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IMPACT OF TAXATION ON HOUSEHOLD CONSUMPTION EXPENDITURES IN SELECTED WEST AFRICAN COUNTRIES

Abstract

Purpose. This study examines the impact of taxation on household consumption expenditure in West Africa and evaluates whether the region's tax structure exerts pressure on household spending patterns.

Design/methodology/approach. The research adopts an ex-post facto design using panel data from five West African countries. Data were obtained from the OECD database and analyzed using the Panel Autoregressive Distributed Lag (ARDL) model to capture both short-run and long-run dynamics between taxation variables and household consumption.

Findings. The results reveal that direct taxes have a negative and significant effect on household consumption expenditure, while indirect taxes exhibit a more nuanced and less consistent impact. Inflation shows a significant positive relationship with consumption, whereas exchange rate and GDP per capita exert insignificant downward pressure. These findings suggest that taxation policies, particularly direct taxation, influence household financial capacity and consumption behavior in the region.

Originality. This study contributes to the literature by providing a comprehensive regional analysis of taxation-consumption dynamics, incorporating both direct and indirect taxes within a unified framework. It offers new empirical insights into fiscal policy effects in West Africa and provides evidence to support tax policy reforms aimed at balancing revenue generation with household welfare.

Keywords: direct tax, indirect tax, inflation, exchange rate, gross domestic product per capita.

Introduction

One of the fundamental problems encountered by individual, household, and firm is scarcity, as human wants are numerous and the resources to satisfy those want are finite. However, despite limited supply of resources, household incur certain expenditures, mostly on goods and services, to satisfy their need or want. Household consumption is a major driver of economic growth and development, as it is the largest component of aggregate expenditure (Osei Bonsu & Muzindutsi, 2017). Consumption expenditure by household consumption shows not only the welfare of the population but, as well, mirrors the general standard of living. This assertion is supported by Asogwa and Nkolika (2018), as they argued that, in order to improve economic performance, the government should focus more on prioritizing household satisfaction and living standards. Adegbite (2023) defines household consumption expenditure as total market value for all goods and services, which include durable goods, such as household items, procured from their income to satisfy their needs and improve their living standard. In most countries of the world, household consumption expenditure contributes to nearly 60% of contribution to GDP (Judijanto, Siminto, & Rahman, 2024). This indicate that consumption expenditures by households have a great significant on the overall economy (Demurger & Wang, 2016).

Various studies have defined household consumption expenditure, such as Adeoye (2021), which posited that household's consumption spending patterns refers to the total spending by household on goods and service, including food and beverages, housing and personal care, education, amongst others. Ajibola and Olowolaju (2017), described household consumption as the portion of disposable income which are spent on acquiring various goods and services that ensure the welfare of the household, especially in meeting essential needs. Adegbite (2023) also posited that household consumption are expenditure incurred on durable goods to enhance the household standard of living.

From the literature consulted, Household Consumption Expenditure (HCE) represent consumer spending (household) on essential goods and services and durable goods that gives satisfaction or utility to the household. Given its importance to economic well-being, it is pertinent to highlight some of the factors that influence it. In an economy, the volume of consumption expenditure is influenced by various factors such as disposable income, interest rate, savings, among others. However, one major factor that influence HCE is Taxation, because for a household, consumption is depending on their disposable income, and this disposable income is derived by subtracting Tax paid from personal income. However, it is not only restricted to Personal Income Tax (PIT), but also indirect tax such as sales tax, value added tax (VAT), and customs, and excise duties.

Taxation is a statutory obligation payment or fees imposed by the government through its revenue agencies, and it is payable by individual, households, businesses, and corporation. Taxation has become a critical component of economic growth and development, as it serves as the major source of revenue to the government. Taxes are implemented by relevant government institutions (Onokoya & Affinition, 2016). Existing literature has identified various forms of tax and defined them, such as Petroleum Profit Tax (PPT), Personal Income Tax (PIT), Value Added Tax (VAT), Company Income Tax (CIT), Customs and Excise Duties (CEDs), amongst others.

An extensive review of the existing literature indicates that, to the researcher's best knowledge, there is limited empirical evidence directly examining the impact of taxation on household consumption expenditure (HCE) within a West African regional context. Most prior studies are either country-specific or focus narrowly on a single category of taxation, typically distinguishing between direct and indirect tax in isolation. In Nigeria, only a handful of studies have explicitly investigated the relationship between taxation and household consumption expenditure (Ajibola & Olowolaju, 2017; Usman, 2018; Omodero, 2020; Adegbite, 2023; Ologbenla, 2024), while several others concentrate exclusively on indirect or consumption-based taxes (Adegbite, 2018; Gidigbi et al., 2021; Nyiputen & Abijia, 2022; Miftahu & Emmanuel, 2023). More broadly, empirical research in the region has largely examined the effect of taxation on other macroeconomic outcomes, including poverty (Ayano, 2022), income inequality (Anyaduba, 2019; Nwosu et al., 2018; Nwachukwu, 2025), unemployment (Adesola, 2018), economic growth (Eugene & Abigail, 2016; Micah et al., 2016; Onakoya & Afiniti, 2016), and investment (Adegbite & Usman, 2017). Similarly, studies focusing on Ghana predominantly emphasize indirect or consumption-based taxes and their implications for broader economic indicators, rather than household consumption behavior specifically. (Andoh, 2021; Ocran & Fumey, 2023). Furthermore, findings reveal inconsistent findings on the effect of taxation on household consumption expenditure, especially within the West Africa region. For instance, the review of literature indicates that there is no consensus yet on the specific effect of Taxation on HCE, as studies such as Omodero (2020), Miftahu & Emmanuel (2023), and Adegbite (2023) showed mixed result, as carefully exposed in the empirical review.

Against this backdrop, the present study contributes to the body of literature by providing a comprehensive assessment of the effects of taxation on household consumption expenditure across the selected West African countries. And unlike existing studies that rely on aggregate tax measures or single-country analyses, this study differentiates between multiple tax categories, especially highlighting the role of personal income tax, also examining the short-run and long-run responses. Furthermore, by adopting a regional perspective, the study offers new insights into tax-consumption dynamics in economies characterized by high informality and weak fiscal transmission mechanisms, where changes in tax policy do not always translate into proportional adjustments in household disposable income or consumption behavior, as a significant share of economic activity remains outside the formal tax system.

Literature review

Previous studies have investigated the influence of taxation on household consumption expenditure and related macroeconomic outcomes using different tax categories, and methodological approaches. While some studies employ a broad macroeconomic perspective, others narrow their focus to consumption taxes, particularly value added tax (VAT) and custom and excise duties (CED). To summarise the empirical evidence and clarify existing gaps this study reviews findings from developing and emerging economies.

A strand of literature examines the macroeconomic effects of taxation without directly focusing on consumption. For instance, Eugene and Abigail (2016) investigated the impact of tax policy on Nigeria's economic growth using the Ordinary Least Squares (OLS) technique and found that petroleum

profit tax (PPT), company income tax (CIT), customs and excise duties, and VAT exert positive and significant effects on economic growth. In contrast, Micah, et al., (2016), analyzing the Nigerian economy between 2010 and 2014, reported a significant but negative effect of company income tax on economic growth. Similar evidence was provided by Joseph (2018), who also employed OLS and found that tax revenue negatively affects economic growth in Nigeria.

Beyond growth, other studies have explored other macroeconomics variable such as the labour market and investment channels through which taxation affect economic welfare. In the same vein, Adesola (2018), employed Weighted Least Square estimation technique from 2002 to 2016, examines the influence of government taxes on unemployment rate in Nigeria and reported a positive relationship, suggesting that higher taxes tend to increase unemployment levels. However, Buzugbe, Ologunla and Santeli (2024) revealed that this positive effect mainly exists in the long run. while in the short run unemployment responds negatively to changes in PPT and CIT but positively to VAT. Similarly, Asogwa and Nkolika (2018) found that VAT has significant long-run impact on investment growth in Nigeria, whereas findings from Chindengwike (2022) reported a negative long-run relationship between VAT and private domestic investment, suggesting that value-added tax is negatively associated with private domestic investment in the long run. Collectively, these findings indicate that the effects of taxation vary not only across tax types but also across economic outcomes and time horizons.

More closely related to household consumption expenditure, Omodero (2020) examined the impact of indirect taxation that is VAT and CEDs on consumption expenditure in Nigeria from 2005 to 2019 using Ordinary Least Squared. The study found that VAT exert a positive relationsip on consumption but the association is insignificant, while custom and excise duties have a significant positive effect. The researchers argues that VAT may discourage the consumption of certain good and services, thereby encouraging smuggling and other informal sector activities, while CEDs do not significantly reduce the consumption of targeted products. Similar evidence was reported by Sani and Idris (2020) as they examine the effect of VAT on consumption expenditure in Nigeria over the period 1994 to 2018 employing Autoregressive Distributed Lag (ARDL) model. There findings suggest that the impact of VAT on consumption is affected by other macroeconomic variables which includes interest rate and inflation. When interest rate and inflation are low, VAT influence consumption positively, whereas high interest rate and inflation weaken consumer's purchasing power and result in a negative consumption response.

Using a more broader tax structure, Adegbite (2023) investigated the effect of multiple tax component on household consumption expenditure in Nigeria, from 1990 to 2021 using ARDL framework. The study found that petroleum profit tax (PPT) has statistically significant, strong and positive impact on consumption expenditure by household. While, company income tax, VAT and custom and excise duties have negative statistically significant influence on HCE. The author concluded that overall, taxation tend to reduce household consumption expenditure, although the magnitude and direction vary by tax component. Related evidence from Ghana was provided by Adukonu and Aberese (2016), who assess the relationship between various form of taxation on poverty in Ghana, focusing on the effect of tax policies on poverty and inequalities over the period of 1984 to 2013, the researchers employ Johansen cointegration estimation technique. The study utilised household per capita consumption as a proxy for poverty. The study found that direct taxes have a positive and significant effect on poverty, while indirect taxes exert a negative and significant effect. This evidence suggests a consistent divergence in the welfare effects of direct and indirect taxation across countries within the West African region.

To have a broaden analytical scope, this study also consider evidence from emerging economies also panel data analyses. Simionescu and Albu, (2016), used a panel data model to estimate from five central and Eastern European countries, found that VAT rate had a statistically significant positive impact on GDP, using Generalized Moment Methods System (GMM). In contrast, Esunge (2025), employing a panel dataset of 94 high- and low-income countries and a GMM approach, reported that both VAT and income tax are negatively correlated with household consumption per capita. These findings highlight the different effects of taxation across income groups and economic structures.

Further evidence from emerging economies shows mixed result. Kolahi and Noor, (2016) examined the effect of VAT on economic growth in nineteen emerging economies between 1995 and 2010 and found that VAT negatively affects capital accumulation and productivity but positively influences overall economic growth. Balasoiu, Chifu, and Oancea (2023), using panel data from 27 European Union

countries, reported that corporate income tax significantly affects economic growth, while personal income tax reduces growth in countries with limited fiscal efficiency. Hammour and McKeown (2022) analyzed household purchasing behavior in the United Arab Emirates (UAE) and found that VAT reduces household income and consumption across both high- and low-income groups. Similarly, Yilmaz, Ozyer, and Ozyer (2019) demonstrated that VAT and excise duties exert a regressive effect on household consumption in Turkey, disproportionately affecting low-income households.

Overall, across both single-country and cross-country evidence, the literature reveals several consistent themes such as; indirect taxes often have ambiguous effects on household consumption, with some studies reporting positive impacts in the long-run while others finds insignificant or negative effect depending on the macroeconomic conditions and exchange rates furthermore, direct taxes and indirect taxes may exert contrasting influence which then suggest that disaggregated tax analysis is crucial for understanding consumption expenditure pattern.

In conclusion, the reviewed of literature shows that while taxation has been widely examined in relation to economic growth, investment, unemployment, poverty, and inequality, relatively few studies focus explicitly on household consumption expenditure, particularly within the West African context. Moreover, existing studies often analyze either direct or indirect taxes in isolation or rely on aggregate tax measures. This study contributes to the literature by uniformly examining multiple tax categories and their effects on household consumption expenditure in selected West African countries, thereby proffering a more comprehensive understanding of tax and consumption dynamics and household welfare in the region.

Methodology

This study adopts an ex post facto research design. The research relied on secondary time-series data covering the period of 2010-2023 for the selected West African countries. The choice of 2010–2023 period is deliberately linked to major fiscal, institutional, and macroeconomic developments in West Africa. This time-period captures a phase of major tax reforms as well as structural adjustments across the region. Specifically, the period covers the expansion and harmonization of VAT regimes across ECOWAS countries, also reforms in personal income tax administration which includes the introduction of taxpayer identification system such as tax identification number (TIN). Furthermore, the increase reliance on indirect taxation following the oil price fluctuation and declining oil revenue particularly 2014 to 2016 oil price shock. Lastly, macroeconomic disruptions arising from the COVID-19 pandemic, which significantly changes consumption pattern, income level of household and government fiscal policy response. The empirical analysis covers five selected West African countries: Nigeria, Ghana, Senegal, The Gambia, and Cote d'Ivorie.

The main research question guiding the study was: What is the impact of direct tax on household's consumption expenditure? What is the impact of indirect tax on household's consumptions in Nigeria.

The theoretical foundation is anchored on three major theories; Keynesian consumption theory proposed by John Maynard Keynesian in 1936, the Permanent Income Hypothesis proposed (PIH) by Milton Friedman in 1957 and the life-cycle hypothesis (LCH) developed by Franco Modigliani in (1957). These theories provide a framework for understanding how household consumption respond to changes in income, and fiscal policy instrument over time. Direct taxes, such as personal and company income taxes, affect disposable income and households' long-term consumption plans, consistent with the predictions of the PIH and LCH. Indirect taxes, including VAT and customs and excise duties, influence consumption by altering the prices of goods and services, thereby affecting purchasing power in line with Keynesian short-run consumption behavior.

Following from the consumption theory by JM. Keynes, such that;

$$C = a + by^{d} \quad (1)$$

Where

$$Y^{d} = Y\text{-}T \quad (2)$$

Thus, from equation (1), we have

$$C_{t} = a + b\,(Y - T) \quad (3)$$

Where Ct is current consumption at time t, 'a' is autonomous consumption, (Y – T) is the current disposable income, and 'b' is the marginal propensity to consume (MPC). The study therefore draws from the consumption theory and also guided by Ekong & Effiong (2020), with little modification. The new model's functional form is specified as:

$$HCE = f(PIT, VAT, CIT, CED, INF, EXR, GDP) \quad (4)$$

To achieve Objective 1, we have;

$$HCE_{it} = \alpha_0 + \alpha_1 lnPIT_{it} + \alpha_2 INF_{it} + \alpha_3 EXR_{it} + \alpha_4 GDP_{it} + \mu_{it} \quad (5)$$

$$HCE_{it} = \beta_0 + \beta_1 lnCIT_{it} + \beta_2 INF_{it} + \beta_3 EXR_{it} + \beta_4 GDP_{it} + \mu_{it} \quad (6)$$

To achieve Objective 2, the model is specified below;

$$HCE_{it} = \lambda_0 + \lambda_1 lnVAT_{it} + \lambda_2 INF_{it} + \lambda_3 EXR_{it} + \lambda_4 GDP_{it} + \mu_{it} \quad (7)$$

$$HCE_{it} = \varphi_0 + \varphi_1 lnCED_{it} + \varphi_2 INF_{it} + \varphi_3 EXR_{it} + \varphi_4 GDP_{it} + \mu_{it} \quad (8)$$

Where:

HCE is household consumption expenditure, PIT is Personal income tax, VAT is Value Added Tax, custom and excise duties denoted by CED, INF is rate of inflation, EXR is the official exchange rate, and μ is used to denote the error term. The HCE is the dependent variable, while PIT, VAT, and CED are the explanatory variable or the independent variables. INF, EXR and Gross Domestic Product Per Capital are employed as control variable for the model, the error term is employed to capture the unexplained variation in the model. The explanatory variable is in their natural logarithm form. Equation 1 and 2 are specified to capture the impact of direct taxes on Household consumption expenditure while equation 3 and equation 4 were specified to explain the impact of indirect taxation on household consumption expenditure. The a-priori expectation is expressed mathematically as $\alpha_1 < 0$, $\beta_1 < 0$, $\lambda_1 < 0$, $\varphi_1 < 0$.

The study was conducted in several stages. First, relevant data were collected and organized in time series format. Second, Correlation Matrix was used to examine the degree of association of the variables. Third. unit root test such as Augmented Dickey-Fuller test and Philip-Perron was applied to assess the level of stationarity of the variables. Fourth, cointegration test such as Kao residual was employed to examine if variables exhibit long-run relationship. Fifth, panel Autoregressive Distributed Lag (ARDL) model was used to examine both the short-run and long-run relationships among the variables.

Results and discussion

To evaluate level of association amongst the variables, correlation matrix was utilised. From the table 1 below it is observed that the explanatory variable is positive but highly correlated with each other, for instance LOGPIT with LOGCIT (0.956), LOGPIT with LOGVAT (0.959), LOGPIT with LOGCED (0.949). This strong association is expected, as all explanatory variables represent different components of tax revenue and tend to move together over time. However, the independent variable (HCE) is weakly correlated with the dependent variables but fall within the accepted threshold, suggesting that while taxation is associated with household consumption, the linear relationship is not excessively strong at the bivariate level. The control variables display moderate correlation with the dependent variable Indicating their relevance in explaining household consumption dynamics without posing serious multicollinearity concerns.

The different tax components are not used together in a single model due to their high degree of correlation. Including highly correlated regressor in a single model could lead to multicollinearity, resulting in inflated standard errors and unreliable coefficient estimates which will give spurious results. This will help us achieve our objective while still avoiding multi-correlation.

Table 1
Correlation Matrix

Var	HCE	LOGPIT	LOGCIT	LOGVAT	LOGCED	INF	EXR	GDP
HCE	1							
LOGPIT	-0.075	1						
LOG CIT	-0.063	0.988	1					
LOGVAT	-0.050	0.994	0.987	1				
LOGCED	-0.011	0.987	0.985	0.996	1			
INF	0.168	0.488	0.495	0.438	0.455	1		

Continuation of the table

Var	HCE	LOGPIT	LOGCIT	LOGVAT	LOGCED	INF	EXR	GDP
EXR	-0.170	-0.199	-0.172	-0.119	-0.0098	-0.186	1	
GDP	-0.677	0.050	-0.005	-0.020	-0.083	-0.169	-0.374	1

*Source***:** *Author's Compilation*

To determine the degree of stationarity of the variables, the research employs Augmented Dickey-Fuller (ADF), Phillips-Perron (P-P) and Levin, Lin & Chu (LLC). This study adopts these unit root tests to compare the level of stationarity, Levin Lin & Chu assumes common unit root process while the Augmented Dickey-Fuller and Philip-Perron assumes individual unit root process. The findings revealed that the variables are stationary at both levels, I (0), and at first difference, I (1). This implies that in each of our model there will be a mixed order of integration. The presence of variables integrated of both I(0) and I(1), and the absence of any variable integrated of order two, I(2), justify the use of the Panel Autoregressive Distributed Lag (Panel ARDL) framework. This approach is appropriate for modeling long-run and short-run relationships in panels characterized by mixed orders of integration and cross-country heterogeneity.

Table 2
Unit Root Test

VAR	Augmented Dickey-Fuller Test			Phillip-Perron Test			Levin, Lin & Chu			Decision
	ADF statistics	Prob.	Order of integration	PP statistics	Prob.	Order of integration	LLC statistic	Prob.	Order of Integration	
HCE	22.859	0.011	I (0)	38.868	0.000	I (1)	-2.27	0.012	I (0)	I (0)
LOGPIT	19.988	0.029	I (0)	19.5463	0.033	I (0)	-2.627	0.004	I (0)	I (0)
LOGCIT	20.115	0.028	I (0)	25.1682	0.005	I (0)	-4.437	0.000	I (1)	I (0)
LOGVAT	36.869	0.000	I (1)	35.967	0.000	I (1)	-5.798	0.000	I (1)	I (1)
LOGCED	37.758	0.000	I (1)	58.164	0.000	I (1)	-2.854	0.002	I (0)	I (1)
INF	28.964	0.001	I (1)	28.565	0.001	I (1)	-4.21	0.000	I (1)	I (1)
EXR	20.451	0.025	I (1)	32.759	0.000	I (1)	-2.647	0.004	I (1)	I (1)
GDP	32.867	0.000	I (1)	39.652	0.000	I (1)	-3.156	0.000	I (0)	I (1)

*Source***:** *Author's Compilation*

To examine the existence of a long-run equilibrium relationship among the variables, the Kao residual panel cointegration estimation technique was employed. The Kao test is appropriate in panel settings where slope coefficients are assumed to be homogeneous across cross-sectional units, which aligns with the long-run assumptions underlying the Pooled Mean Group (PMG)/Panel ARDL estimator. Kao Residual Cointegration result shows that there exists a long-run relationship among the variables as the ADF statistic (-2.055, prob = 0.019 < 0.05) is significant at 5%. This finding provides empirical justification for estimating both long-run coefficients and short-run dynamics using the Panel ARDL framework with an error-correction mechanism.

Table 3
Kao Residual Cointegration Test

	t-Statistic	Prob. value
ADF	-2.055	0.0199

*Source***:** *Author's computation*

To achieve our objective one which is to examine the impact of direct taxation proxied by personal income tax and company income tax we employ Panel Autoregressive Distributed Lag model as it can be used to examine both the short-run and long-run relationships when the variables are mixed order of integration I(0) and I(1). The trend specification is set to be linear trend and this is done so as to capture the constant growth or decline in the dependent variable over time.

The Panel ARDL results confirm a stable long-run relationship between household consumption expenditure (HCE) and personal income tax, as indicated by the negative and statistically significant error correction term (–0.673, p = 0.0126). This suggests that about 67 percent of short-run disequilibrium is corrected each year, this means a relatively fast adjustment of consumption to long-run equilibrium following fiscal shocks. The long-run result shows that tax statistically and significantly reduces household consumption (–5.594, p < 0.01). This shows the reality in West Africa, where personal income taxes directly lower consumer purchasing power and households' disposable income. Furthermore, given the region's high informality and narrow tax base, the tax incidence will fall on a small portion of formal earners, and this will amplify the contractionary effect on consumption. This finding is consistent with the Keynesian consumption theory (KCT) and the permanent income hypothesis (PIH), both which explain the role of disposable income in shaping consumption decisions.

Inflation (INF) exhibits a significant positive long-run effect on consumption (0.354, p < 0.0023), implying that persistent increase in price level might lead to household spending more quickly to avoid further rise in prices. The exchange rate (EXR) also exerts a negative and insignificant long-run effect (–0.008, p = 0.4130), this imply that currency depreciation may reduce consumption through higher import prices. GDP per capita shows no long-run effect on HCE (0.005, p = 0. 1742), this suggest that variations in average income levels do not translate directly into corresponding changes in consumption for the sample period. Furthermore, GDP growth may not necessarily translate into household level of income.

In the short-run, PIT do not significantly influence consumption (0.849, p = 0.7454), indicating that households initially smooth consumption in response to tax changes. However, short-run inflation shocks significantly reduce consumption, reflecting households' limited ability to adjust spending when faced with sudden increases in living costs. Short-run GDP per capita also shows a negative effect, suggesting precautionary behavior in uncertain economic conditions. Exchange rate remain insignificant in the short-run.

Table 4
Panel ARDL (PMG) estimate (PIT)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
		Long-Run Estimate		
LOGPIT	-5.594***	1.125	-4.9706	0.000
Inflation	-0.354**	0.106	` 3.329	0.0023
Exchange Rate	-0.008	0.009	-0.829	0.413
GDP per Capita	-0.005	0.003	1.390	0.1742
		Short-Run Estimate		
COINTEQ01	-0.673**	0.254	-2.265	0.0126
D(LOGPIT)	0.849	2.593	0.327	0.745
D(Inflation)	-0.401**	0.182	-2.202	0.0352
D(Exchange Rate)	0.222	0.394	0.565	0.5762
D(GDP per Capita)	-0.0216**	0.009	-2.261	0.0309

Note: ***= 1% significance, **=5%, *= 10%

*Source***:** *Author's computation*

To achieve equation (ii) objective 1, the study also employs panel ARDL while making company income tax (CIT) serves as the main explanatory variable while other control variable is used per-usual. The results are presented in the Table 5.

The error correction term is negative and statistically significant (COINTEQ01 = –0.662, p = 0.017), confirming the existence of a stable long-run relationship among household consumption expenditure (HCE), company income tax, inflation, exchange rate, and GDP per capita. The magnitude of the adjustment coefficient implies that approximately 66 percent of short-run deviations from equilibrium are corrected annually, indicating relatively rapid convergence to the long-run path.

In the long-run estimates showed that company income tax has a negative significant (-3.752, p = 0.000) impact on household consumption spendings such that 1% increase in corporate income tax reduces long-run HCE by 3.75%. This effect reflects the indirect transmission of corporate taxation to households through reduced firm profitability, lower wages, employment adjustment and widen the income inequality gap, particularly in West African economies. Inflation shows a positive and significant long-run effect on consumption (0.361, p < 0.01), suggesting that persistent price increases may encourage households to bring forward consumption in anticipation of further inflation. Exchange rate movements and GDP per capita remain statistically insignificant in the long run, indicating weak income and external price transmission to household consumption. in the short run, changes in CIT have insignificant effect on household consumption spending pattern, suggesting that households initially smooth spending in response to corporate tax changes. However, short-run inflation and GDP per capita both exhibit negative and significant effects, reflecting the immediate erosion of purchasing power and precautionary consumption behaviour during periods of macroeconomic uncertainty. Exchange rate changes remain insignificant in the short run.

The overall findings from objective one shows that Direct tax proxy by personal income tax and company income tax has a contractionary impact on household consumption expenditure in West African, with strong impact observed in the long run than in the short run. These findings are in line with earlier evidence from Nigeria and other developing economies (Ajibola & Olowolaju, 2017; Omodero, 2020; Adegbite, 2023), as well as recent cross-country studies (Esunge, 2025). However, they differ from studies that report growth-enhancing effects of taxation (Eugene & Abigail, 2016), suggesting that improvements in macroeconomic performance do not necessarily translate into higher household consumption or welfare.

Table 5
Panel ARDL (PMG) estimate (CIT)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-Run Estimate				
LOGCIT	-3.752***	0.877	-4.277	0.000
Inflation	0.3614**	0.113	3.193	0.003
Exchange Rate	-0.012	0.011	-1.046	0.303
GDP per Capita	0.003	0.004	0.754	0.456
Short-Run Estimate				
COINTEQ01	-0.662**	0.2639	-2.5076	0.017
D(LOGCIT)	2.024	2.369	0.8544	0.399
D(Inflation)	-0.495**	0.1782	-2.777	0.0092
D(Exchange Rate)	0.5022	0.5860	0.857	0.3980
D(GDP per Capita)	-0.0215**	0.009	-2.279	0.0297

Note: ***= 1% significance, **=5%, *= 10%

Source: Author's compilation

The paper then examine object 2, which is to determine the impact of indirect tax proxy by value added tax (VAT) and custom and excise duties (CEDs) on household consumption spending. Table 6 presents the Panel ARDL (PMG) estimates examining the impact of value added tax on household consumption expenditure (HCE). The error correction term is negative and highly significant (COINTEQ01 = –0.620, p = 0.0017), confirming the existence of a stable long-run equilibrium relationship among consumption, VAT, and the macroeconomic control variables. The coefficient indicates that about 62 percent of short-run disequilibrium is corrected annually, suggesting relatively fast adjustment to the long-run path.

Value added tax has a negative but marginally significant (at 10%) effect on household consumption in the long-run (-5.349, p = 0.093). this implies the increase in value added tax reduces consumption through higher final prices, which reduces disposable income and consumption. The weak effect of VAT as compared to PIT and CIT is that VAT burden spreads across all households, including informal sector, also some West African countries such as Nigeria and Ghana have VAT exemption on basic necessities, moderating it effect, VAT reduces tax evasion as it is better enforced than income tax, however, it raises prices broadly especially with the not so recent increase in the VAT rate for some African countries. Inflation shows a positive and strongly significant long-run relationship with household consumption (0.735, p < 0.01), suggesting that persistent price increases may induce households to accelerate spending in anticipation of further inflation. Exchange rate depreciation and GDP per capita both show negative but statistically insignificant long-run effects, indicating limited transmission of external price shocks and average income changes to household consumption over the study period. In the short run, changes in VAT do not significantly affect household consumption, indicating that households do not immediately adjust spending in response to VAT fluctuations.

In the short-run, inflation exhibit a significant negative effect on household consumption expenditure (–0.592, p = 0.013), showing the quick reduction of purchasing power before income adjustments happens. Exchange rate changes remain insignificant, while GDP per capita is only weakly significant at the 10 percent level, suggesting limited short-term income responsiveness. Overall, the VAT results further support the broader findings of the study which is indirect taxation reduces household consumption in West Africa, but its effect is weaker and less immediate than that of direct taxes, largely due to policy exemptions, informality and consumption behavior pattern by household.

Table 6
Panel ARDL (PMG) estimate (VAT)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
		Long-Run Estimate		
LOGVAT	-5.349*	3.088	-1.732	0.093
Inflation	0.735***	0.195	3.754	0.000
Exchange Rate	-0.017	0.013	-1.308	0.200
GDP per Capita	-0.005	0.005	-1.092	0.282
		Short-Run Estimate		
COINTEQ01	-0.620**	0.180	-3.437	0.0017
D(LOGVAT)	-10.848	10.341	-1.049	0.3023
D(Inflation)	-0.592**	0.226	-2.612	0.013
D(Exchange Rate)	0.358	0.454	0.791	0.435
D(GDP per Capita)	-0.0159*	0.008	-1.777	0.0852

Note: ***= 1% significance, **=5%, *= 10%

*Source***:** *Author's computation*

The effect of customs and excise duties (CEDs) on household consumption expenditure is presented in table 7 below. The error correction term is negative and statistically significant (COINTEQ01 = –0.489, p = 0.001), confirming a long-run equilibrium relationship among consumption, CEDs, and the control variables. The coefficient indicates that approximately 49 percent of short-run disequilibrium is corrected annually, implying moderate speed of adjustment.

In contrasts to value added tax and other direct taxes, CEDs shows a positive and marginally significant long-run effect on household consumption (7.757, p = 0.078). This suggests that a 1 % increase in CED revenue is associated with about a 7.8 % increase in long-run household consumption. This outcome is contrary to the a-priori expectations and can be explained by the structure of excise taxation in West Africa, where CED revenues are largely derived from commodities such as fuel, alcohol, tobacco, and other inelastic or habit-forming goods "Bads". Despite higher duties, consumption of these goods remains strong, thereby increasing overall household expenditure. In addition, excise duties are not directly deducted from household income, making their burden less visible compared to income taxes and VAT. In the short run, changes in CEDs do not significantly influence consumption, implying limited immediate behavioral response to excise duty adjustments. However, short-run inflation negatively and significantly affects consumption (–0.421, p = 0.028). Short-run changes in GDP per capita also reduce consumption, suggesting temporary income constraints.

In summary, the findings reveal a nuanced impact of indirect taxation on consumption expenditure in West Africa. While VAT reduces household consumption, customs and excise duties increase long-run consumption, reflecting the dominance of excise-taxed goods with low demand elasticity. This is to show the importance of disaggregating indirect taxes when analysing their welfare and consumption effects in economies characterised by informality and consumption rigidity

These findings are supported by studies from Omodoro, (2020), Sani and Idris (2020), Esunge (2025), and Yilmaz, et al., (2019)

Conclusion

The study investigates the impact of taxation on household consumption expenditure in selected West African countries over the period 2010–2023 using a Panel ARDL (PMG) framework. By disaggregating taxation into personal income tax, company income tax, value-added tax, and customs and excise duties, the paper adds to the body of literature, which has largely relied on aggregate tax measures, single-country evidence, or a narrow focus on indirect taxation. The empirical results indicate that direct taxes, proxied by personal and company income taxes, exert a negative and statistically significant long-run effect on household consumption expenditure. This result is consistent with the Keynesian consumption framework, which emphasises the role of disposable income in shaping consumption behaviour, and is also compatible with the Permanent Income and Life-Cycle hypotheses. The findings for indirect taxes are nuanced. Value-added tax exhibits a negative but relatively weaker long-run effect on household consumption expenditure. This finding supports evidence that VAT operates primarily through price increases, which may reduce real purchasing power, particularly among lower-income households. The comparatively smaller magnitude of the VAT effect may reflect the presence of exemptions and zero-rating on basic goods, as well as the large informal sector, which limits the effective reach of VAT in West African economies. While in contrast, customs and excise duties are found to exert a positive and marginally significant impact on household consumption expenditure. While this result may appear counterintuitive, it is consistent with empirical studies indicating that excise-taxed goods, such as fuel, alcohol, and tobacco, often exhibit low price elasticity of demand in developing countries. Consequently, increases in excise revenues may coincide with sustained or rising consumption of these goods rather than a contraction in overall household spending. This highlights the importance of distinguishing between different forms of indirect taxation when assessing their consumption and welfare effects. With respect to the control variables, inflation shows a positive long-run but negative short-run relationship with household consumption. Exchange rate depreciation exerts a reducing effect on consumption, reflecting the import dependence of the selected economies. GDP per capita does not exhibit a robust long-run relationship with household consumption, indicating that average income growth may not adequately capture household-level welfare dynamics in the presence of inequality and structural constraints.

From a policy stand point, the findings suggest that the composition of taxation is critical for household consumption outcomes in West Africa. VAT reforms should continue to prioritise exemptions and targeted relief for essential goods to mitigate adverse welfare effects

Overall, the study provides evidence that tax instruments affect household consumption through

distinct channels, and that uniform tax policy prescriptions may yield uneven welfare outcomes. By offering tax-disaggregated and region-wide evidence, the paper contributes to a more context-sensitive understanding of fiscal policy and household consumption dynamics in West Africa.

Conflicts of Interest

The authors declare no conflict of interest.

Author Contributions

Conceptualization, A.A. and B.A.; Methodology, A.A.; Software, A.A. and B.A.; Validation, A.A. and B.A.; Formal Analysis, A.A.; Investigation, A.A. and B.A.; Resources, B.A.; Data Curation, A.A. and B.A.; Writing – Original Draft Preparation, A.A.; Writing – Review & Editing, B.A.; Visualization, A.A. and B.A.; Supervision, B.A.; Project Administration, A.A. and B.A.

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