Public Expenditure and Economic Development: New Evidence from Economic Community of West African States (ECOWAS)

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Abstract

This study empirically investigates the relationship between public expenditure and economic development in the Economic Community of West African States (ECOWAS) countries. It employs panel data analysis to investigate the relationship between public expenditure and economic development in thirteen (13) ECOWAS countries based on data availability. The analysis is based on relevant data from World Development Indicators (WDI) spanning from 1990 to 2021. The study employs descriptive and quantitative analysis, with the Human Development Index (HDI) serving as proxy for economic development. In accomplishing the primary objective of this study, Autoregressive Distributed Lag (ARDL) and Fully Modified Ordinary Least Squared (FMOLS) techniques were employed, using the latter technique for robustness of the results. The regression analysis reveal that there is a long run but insignificant relationship between public expenditure and economic development in ECOWAS countries for the period under review. The study concludes that public expenditure has not been utilized optimally for economic development in these countries. The study

thus, recommends as a matter of urgency, plethora of policies to make ECOWAS countries develop economically from its present status of the least developed region globally. Such recommendations include sound monetary and fiscal policy, increased government expenditure on education, increase in primary school enrolment, increase in labour force participation that will enhance increase in employment generation and diversification of economy from natural resources (e.g crude oil, gold, uranium) to other viable sectors of the economy, thereby resulting in rapid economic development in the region.

Keywords: Public Expenditure, Economic Development, ECOWAS

1. Introduction

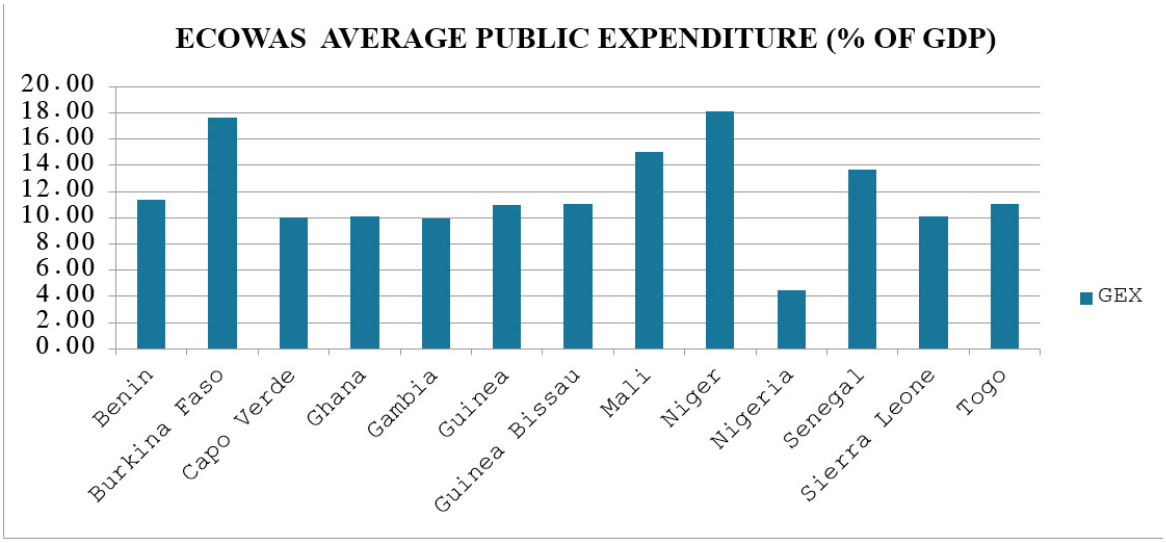
In the process of economic progress, public expenditure plays a pivotal role. As nations strive for coordinate sustainable growth and societal well-being, the allocation and efficacy of public funds become critical. The volume of public expenditure, especially in developing countries, has been on the increase for various reasons, according to available data. One of such reasons is attributed to the increase in the functions of the government of these countries in areas such as provision of social amenities for their citizens. These social amenities include education, health, social infrastructures, commercial and industrial expenditures. This increase in public expenditure is due to socio-political and economic advancement in both developed and developing countries. However, the involvement of government in the activities of the state is dependent on the structure of the state in terms of prevailing political and economic development levels of such a country. Whatever the structure of the economic level of any nation, government is highly responsible for the provision of an enabling environment for foreign investors as well as provision of social amenities as a means of improving the standard of living of her citizens. This government effort towards provision of public goods therefore leads to increased public expenditure and in the long-run economic growth and development. This submission is attributed to a German economist Adolph Wagner. Wagner's Law of Increasing State Activities states that there is a strong relationship between public expenditure and economic growth. The fundamental idea behind this relationship is generally because, the increase in public expenditure is attributed to economic growth. According to Wagner, the reason behind this increase of state activities is due to provision of public goods for its citizens which results to economic growth. Similarly, according to the Keynesian approach, there is a long-run relationship between public expenditures and economic growth. Thus, Keynesian theory considers government expenditure as an exogenous policy tool, as Keynesians assume public expenditure supports economic growth.

Therefore, the role of government expenditure policy is very crucial in maintaining the economy at full employment. One of the ways to do this is by appropriating its spending in form of public expenditure to the real sectors of the economy to bring about economic growth and development.

Government expenditure consisting of capital and recurrent expenditure is one of the most direct and effective instruments to bring about economic development through employment generation in a country. The government therefore uses its expenditures to improve the living standard of the citizens and to expand gross national income and more especially per capita income (PCI) of the citizens at a persistent growth rate in order to attain economic development. Economic development, therefore, is the process of focusing on both the qualitative and quantitative growth of the economy. In most cases, it is the responsibility of the government to achieve these qualitative and quantitative economic growth through its expenditure policy. According to Snowdon (2005), qualitative growth speaks to the standard of living of the people in terms of good health, education and higher income per capita. The quantitative aspect of economic growth refers to the gross national income (GNI) of a nation which is the sum of a country's gross domestic product (GDP) plus net income from abroad presented on an annual basis.

This gross national income in most of the ECOWAS countries had been adjudged relatively small for economic development to be attained soon. Also, some reasons had been put forward by economists which hinder countries of the world especially West African and sub-Saharan African countries to transit from economic growth to economic development. Such reasons include but not limited to diversification of economic base, corruption, obsolete technology, low capital formation for development, political instability, debt burden, leadership issue and so on. Therefore, Iwayemi (2019) opined that the resultant effect of these lapses in Africa has hindered the region to transform its economic growth to economic development thus reflecting in insignificant higher living standards for the citizens, despite all available human and natural resources in the country.

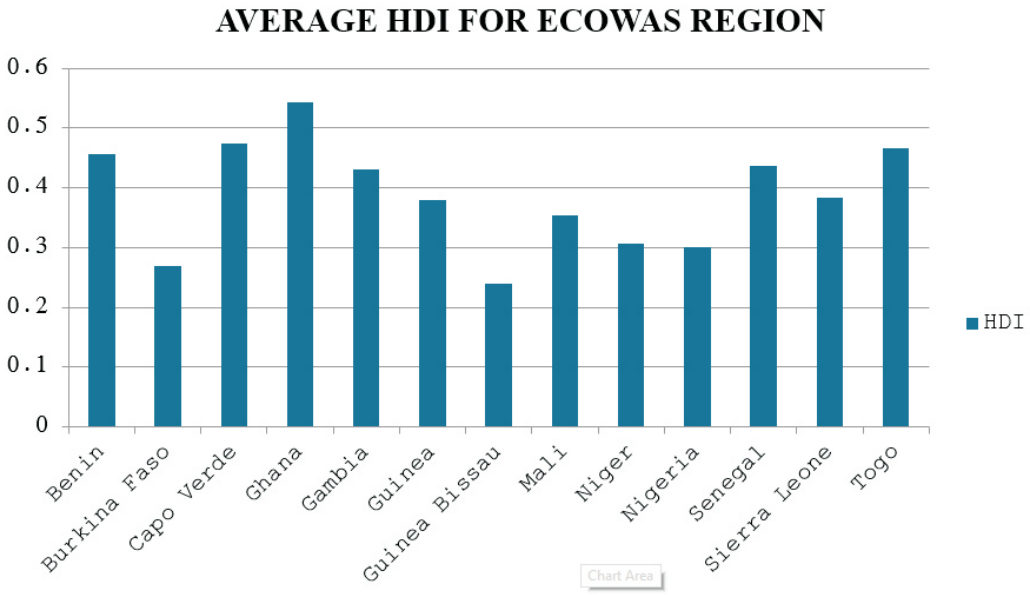
Generally, West African region with low Gross Domestic Product (GDP) also has high public expenditure (in terms of amount) because of government involvement in almost all the sectors of their economy. Therefore, continuous increase of government expenditure especially recurrent expenditure is inevitable getting higher annually. However, the percentage of public expenditure to Gross Domestic Product (GDP) is low in ECOWAS countries when compared to other regions of the world (West African Outlook, 2022). Despite these increases in government expenditure in West African countries' economies, development is very low as the region is classified as the least developed region among the regions globally. Over the years, governments of West African countries have made significant efforts towards attaining economic development through welfare maximization for their citizens, which had resulted to increases in public expenditure. These increased activities were noticeable after independence of the countries in this region. Thus, the increase in government expenditure in West African countries is necessary because of peculiar reasons. Such reasons the include the expansion of social-political functions, environmental protection programs, provision of education and health facilities, investment in technology, and increase in servicing budget deficit and so on (West African Outlook, 2022).



Source: Authors compilation using data from WDI (2022)

As depicted in Figure 1, average public expenditure ranging from about 18 percent to 4 percent between 1990 and 2012 is considered low. In most of the countries, total output is generally low which, is a reflection of low demand for goods and services. In Figure 2, the average human development index (HDI), a good measure of economic development (less than 0.6), is also generally low in all the countries considered for this study. The highest HDI is about 0.55 and 0.25 is the lowest making the ECOWAS region categorized as a low human development region by UNDP which is the least of the regions compared to others.

Figure 2: Average HDI for ECOWAS Region



Source: Authors compilation using data from WDI (2022)

Several early researches underscored a robust bi-directional relationship between government expenditure and economic development across diverse global contexts, validated by methodologies such as panel data analysis and Granger causality tests (Wu Shih-Ying et al., 2010). While insights into government spending's impact on economic growth are well-established, its effectiveness in income redistribution and poverty reduction varies significantly, particularly in low- and middle-income countries (Lustig, 2018). Sector-specific studies reveal nuanced impacts across education, health, and agriculture, enriching our understanding of how different types of expenditure contribute to economic outcomes (Chemingui, 2017). Regional analyses emphasize the contextual factors influencing government expenditure's efficacy, guiding nuanced policy interventions for sustainable economic development (Mduduzi and Talent, 2015; Lofgren and Sherman, 2004; Nyarko et al., 2019; Allakuliev & Sattoriy, 2023; Zeynalli & Hasanoğlu, 2022).The relationship between government expenditure and economic development has been extensively studied across various economies, thus, these findings contribute to a dynamic and evolving knowledge base shaping global economic policy however, several gaps and challenges persist in understanding the nuanced impacts and effective policy interventions. While existing literature provides insights into the bi-directional relationship between public spending and economic outcomes, there remains a need to address the need to elucidate the differential impacts of public spending across sectors such as education, health, infrastructure, and agriculture, considering their varying contributions to economic growth and social development especially in the ECOWAS region where public expenditure and economic development is low. Hence, the objective driving this work is to examine the effect of public expenditure on government consumption, capital formation and education on the human development aspect of development for thirteen ECOWAS countries between 1990 and 2021. Section two provide a summary of literature of the relationship between public expenditure and economic development variables while section three presents the methodology employed for the study and the result of data analysis in section four with section five concluding.

2. Literature Review

Theoretically, Adolph Wagner, a German economist in the late 19th century, formulated Wagner's Law, positing that as economies develop, government activities and expenditures tend to increase. This theory, often referred to as "The Law of Increasing State Activity," suggests that governments expand their roles to meet growing economic needs (Wagner, 1838). Wagner emphasized long-term trends rather than short-term fluctuations in public spending, arguing that governments continuously extend their functions to include sectors like education, healthcare, transportation, and communication. However, criticisms of Wagner's Law highlight its historical basis and its inability to predict future changes in public expenditure systematically (Todaro and Smith, 2015). Keynesian Theory, developed by John Maynard Keynes in the 1930s, proposes that increasing government expenditure can stimulate economic growth by complementing private investment (Keynes, 1936). This theory suggests that

government spending on public goods and services, such as infrastructure, education, and healthcare, can enhance overall economic activity and stabilize fluctuations in the business cycle (Jhingan, 2012). Keynesian economists argue that budget deficits incurred from higher government spending can lead to increased domestic production and encourage private sector investments, thereby promoting economic expansion. However, the causal relationship between government expenditure and economic growth remains debated across different countries and economic contexts. These theories provide foundational perspectives on the relationship between government expenditure and economic development. Wagner's Law emphasizes the gradual expansion of government roles in response to economic growth, while Keynesian Theory underscores the proactive use of government spending to foster economic stability and growth. Understanding these theories and their empirical implications is crucial for assessing the impact of public expenditure policies on economic outcomes in various global contexts.

Empirically, the relationship between public expenditure and economic development has been a central topic in economic research, attracting extensive empirical investigations across various economies, both developed and developing. Wu Shih-Ying et al. (2010) conducted a comprehensive study using panel data from 182 countries between 1950 and 2004, employing the Granger causality test. Their findings demonstrated a significant bi-directional relationship between government expenditure and economic development, suggesting a mutual influence between these variables across diverse economic contexts. Lustig (2018) focused on 19 low- and middle-income countries, utilizing regression analysis to examine the impact of government spending on income and poverty. The study revealed that government expenditure had a limited redistributive effect and did not significantly reduce poverty, highlighting the challenges faced by developing countries in achieving immediate economic benefits from public spending. Chemingui (2017) analyzed the impact of public spending on economic growth and poverty reduction in Yemen using the Computable General Equilibrium (CGE) model. The study found that spending on education and health had a more substantial impact on economic growth and poverty reduction compared to agricultural spending. However, in oil-dependent economies like Yemen, agriculture remained crucial for economic development.

Jabeen et al. (2018) investigated the relationship between economic growth, inequality, and development in Pakistan using the Auto Regressive Distributed Lag (ARDL) technique. Their findings indicated a positive correlation between GDP per capita and income inequality, suggesting that economic growth influences income inequality in Pakistan. Khalid and Abdullah (2015) examined the relationship between government revenue and GDP in Sudan, employing regression analysis. Their results showed a positive impact of government revenue on GDP, emphasizing the importance of effective fiscal policy for economic development. Mduduzi and Talent (2015) used panel data for 30 African countries to study the relationship between economic growth and government expenditures. Their findings confirmed a positive and statistically significant effect of economic growth on government spending, reinforcing the crucial role of government in economic development. Madaki

and Warren (2012) analyzed the impact of public spending on various sectors in Kenya using the Ordinary Least Squares (OLS) technique. Their results highlighted the positive relationship between expenditure on education and economic growth, while spending on economic affairs, transport, and communication was found to be insignificant.

Allakuliev & Sattoriy (2023) examined the relationship between government spending and economic growth in Uzbekistan using Engle-Granger Cointegration and Error Correction Model (ECM). Similarly, Zeynalli & Hasanoğlu (2022) studied public expenditure in Azerbaijan, finding that health and research expenditures negatively impacted economic growth, while education and economic expenditures had positive effects. Lofgren and Sherman (2004) employed a dynamic CGE model to analyze the impact of government policy on long-run growth and poverty in Sub-Saharan Africa. Their findings emphasized the importance of allocating government spending to the agricultural sector and improving spending efficiency for pro-poor growth strategies. Nyarko et al. (2019) and Poku et al. (2022) investigated the impact of public expenditure on economic growth in Ghana using various econometric techniques. Their studies confirmed that capital expenditure positively influenced economic growth, while recurrent expenditures had a detrimental effect. Numerous studies have focused on Nigeria, exploring various aspects of public expenditure and economic development. For instance, Efobi and Osabuohien (2012) highlighted the impact of fiscal decentralization and political instability on government expenditure. Onodugo et al. (2015) emphasized the need for economic diversification through non-oil exports and information technology. Other studies, such as Oriavwote and Ukawe (2018) and Taiwo and Taiwo (2018), examined the relationship between public spending and economic growth, poverty reduction, and the standard of living. Ogboru et al. (2018) used sectoral-econometric modeling to study the impact of government expenditure on agriculture, health, and education on unemployment reduction in Nigeria. Their findings underscored the importance of sector-specific analysis for effective policy formulation. Jeff-Anyeneh et al. (2020) and Nduka et al. (2019) used ARDL models to analyze the effect of government expenditure on the standard of living in Nigeria. Their studies revealed significant impacts of both recurrent and capital expenditures on living standards, although the actual improvement in citizens' welfare was questioned.

Despite the extensive research on public expenditure and economic development, several gaps remain. Many studies focus on broad regional analyses or aggregate data, which may overlook unique country-specific factors. More context-specific studies are needed to understand the distinctions of public expenditure impacts in different economic environments. While some studies examine short-term impacts, there is a need for more research on the long-term effects of public expenditure on economic development, particularly in developing countries. More detailed analyses of sector-specific expenditures and their direct impacts on economic growth and poverty reduction are necessary. This includes understanding the optimal allocation of public funds across different sectors. Research on the effectiveness of policy implementation and monitoring mechanisms is limited. Understanding the

challenges and best practices in executing public expenditure policies can provide valuable insights for policymakers. Many studies use aggregated data, which may mask significant variations within countries. Utilizing disaggregated data can reveal more precise relationships between public expenditure and economic development outcomes. The reviewed literature highlights the complex relationship between public expenditure and economic development, with findings varying across different contexts and methodologies. While significant progress has been made in understanding this relationship, addressing the identified gaps can lead to more effective policy formulation and implementation, ultimately fostering sustainable economic development. Further research should focus on context-specific analyses, long-term effects, sectoral allocations, policy implementation, and the use of disaggregated data to provide a more comprehensive understanding of the impact of public expenditure on economic development.

3. Methodology

The Keynesian theory is handy to address the focus of this study and upon which the model for his study is drawn. This study is aimed at examining the effect of public expenditure on government consumption, capital formation, and education on the human development aspect of development. It specifies that government expenditure on public goods and services, such as infrastructure, education, and healthcare, can enhance overall economic activity and stabilize fluctuations in the business cycle. Keynesian economists argue that budget deficits incurred from higher government spending can lead to increased domestic production and encourage private sector investments, thereby promoting economic expansion which can result into development over some time. Thirteen (13) ECOWAS countries from 1990 to 2020 have been examined in this study. The countries include Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea Bissau, Cote D'Ivoire, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo. Liberia and Capo Verve. The justification for this selection was based on the dearth of major data necessary for this study. Also, perform cubic spline interpolation where there are incomplete data in some countries in order not to estimate with unbalanced panel data.

To achieve objective, we employ panel data of the countries for the period, sourcing data from the World Development Indicator (WDI, 2022) database. The techniques of data analysis employed for this study are the panel Autoregressive Distributed Lag (PARDL) approach and Fully Modified Ordinary Least Square (FMOLS) technique for the robustness of our estimation. The ARDL approach is suitable for handling the existence of potential non-stationarity and heterogeneity of data in long periods and large sample sizes (Pesaran, Smith, 1995; Pesaran, Shin, 1995 and Pesaran et al., 1999). Several studies have also made use of the same model in literature (Adeniyi and Kumeka, 2020; Chaudhary et al., 2016; Alam, 2010). The ARDL was employed for two reasons. One, it takes into consideration both the non-stationarity and heterogeneity impacts of the data. Two, it performs better in terms of data estimation for a combination of I(0) and I(1), but not higher than I(1) (Shin et al., 2014).

Going by Keynesian analysis, increase in public expenditure boosts economic growth and development. That is, higher government expenditure brings about change in economic development.

$$EDV = f(PEX, GDP, Z) \quad (1)$$

More formally, the nexus between public expenditures and economic development in literature is specified by the following equation of the panel models:

$$EDV_{it} = \alpha + \beta_1 GEPX_{it-1} + \beta_2 Z_{it} + \mu_{it}, \quad (2)$$

Equation (2) shows the linkage between public expenditure and economic development. Z represents control variables. Therefore, the explicit econometric function to estimate in this study is shown as:

$$HDI_{it} = \alpha + \beta_1 lnGDP_{it} + \beta_2 GEPX_{it} + \beta_3 lnGFCF_{it} + \beta_4 GEED_{it} + \beta_5 INF_{it} + \beta_6 LFR_{it} + \beta_7 LEX_{it} + \beta_8 PSCE_{it} + \mu_{it}, \quad (3)$$

Where: EDV is Economic Development proxy by Human Development Index (HDI), GDP is Gross Domestic Product (GDP) (constant 2015 US$), GEPX is General government final consumption expenditure (% of GDP), GFCF is Gross fixed capital formation (% of GDP), GEED is Government expenditure on education, total (% of GDP), INF is Inflation, consumer prices Index (annual %), LFP is Labor force participation rate, total (% of total population ages 15-64), LEX is Life expectancy at birth, total (years), PSCE is School enrollment, primary (% gross), Subscripts i and t denote the country and time respectively, $\beta 1 \ldots\ldots \beta_8$ are the coefficients, and μ_{it} is the stochastic error term.

4. Data Analysis

Preliminary analyses of the variables that were employed in this study include descriptive statistics, panel cross sectional dependence and unit root test analysis. This is shown in Table 1 below. It consists of minimum, mean and maximum values of the variables employed in this study together with the values of skewness and standard deviation of 416 observations.

Table 1: Descriptive Statistics of the Variables

Variables	Obs	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
HDI	416	.388	.145	0	.632	-1.492	4.908
GDP	416	3.370e+10	8.910e+10	6.510e+08	5.180e+11	4.032	19.137
GEX	416	11.797	4.392	.911	26.065	.206	3.276
GEXED	416	3.069	1.504	.3	9.087	.622	4.18
GFCF	416	18.524	7.644	-2.424	53.122	1.051	5.954
INFL	416	8.1	11.394	-7.797	72.836	2.626	11.482
LFP	416	65.143	8.44	46.882	85.696	.223	2.295
LEX	416	55.148	5.431	41.852	68.526	-.214	2.627
SCHE	416	81.964	26.04	26.187	156.445	-.01	2.611

Source: Authors' Compilation 2023 from EViews 13

In performing a panel data econometric analysis for different economies, it is imperative to first test for cross-sectional dependence (CD) of the panel variables before choosing the most suitable methodology. Panel data analysis may give rise to CD due to common socio-economic networks, geographical locations, environmental characteristics, and other undetected elements which may result to unreliable findings if not carried out before panel regression analysis. (Kumeka et al., 2023). Therefore, the study carried out Breusch and Pagan's (1980) LM test as shown in Table 2.

Results reveals that there is presence of cross-sectional dependence (CD) at level and at first difference except government expenditure (GEX) variable. This means our variables are order I(0) and I(1) With the confirmation of CD, the second-generation unit root test CADF was employed as first generation techniques will be unsuitable and unreliable for this type of study. (Pesaran, 2007).

The authors used fully modified ordinary least square (FMOLS) result to test the robustness of the ARDL result in this study. The two results are the same. Starting with the major variables, the ARDL result indicate that general expenditure (GEX) and Gross Domestic Product (GDP) have negative effect on economic development in the short run though, they are insignificant for all the countries in West African region. This result is consistent with the findings in Madaki and Waren (2012), Deepti and Deepak (2020) and Nwolisa and Amakor (2019). It is found that a percentage increase in government expenditure decreases economic development by 0.052.

Table 2: Cross-Sectional Dependence Test and Second-Generation Unit Root Test

	Cross-sectional dependence (CD)				CADF	
	At Level					
VARIABLES	CD TEST	p-value	CORR.	Abs (CORR.)	Without Trend	With Trend
HDI	46.22	0.000	0.925	0.925	-1.462*	-0.536
GDP	47.46	0.000	0.950	0/950	-0.565	-0.298
GEX	0.66	0.507	0.013	0.367	-2.607**	-1.327
GEXED	4.64	0.000	0.093	0.396	-1.954*	-0.804
GFCF	4.84	0.000	0.097	0.341	-0.467	0.648
INFL	12.96	0.000	0.259	0.345	-5.790***	-4.635***
LFP	15.66	0.000	0.314	0.693	3.224**	0.348
LEX	47.59	0.000	0.953	0.953	-2.671	-0.684
SCHL	35.59	0.000	0.712	0.756	-1.354*	0.147
			First Difference			
DHDI	6.68	0.000	0.136	0.203	-4.492***	-3.467***
DGDP	4.84	0.000	0.098	0.168	-3.630***	-4.583***
DGEX	1.42	0.156	0.029	0.127	-7.074***	-5.570***
DGEXED	0.05	0.957	0.001	0.142	-3.398***	-3.754***
DGFCF	0.54	0.558	0.011	0.152	-4.684***	-7.223***
DINFL	9.49	0.000	0.193	0.267	-6.575***	-4.722***
DLFP	13.43	0.000	0.273	0.301	-1.236*	-8.231***
DLEX	14.50	0.000	0/295	0.342	-7.404***	-7.264***
DSCHL	3.18	0.001	0.065	0.178	-4.945***	-9.322***

Authors' Compilation, 2023

Note: ***, ** and * indicate rejection of null hypothesis at 1%, 5% and 10% level of significance, respectively.

Also, a percentage point increase in GDP in a typical West African economy would result to about 0.115 percent decrease in economic development in the short run. Focusing on the long-run result, government expenditure has a positive effect but statistically insignificant on economic development. This indicates that a one percent increase in government expenditure affects economic development by

about 0.016 percent. Also, Gross Domestic Product has a positive and statistically significant effect at one percent on economic development. More so, a one percent increase in Gross Domestic Product increases economic development by about 1.427 percent in ECOWAS countries. Furthermore, government expenditure on education has a positive and insignificant effect on economic development.

Table 3: Regression Result - Multivariate

Models	VARIABLE	ARDL Result	FMOLS Result
	LnGEX	0.0155	0.056
		(0.0170)	(0.030)
	LnGDP	1.4269***	0.165***
		(0.3663)	(0.011)
	LnGEXED	0.0004	-0.008
		(0.0099)	(0.021)
	LnGFCF	0.0336	-0.095***
Long-run		(0.0201)	(0.015)
Estimate	LnINFL	-0.0065	-0.072***
		(0.0039)	(0.017)
	LnLFX	0.2578	0.442***
		(0.1229)	(0.014)
	LnLFP	0.7480**	0.107***
		(0.2248)	(0.009)
	LnSCHE	0.2233***	0.029***
		(0.0420)	(0.018)
	C	-0.2574**	
		(0.0923)	
	Δ.GEX	-0.0524	
		(0.0188)	
	Δ.GDP	-0.1147	
		(0.0866)	
	Δ.GEXED	0.0059	
		(0.0084)	
	Δ.GFCF	0.0127	
		(0.0084)	

Short-Run Estimate	Δ.INFL	0.0017
		(0.0017)
	Δ.LFX	0.5094
		(0.2653)
	Δ.LFP	0.3020
		(0.2642)
	Δ.SCHE	0.0402
		(0.0410)
	??$_{??1}$	-0.0523
		(0.0187)**

Source: Authors' Compilation 2023 from EViews 13

Note: ***, ** and *represent significant statistical levels at 1%, 5% and 10% respectively. Numbers in parentheses are standard errors (S.E).

A percent increase in government expenditure increases economic development by about 0.0004 percent point. In terms of other exogenous variables, Gross fixed capital formation has positive but insignificant relationship with economic development. It shows that one percent increase in gross fixed capital formation will result to about 0.034 percent in economic development. This finding corresponds with Poku et al. (2022). For inflation, having a negative effect on economic development in our result is in line with economic theory. Inflation is the continuous rise in prices of goods and services in an economy resulting to lower purchasing power of money and subsequent lower standard of living. From our result also life expectancy has a positive relationship with economic development though not statistically insignificant. Labour force participation is positively related and significant at 5 percent with economic development. A percentage increase in labour force increases economic development by 0.748 percent. Similarly, school enrolment at the primary level has positive and statistically significant level with economic development as one percent increase in school enrolment at the primary level increases economic development by 0.223 percent in ECOWAS countries. Also the speed of adjustment, ? $_{?,-1}$ in the short run is -0.0523which has the right conventional properties; it has the right sign (-), it is statistically significant at five percent level and less than one. This means that the model will result to its steady state in the long run.

In summary therefore, this study found out that gross domestic product, labour force participation and school enrolment at the primary level all have positive and statistically significant effect on economic development in ECOWAS countries. The study also found out that government expenditure on education has no significant effect on economic development. This might be because not all government expenditure on education is captured for data purposes. This is so because of endemic corruption in most of the West African countries. Another reason for this might be that a small

percentage of fiscal allocation is allocated to education development in terms of provision of education infrastructures, training of teachers and low teachers' salaries and wages in most of the countries. Fiscal allocation to the education sector up till now has been far from UNESCO's recommendation for education in ECOWAS region. The study therefore reveals that there is a long run but insignificant relationship between public expenditure and economic development in ECOWAS countries for the period under review. This is the major reason why ECOWAS region has been the least developed region globally (Africa Human Development Report, 2016).

5. Conclusion

This study empirically investigates the relationship between public expenditure and economic development in Economic Community of West African States (ECOWAS) countries. Employing Panel data analysis, the relationship between public expenditure and economic development in thirteen (13) ECOWAS countries based on data availability. The analysis is base on relevant data from World Development Indicators (WDI) for the period covering 1990 – 2021. The study employs descriptive and quantitative analysis with Human Development Index (HDI) proxy for economic development. In accomplishing the primary objective of this study, Autoregressive Distributed Lag (ARDL) and pooled Ordinary Least Squared (OLS) techniques were employed, using the latter technique for robustness of the results. The regression analysis results reveal that there is a long run but insignificant relationship between public expenditure and economic development in ECOWAS countries for the period under review. This implies that public expenditure has not been optimally utilized to bring about economic development in the ECOWAS region where human development index trends will be greatly improved within shortest possible years.

Based on the findings of the study, the authors therefore recommend that governments in all countries should increase their expenditure on education and health, engage in sound monetary and fiscal policy making capital expenditure higher than recurrent expenditure and encourage increase in school enrolment rate at all levels by providing capital infrastructure in all public schools.

References

Adeniyi, O., Kumeka, T. T., & Alagbada, O. (2022). Natural Resource Dependence and Tax Effort in sub-Saharan Africa. *Journal of Economic Development*, Vol.47, No 1: 29–64.

Allakuliev, A. & Sattoriy, F. (2023). Analyzing the Link Between Government Budget Expenditures and Economic Growth: A Case Study of Uzbekistan's Experience. *International Professional Business Review* 1-14.

Anochie, U. & Ude, K. (2014). Public Expenditures as a Fiscal Policy Tool for Sustainable Economic Growth: Its Quality Achievement and Employability in Nigeria. *Journal of Economics and Sustainable Development*, Vol. 5, No 23: 7-24.

Binuyo, B. (2014). Effect of Poverty Reduction Programmes on Economic Development: Evidence from Nigeria". *Arabian Journal of Business and Management Review* (OMAN Chapter), Vol., 4 No 1.

Chemingui, M. (2017). Public Spending and Poverty Reduction in an Oil-Based Economy: The Case of Yemen. *International Food Policy Research Institute (IFPRT)* Discussion Paper No 00701: 1-68.

Choudhry, H. & Musa A. (2021). Sub-Saharan African Countries Public Expenditure and Economic Growth: Wagner's Panel Cointegration and Causality Applications. Retrieved from www.preprints.org.

Chude, P., Chude, I. & Anah, A. (2019). The Relationship Between Government Expenditure, Economic Growth and Poverty Reduction in Nigeria. *International Journal of Developing and Emerging Economies*, Vol. 7, No 2: 1-10.

Deepti, A. & Deepak, P. (2020), Public Expenditure and Economic Growth: Evidence from the Developing Countries. *Fortune Institute of International Business*. FIIB Business Review 1–9.

Efobi, U. & Osabuohien, E. (2012). Government Expenditure in Nigeria: An Examination of Tri-Theoretical. *Journal of Economic and Social Research,* Vol. 14, No 2: 27-52.

Idenyi, O., Nwachukwu, O., Agbi, P. & Okoro, O. (2016). Analysis of Government Expenditure and Economic Growth in Nigeria: Application of Co integration Methodology. *Asian Research Journal of Arts & Social Sciences,* Vol. 1, No 4: 1-17.

Iwayemi, A. (2019). The Fuel Subsidy Puzzle: Facts, Fallacies and the Way Forward". Nigerian Economic Society Annual Public Lecture Series No 15: 5 – 13.

Jabeen, H., Sami, U. & Izhazul, H. (2018). Economic Development Amidst Income Inequalities and Tax Structure: A Case Study of Pakistan. *International Journal of African and Asian Studies,* Vol. 48: 20-30.

Jeff-Anyeneh, S., Amalachukwu, A., Ezu, G. & Nnoje A. (2020). Government Expenditure and Standard of living in an Emerging market in Africa–Nigeria. *Economic Journal of Emerging Markets,* Vol. 12, No 2: 167-178.

Jhingan, M. L. (2012). *The Economics of Development and Planning*, 40th Ed. India Vrinda Publication (P) Ltd.: 148-149.

Khalid, H. & Azrai, A. (2015). Effect of Government revenue and the Sudan economy: Econometric model for services sector GDP. *Procedia-Social and Behavioral Sciences* 172: 223-229.

Kumeka, T. T., Rafiu, I. A., & Adeniyi, O. (2023). Globalisation and Inclusive Growth in Africa: The Role of Institutional Quality. *Indian Institute of Foreign Trade.* Foreign Trade Review 1-36.

Lamido, S. (2012). Nigeria's Economic Development Aspirations and the Leadership Question – Is there a Nexus? Speech at the 2nd General Dr. Gowon Distinguished Annual Lecture, Lagos, 19 October 2012.

Lustig, N. (2018). Fiscal Policy, Income Redistribution, and Poverty Reduction in Low- and Middle-Income Countries.*Commitment to Equity*. Working Paper.

Madaki, J. & Warren, M. (2012). Does the Composition of Public Expenditure matter in Economic Growth for Kenya? *Journal of Economics and Sustainable Development,* Vol. 3, No 3: 60-70.

Mduduzi, B. and Talent, Z. (2015). Economic Growth And Government Expenditures In Africa: Panel Data Analysis. *Environmental Economics,* Vol. 6, No 3: 15-19.

Nduka, J., Amalachukwu, A. & Osakwe, C. (2019). Expenditure of the Federal Government of Nigeria: Effect on the Standard of Living of her Citizens. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* Vol. 9, No 4: 57–64.

Nwaolisa, F. & Amakor, C. (2019). The Impact of Government Expenditure on Nigeria Economic Growth: A Further Disaggregated Approach, *Journal of Social Development*. Vol. 6, No 3: 34-48.

Nyarko-Asomani, A., Bhasin, V., & Aglobitse, P. (2019). Government Capital Expenditure, Recurrent Expenditure and Economic Growth in Ghana *Ghanaian Journal of Economics*, Vol. 7, 44-70.

Ogboru, I., Abdulmalik, F., & Park, I. (2018). Government expenditure on Agriculture and its Impact on unemployment reduction in Nigeria. *International Journal of Economics, Commerce and Management*, Vol. 6, No 6: 1-25.

Onodugo, I., Benjamin, A. & Nwauba, N. (2015). Diversification of the Economy: A Panacea for Nigerian Economic Development. *International Journal of Multidisciplinary Research and Development.*

Oriavwote, V. & Ukawe, A. (2018). Government Expenditure and Poverty Reduction in Nigeria. *Journal of Economics and Public Finance*, Vol. 4, No 2.

Poku, K., Opoku, E. & Ennin, P. (2022), The Influence of Government Expenditure on Economic Growth in Ghana: An ARDL Approach. *Cogent Economics & Finance,* 1-16.

Snowdon, B. & Howard, V. (2005). *Modern Macroeconomics*. (USA: Edward Elgar Printing.

Taiwo, M. & Taiwo A. (2018). Government Expenditure and Economic Development: Empirical evidence from Nigeria. *MPRA Paper* 37293, University Library of Munich, Germany.

Teshome, A. (2018). Government Expenditure and Economic Growth in Ethiopia. Master's degree Thesis, University of Ethiopia.

Todaro, M. & Stephen, S. (2015). *Economic Development,* 12th Ed. USA: Pearson Education Inc.

Top 10 Indicators of Economic Development in a Country (2019). Accessed from https://www.legit.ng/1139672.

Udo, A., Benedict, E., Charles, E. & Ogar, O. (2016). Economic Growth of West African Countries and the Validity of Wagner's Law: A Panel Analysis. *Asian Journal of Economics and Empirical Research*, 3(1): 71-83.

United Nations Development Programme, (2016). Africa Human Development Report (AfHDP).

United Nations Development Programme, (2018). Human Development Indices and Indicators: Statistical Update.

Uzoigwe, D. (2007). Economic Development in Nigeria through Agricultural, Manufacturing and Minning Sectors: An Unpublished PhD Thesis of Economic Development of University of Pretoria, South Africa.

West African Economic Outlook (WAEO 2023).

World Bank, (2018). *The Economist*. The Global Liveability Index

World Development Indicator (WDI) 2022.

Wu, S., Tang, J. & Lin, E. (2010). The Impact of Government Expenditure on Economic Growth: How sensitive to the level of Development? *Journal of Policy Modeling, Elsevier*, 32 (6).

Zeynalli, L. & Hasanoğlu, M. (2022). An Assessment of the Impact of Public Expenditure on Economic Growth in Azerbaijan. Accessed from https://doi.org/10.33712/mana.1179687 Yıl on 02 September 2023.