. GDP has the Median value of 1.82 which indicates a very low median compared to the mean suggests significant right skewness. GDP has the maximum and minimum values of 5343.89 and -249.47 respectively, which indicates extremely wide range, indicating high disparities in economic performance across countries. The negative minimum may indicate economic contraction in some years. It has a Standard Deviation of 452.18 which indicates a very high dispersion, consistent with the wide GDP range. GDP has a Skewness of 10.93 which indicates a Strong right skew, a few countries have exceptionally high GDP. The Kurtosis value of 126.92 indicates extremely leptokurtic; there are sharp peaks or extreme outliers. Finally, the Jarque-Bera (JB) value of 195,278.5 with the respective probability value of 0.000 ($p < 0.05$) implies that the data set is not normally distributed.

Per Capita Income (PCI) has the Mean value of 0.93. This likely indicates per capita income is scaled or expressed in an index. The mean is close to 1. PCI has Median value of 0.04 which indicates a large difference between mean and median suggests very high skewness. PCI has the maximum and minimum values 99.19 and -1.00 respectively, which indicates a huge spread and presence of extreme outliers. PCI has a Standard Deviation of 7.68 which indicates a large variation in income across individuals in different countries. The Skewness of 11.44 indicates extremely skewed to the right – a few high-income countries drive up the mean.

The Kurtosis value of 137.94 indicates an extremely high, pointing to heavy tails and extreme outliers. Finally, Jarque-Bera (JB) value of 234,157.3 with the $p < 0.05$ implies that data set is not normally distributed.

The Inflation Rate (INFR) has the Mean value of 0.98 which indicates that inflation appears low on average, but the scale might be standardized. The median value of 0.03 implies that the mean is heavily affected by a few countries with very high inflation. The maximum and minimum values of 115.71 and -13.40 respectively indicates a huge range, possibly including hyperinflation and deflation episodes. The standard deviation of 9.65 indicates very volatile inflation patterns across the region. The Skewness value of 11.29 indicates a highly skewed, again confirming a few extreme inflation cases. The Kurtosis value of 134.26 indicates a highly leptok-

urtic, pointing to a few extreme inflationary spikes. Finally, the Jarque-Bera (JB) value of 221,739.9 with respective probability value of 0.0000 ($p < 0.05$) implies that data set is not normally distributed.

Table 4.2: Unit Root Test Table

Variable	LLC (Common P-value)	Difference	Order
LNCED	0.0000	1 st difference	1(1)
GDP	0.0000	1 st difference	1(1)
PCI	0.0000	Level	1(0)
INFR	0.0000	Level	1(0)

Source: E-view Output extracted from appendix 2

The table above shows the result of the first test required to know the common and individual stationarity of the variables. For the common stationarity test, the Levin Lin Chu (LLC) test for common stationarity was used which considers lags in data series. A variable is stationary if the p-value is less than or equal to 0.05 level of significance. The result from the table shows that PCI and INFR are stationary at level. However, CED and GDP is stationary at first difference. Since there is mixed order of integration (1(0) and 1(1)), ARDL (Autoregressive Distributed Lag) is the most suitable analytical tool for study.

ARDL Test on the effect of custom and excise duties on Gross Domestic Product of West African countries.

Table 4.3: ARDL long-run and short-run result

Dependent Variable: D(GDP)				
Method: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-run (Pooled) Coefficients				
LNCED	0.14745	0.04472	3.297	0.0011
C	0.51254	0.11223	4.56685	0
Short-run (Mean-Group) Coefficients				
COINTEQ	-1.1325	0.28088	-4.0321	0.0001
D(GDP(-1))	0.10827	0.21172	0.51139	0.6095
D(GDP(-2))	-0.1215	0.24352	-0.499	0.6182
D(GDP(-3))	-0.2465	0.31471	-0.7834	0.4342
D(LNCED)	-141.54	118.442	-1.195	0.2332
D(LNCED(-1))	-453.12	523.109	-0.8662	0.3872
D(LNCED(-2))	-161.16	168.955	-0.9538	0.3411
D(LNCED(-3))	631.179	594.181	1.06227	0.2892
Log-Likelihood:	-1061.2			

Source: E-view output extracted from appendix 3A

Long-Run Relationship

The long-run coefficients, pooled across the panel, provide insight into the sustained effects of CED on GDP. The coefficient for LNCED is 0.147452, with a t-statistic of 3.297004 and a p-value of 0.0011, indicating a statistically significant positive relationship at the 5% level. This suggests that a 5% increase in CED is associated with a 0.147452% increase in GDP in the long run, holding other factors constant. This positive

effect implies that CED, as a source of government revenue, may enhance economic development by funding public investments in infrastructure, education, and healthcare key drivers of GDP growth in developing regions like West Africa. The constant term (C) is 0.512543, with a p-value of 0.0000, indicating it is statistically significant, suggesting that the baseline GDP growth is significant when CED is zero, and the model's explanatory power largely derives from LNCED.

The cointegrating equation (COINTEQ) coefficient of -1.132542, with a p-value of 0.0001, confirms a long-run equilibrium relationship between CED and GDP. The negative sign indicates that approximately 113.25% of any disequilibrium is corrected each period, reflecting a robust error-correction mechanism. This suggests that while short-term fluctuations may occur, the economies of West African countries tend to converge toward a stable long-run relationship between CED and GDP.

Short-Run Dynamics

The short-run coefficients, estimated using the Mean-Group (MG) approach, reveal the immediate effects of changes in CED and lagged GDP on current GDP. The lagged dependent variables (D(GDP(-1)) to D(GDP(-3))) have small coefficients (0.108273 to -0.121512) and are statistically insignificant (p-values > 0.05), indicating that past GDP growth has limited predictive power for current growth in the short run within this model.

The short-run effects of CED (D(LNCED), D(LNCED(-1)), D(LN CED (-2)), and D(LN CED (-3))) are substantial but statistically insignificant, with coefficients of -453.1236, -161.1556, and 631.1785, respectively, and p-values exceeding 0.05. The coefficient of -141.5393 suggests a negative impact of CED changes on GDP. However, the lack of significance for lagged terms and the wide standard errors (e.g., 118.4415 for D(LNCED)) indicate volatility in the short-run response, possibly reflecting implementation lags, economic shocks, or structural rigidities in West African economies.

Test of Hypothesis one

H0₁: Custom and excise duties have no significant effect on gross domestic product of West African countries.

The p-value of the long-run coefficient (0.0011) suggests the rejection of the null hypothesis, meaning that custom and excise duties have a positive and significant effect on gross domestic product in West African countries.

ARDL Test on the effect of custom and excise duties on per capita income of West African countries.

Table 4.4: ARDL long-run and short-run result

Dependent variable: D(PCI)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-run (Pooled) Coefficients				
LNCED	-0.0092	0.00593	-1.5536	0.1215
C	0.07422	0.02367	3.1358	0.0019
Short-run (Mean-Group) Coefficients				
COINTEQ	-0.8468	0.1051	-8.0566	0

D(LNCED)	2.31735	2.44697	0.94703	0.3445
D(LNCED(-1))	-19.599	20.4191	-0.9599	0.338
D(LNCED(-2))	12.2783	12.6388	0.97148	0.3322
Log-Likelihood:	-142.16			

Source: E-view output extracted from appendix 3B

The Autoregressive Distributed Lag (ARDL) model was employed to examine the impact of custom and excise duties (CED), represented by the logarithm of CED (LNCED), on economic development in West African countries, with per capita income (PCI) as the proxy for economic development. This panel dataset spans from 1999 to 2024, including 10 West African countries. The selected model is PMG(1,4), determined based on the Akaike Information Criterion (AIC), which ensures an optimal balance between model fit and complexity.

Long-Run Relationship

In the long-run section of the ARDL results, the coefficient for LNCED is -0.009204 with a standard error of 0.005925, a t-statistic of -1.553557, and a p-value of 0.1215. This negative coefficient indicates that, on average, a 1% increase in CED is associated with a 0.009% decrease in PCI in the long run. However, this effect is not statistically significant at the 5% significance level ($p > 0.05$). This suggests that while CED may have a negative association with economic development over the long term, this relationship lacks sufficient evidence to conclude it is systematic or robust.

The constant term (C) in the long run is 0.074216, with a p-value of 0.0019, indicating statistical significance. This implies that in the absence of CED (when LNCED = 0), PCI tends to grow at a modest rate, reflecting perhaps the influence of other macroeconomic factors or structural characteristics within these economies that promote income growth independently of CED policy.

Short-Run Dynamics

The short-run coefficients (Mean-Group estimates) provide insight into the immediate effects of changes in CED on PCI:

The error correction term (COINTEQ) is -0.846754, highly significant with a p-value of 0.0000. This negative and statistically significant coefficient confirms the presence of a stable long-run equilibrium relationship between CED and PCI. It also implies that deviations from this equilibrium are corrected by approximately 84.6% within one period (e.g., one year), indicating a rapid speed of adjustment back to the long-run path.

The first difference of LNCED (D(LNCED)) has a coefficient of 2.317347 with a p-value of 0.3445. Though positive, this is not statistically significant. This suggests that a change in CED positively influences PCI in the short run, but again, the evidence is not strong enough to confirm a causal link. Lagged differences of LNCED (D(LNCED(-1)) and D(LNCED(-2)) also show varying coefficients (positive and negative), none of which are statistically significant, with p-values well above 0.05. This implies that past changes in CED do not have a significant short-term impact on PCI.

Test of Hypothesis two

H₀₂: Custom and excise duties have no significant effect on per capita income of West African countries.

Based on the long-run ARDL result, the T-statistic of -1.553557 has a probability value of 0.1215% significant level. Since the probability value is above the significance level of 0.05, therefore the study failed to reject the null hypothesis (H₀) which states that custom and excise duties have no significant effect on per capita income in West African countries.

ARDL test on the effect of custom and excise duties on inflation rate of West African countries.

Table 4.5: ARDL long-run and short-run result

Dependent Variable: D(INFR)				
Method: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-run (Pooled) Coefficients				
LNCED	-0.007	0.01233	-0.566	0.5719
C	0.09362	0.04614	2.02911	0.0434
Short-run (Mean-Group) Coefficients				
COINTEQ	-1.1004	0.0468	-23.515	0
Log-Likelihood:	-495.77			

Source: E-view output extracted from appendix 3C

The provided document presents the results of an Autoregressive Distributed Lag (ARDL) model analysis to examine the impact of custom and excise duties (CED), represented by the variable LNCED, on the inflation rate (INFR) in West African countries. The study covers a sample period from 1995 to 2024. The dependent variable is the first difference of the inflation rate (D(INFR)), and the model incorporates up to four lags for both the dependent variable and the independent variable (LNCED), selected using the Akaike Information Criterion (AIC).

Long-Run Relationship

The long-run coefficients, which are pooled across the panel, provide insights into the sustained effects of CED on inflation. The coefficient for LNCED is -0.006979, with a highly significant t-statistic of -0.565965 and a p-value of 0.5719. This indicates a statistically insignificant and negative relationship between CED and inflation in the long run. A 5% increase in CED is associated with a 0.006979% decrease in the inflation rate, holding other factors constant. The constant term (C) is 0.093618, also significant (p-value = 0.0434), implying a baseline positive effect on inflation when CED is zero, which could reflect other structural or economic factors specific to West African countries.

The presence of a cointegrating equation (COINTEQ) in the short-run results, with a coefficient of -1.100387 and a p-value of 0.0000, confirms the existence of a long-run equilibrium relationship between CED and inflation. The negative sign of the COINTEQ coefficient indicates that any deviation from this equilibrium is corrected over time, with approximately 110.0387% of the disequilibrium adjusted each period. This strong error-correction mechanism supports the validity of the ARDL model in capturing the dynamic relationship.

Test of Hypothesis three

H0₃: Custom and excise duties have no significant effect on inflation rate of West African countries.

The p-value of the long-run coefficient (0.5719) suggests the acceptance of the null hypothesis, meaning that custom and excise duties have no significant effect on inflation rate of West African countries.

CONCLUSION AND RECOMMENDATIONS

This study investigated the effect of custom and excise duties on economic development in West African Countries, based on the finding, the following conclusions and recommendations were made.

Custom and excise duties have a positive and significant effect on gross domestic product in West African countries, hence, West African countries, particularly those in ECOWAS, should work toward harmonizing customs and excise duties. A more uniform tax regime would reduce trade barriers, encourage intra-regional

trade, and attract foreign investment by creating a more predictable economic environment. By so doing, gross domestic product of West African countries will increase.

However, custom and excise duties have a negative and no significant effect on per capita income and inflation rate in West African countries, therefore, West African countries should strengthen customs administration through digitalization, automation, and anti-corruption measures can significantly improve revenue collection, reduce delays at ports, and boost investor confidence. Efficient border processes also reduce transaction costs for businesses. This will in turn improve per capita income of West African countries.

Also custom and excise duties have a negative and no significant effect on inflation rate of West African countries, it is recommended that, customs policies should align with regional trade agreements like the African Continental Free Trade Area (AfCFTA). Ensuring full implementation of such agreements can boost exports, diversify economies, and reduce dependence on primary commodities. If this is properly executed, the inflation rate of West African countries would reduce.

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