

## Impact of Public Spending On Poverty Eradication in West African Countries. A Panel Cointegration Approach

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### Abstract

The relationship between government spending and poverty eradication in literature is still up for debate, although little is known about how government spending affects it. This study looked into how government spending in west Africa affected efforts to reduce poverty. The study included panel data collected over a 40-year period, and it was analysed using a panel ARDL Co-integration technique. Overall conclusions showed that government spending had a beneficial and considerable impact on reducing poverty in west African countries during the study's time frame. The results also showed that government spending and poverty reduction have a long-term cointegration relationship. The report advocated, among other things, that the government should intervene as much as possible through fiscal policy measures (government expenditure) to assist the success of programmes to reduce poverty in west African states.

**Keywords:** *Government Expenditure; Poverty Eradication; Government Intervention*

**Introduction**

Poverty is viewed as a challenge to human flourishing and as a hazard that is destroying nations all over the world Alinsha, (2018). With countries battling to either slash or eliminate the rate of poverty in their economies, poverty evolved into a problem of global concern. International organizations and agencies have been more concerned about the growing threat of poverty in many nations, especially in emerging nations. As a result, governments in various nations have begun implementing policies to reduce poverty. The United Nations created the Millennium Development Goals (MDGs) in 2000 as a development strategy to reduce the rate of poverty in nations around the world, with the elimination of poverty as its top objective.

West African sub-region is among the regions that suffer from a high rate of poverty Allen,

(2018). According to the United Nations Report in 2017, many countries in this region have a tendency to be unable to reduce the extreme poverty rate to below 3% by 2030. Africa has a huge potential to make significant strides to reduce extreme poverty in the coming decades, but more realistic targets are needed. Over the past 20 years, there has been remarkable progress in reducing poverty. However, Africa contains the largest remaining share of global extreme poverty. Approximately, about 400 million Africans are still living below the poverty line. Eliminating poverty lies at the heart of post-2015 Development Agenda as well as the African Union’s long-term vision Entitled; Agenda 2063. However, the goal to reduce extreme poverty to below 3% in every African country by 2030 does not account for the extremely diverse starting point across the continent.

**Table 1: Poverty headcount ratio at \$1.25 per day (PPP) (percentage of population)**

|               |              |              |              |              |              |
|---------------|--------------|--------------|--------------|--------------|--------------|
| Benin         | 47.33 (2003) |              |              |              |              |
| Burkina Faso  | 71.17 (1994) | 70.03 (1998) | 56.54 (2003) | 44.6 (2009)  |              |
| Cape Verde    | 21.02 (2002) |              |              |              |              |
| Côte d'Ivoire | 17.79 (1993) | 21.09 (1995) | 24.06 (1998) | 23.34 (2002) | 23.75 (2008) |
| Gambia, The   | 65.61 (1998) | 33.63(2003)  |              |              |              |
| Ghana         | 51.07 (1992) | 39.12 (1998) | 28.59 (2006) |              |              |
| Guinea        | 92.55 (1991) | 63.81 (1994) | 56.32(2003)  | 43.34 (2007) |              |
| Guinea-Bissau | 41.31 (1991) | 52.11 (1993) | 48.9 (2003)  |              |              |
| Liberia       | 83.76 (2007) |              |              |              |              |

|              |              |                 |                 |                 |                 |
|--------------|--------------|-----------------|-----------------|-----------------|-----------------|
| Mali         | 86.08 (1994) | 61.18<br>(2001) | 51.43<br>(2006) | 50.43<br>(2010) |                 |
| Niger        | 72.79 (1992) | 78.17<br>(1994) | 65.88<br>(2005) | 43.62<br>(2008) |                 |
| Nigeria      | 61.9 (1992)  | 68.51<br>(1996) | 63.07<br>(2004) | 67.98(2010)     |                 |
|              |              |                 |                 |                 |                 |
| Senegal      | 65.81 (1991) | 53.64<br>(1994) | 44.19<br>(2001) | 33.5 (2005)     | 29.61<br>(2011) |
| Sierra Leone | 62.79 (1990) | 53.37<br>(2003) | 51.71(2011)     |                 |                 |
| Togo         | 38.68 (2006) | 28.22(2011)     |                 |                 |                 |

**Source:** Compiled with data from the World Development Indicators of the World Bank,

**Note:** Figures in brackets are the years in which the headcount ratio was calculated.

Looking at the above table, it can be observed that, on the basis of a purchasing power parity of \$1.25 a day poverty line, the incidence of poverty in West African countries is generally declining except for countries like Côte d'Ivoire, Guinea Bissau and Nigeria where the trend is generally rising. The available data also indicate that except for Cape Verde, Côte d'Ivoire, Ghana, Senegal and Togo which have maintained a poverty incidence of less than 40 percent since 2002, all the countries in the sub region have registered a level of above 40 percent. It would therefore be correct to state that generalized poverty exists in several West African countries. This evidence of widespread poverty in the region is suggestive of a substantial proportion of the population being poor over extended periods of time.

To eradicate the extreme rate of poverty in West African Countries, different macroeconomic policies are applied particularly Monetary and Fiscal Policies. However, empirical evidences proved that Fiscal Policy tools of Government

Expenditure through deficit spending is an effective measure of addressing the extreme rate of poverty particularly in developing economies. Numerous empirical and theoretical studies have demonstrated the link between government spending and the reduction of poverty in the economy in developing countries where the private sector is less active Danlami, (2014).

Despite the existence of many empirical studies across the globe on the nexus and causal relationship between government expenditure and poverty elimination in developing countries, empirical evidences have proven that, the success of government expenditure in poverty alleviation in West African countries is below the expectation. This has attracted the attention of the researchers and policy makers to study the relationship.

Therefore, it is against this background that, this study aims to reevaluate the impact of

government spending on reducing poverty in West Africa between (1999-2020).

## 1. LITERATURE REVIEW

### 2.1 The Concept of Poverty

The UNDP (1997) states that there are three approaches to defining poverty. A person is considered to be poor if their income is below the established poverty line, according to the first perspective on poverty, which focuses on income. The second is the fundamental need, which sees poverty as the lack of the materials necessary to satisfy human needs, including those for food, rudimentary healthcare, education, employment, and important services. The third category is "loss of capability," which refers to the absence of some essential abilities.

A person who does not have the chance to perform at least minimally acceptable levels. The 2004 World Development Report added to these viewpoints. They concurred that there are various facets to poverty. Other dimensions of poverty include low income, illiteracy, poor health, gender inequity, and environmental degradation (world bank, 2004). According to OBADAN (1997), poverty typically includes both income and non-income elements, which are linked in this definition. According to him, when someone's standard of living, income, or consumption is below the poverty threshold, they are considered to be poor. Lack of physical necessities, resources, and income is referred to as poverty. It is a subset of the general state of deprivation, which also includes social inferiority, isolation, and physical infirmity.

Poverty, in the opinion of Olowa (2012), is elusive and has a significant impact on a variety of human conditions, including the physical, moral, and psychological aspects of the human person. As a result, criteria are used to conceptualize poverty; the majority of

understandings are traditional and based on not having enough money to buy necessities like food and shelter. Others see poverty as a result of factors like health, life expectancy, child mortality, and education. From the perspective of consumption and spending, Blackwood and Lynch (2004) analyze poverty.

According to Sens (2003) theory of relational poverty, rights based on products and services over which one has control are comparable to poverty when taken into account along with the means by which such things are acquired and the availability of the necessary goods. Others define poverty as not being able to meet "basic needs" (physical, (food, health care, education, shelter, and requirements for a meaningful life Poverty refers to a household's inability to reach a level of income required to buy the variety of goods and services considered to be standard for those in a particular reference group to be sufficient for living (Ikechi, Akujinma, Emmanuel, and Johnson) (2017).

### 2.2 The Measurement of Poverty

Three crucial factors for poverty measurement were emphasized by the World Bank in 1993. The first is the benchmark to be utilized in determining living standards and classifying people as impoverished or not. Second, I determine the poverty line—the minimum standard of living below which a person is considered poor—and then I determine how many people have incomes that fall below it. The third discusses how poverty is classified according to its intensity. This approach appears to be consistent with Seris, (1981) observation that the definition of poverty, which identifies the poor, and an index, which measures the degree and depth of poverty, could be thought of as two components of poverty measurement.

The poverty line is a method used to measure poverty using income and consumption data.

When a person's measurement or expenditure standard of living [often calculated on income or consumer expenditure] is below a minimally acceptable level, they are considered to be poor. Absolute or relative poverty could apply here (Englama and Bamidele 1997) Lack of resources to buy and use specific bundles of goods and services is considered absolute poverty. In terms of the standard of living that is prevalent in a given society, relative poverty is defined. The measurement of poverty has the benefit of reflecting shifting views on the minimum quality of living that is acceptable (Anyanwu, 1997).

### 2.3 Keynesian Theory of Government Expenditure

Keynes (1936) argued for the importance of government spending in determining income level (economic growth) and distribution. Government spending policies in emerging nations not only help to increase employment prospects and economic growth, but they also

help to improve the standard of living and inequality reduction. A macroeconomic theory known as Keynesian theory examines overall economic spending and how it affects a number of macroeconomic variables, including production, employment, poverty, and inequalities. In an effort to comprehend the Great Depression, the 1930s saw the development of Keynesian economics. Keynes' theory led him to propose higher government spending and lower taxes as a way to boost demand and rescue the world economy from the Great Depression.

## 2. Empirical Methodology

### Models Specification

The aim of this study is to investigate the impact of government expenditure on Poverty Eradication in West African countries. To achieve this objective, the baseline functional form of the model is specified in equation (3.1):

$$POV_t = f(GEX_t) \tag{3.1}$$

Where,  $POV_t$  represents poverty (dependent variable), and GEX represent Government expenditure which is the independent variable.

$$POVERTY_{i,t} = \alpha_0 + \alpha_1 G\_GEX_t + \alpha_2 GDP_t + \alpha_3 INF_t + \alpha_4 POP_t + \varepsilon_{i,t} \tag{3.2}$$

In equation (3.2), Poverty is the dependent variable proxied by household's final consumption expenditure per capita,  $\alpha_0$  is the intercept;  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$  and  $\alpha_4$  are the elasticity measure of the General Government

Expenditure (G\_GEX), Gross Domestic Product (GDP) Inflation Rate (INF) proxied by consumer price index and Population Growth rate (POP) which are the control variables and  $\varepsilon_{i,t}$  is the error term(s).

### 3.1 Definition of variables and data sources

| Variables  | Definition  | Source    |
|--|---|-----------|
| <b>Proxies of the Main Independent Variable</b>  |   |           |
| General government final consumption expenditure | General government final consumption expenditure (general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). | WDI, 2022 |
| <b>Proxies of the Dependent Variables</b>        |   |           |

Impact of Public Spending On Poverty Eradication in West African Countries. A Panel Cointegration Approach

|   |  |           |
|---|--|-----------|
| Households final consumption expenditure per capita (Poverty) | Household final consumption expenditure is the proxy of poverty which is the dependent variable in the model.        | WDI, 2022 |
| <b>Proxies of the Control Variables</b>                       |  |           |
| GDP per capita growth (annual %)                              | The justification for the inclusion of this variable as control variable is because of its role in achieving poverty | WDI, 2022 |
| Population growth rate  | This is also the control variable used in the model because of its role in determining economic development          | WDI, 2022 |
| Inflation   | This variable also is controlled in the model because of its role in the economy as macroeconomic variable.          | WDI, 2022 |

Commented [F1]: Caption this table

### 3. Empirical Results

#### *Impact of government expenditure on poverty eradication*

Table 4.1 presents the PMG estimation results for the model. The results of the panel-A: long-run analysis showed that the general government final consumption expenditure (G\_GEX) is statistically significant and has a positive long-term impact on the proxy of poverty eradication (i.e.: household's final consumption expenditure per capita) at 5% significance level. Specifically, an increase in general government final consumption expenditure by 1% will bring about an increase in household's final consumption

expenditure per capita by 0.032%. the policy implication of this finding is that, government expenditure particularly on social and economic facilities raises the household's final consumption expenditure per capita which has been used in this study as a measure of the rate of poverty in the sampled countries for this study. This implies that government expenditure contributes significantly in poverty eradication in West African countries. This finding is in line with previous studies (Apergis, 2012) and (Apergis, 2011). The authors also found that government expenditure has positive and significant impact on poverty eradication.

Table 4.2. PMG estimations of ARDL results for the Model (Poverty)

| Panel A: Long Run Equation: Dependent variable is Poverty           |             |            |             |       |
|---|-------------|------------|-------------|-------|
| Variable  | Coefficient | Std. Error | t-Statistic | Prob. |
| G_GEX   | 0.032       | 0.015      | 2.101       | 0.037 |
| GDP   | 0.688       | 0.069      | 9.922       | 0.000 |
| INFLATION   | -0.179      | 0.037      | -4.897      | 0.000 |
| POPULATION  | -0.510      | 1.124      | -0.454      | 0.650 |
| Panel B: Short Run Equation: Dependent variable is $\Delta$ Poverty |             |            |             |       |
| ECT <sub>t-1</sub>  | -0.632      | 0.084      | -7.510      | 0.000 |

*Impact of Public Spending On Poverty Eradication in West African Countries. A Panel Cointegration Approach*

|                      |         |        |        |       |
|----------------------|---------|--------|--------|-------|
| $\Delta(G\_GEX)$     | 0.050   | 0.018  | 2.821  | 0.005 |
| $\Delta(GDP)$        | -0.092  | 0.154  | -0.599 | 0.550 |
| $\Delta(INFLATION)$  | 0.104   | 0.130  | 0.795  | 0.427 |
| $\Delta(POPULATION)$ | -15.734 | 16.159 | -0.974 | 0.331 |
| C                    | 9.446   | 2.876  | 3.285  | 0.001 |
| @TREND               | -0.231  | 0.120  | -1.920 | 0.056 |

Note: The lag selected by Akaike info criterion is (1, 1, 1, 1, 1) and  $\Delta$  is the difference operator

Source: Researcher's computation (2022)

The results in table 4.2 further revealed that the impact of government expenditure on poverty eradication in West African countries is among others transmitted through economic growth as represented by gross domestic product (GDP) per capita. The result showed that holding other factors constant, economic growth proxied by gross domestic product (GDP) per capita has a positive and significant impact on household's final consumption expenditure per capita in the long-run. Specifically, the coefficient (0.688) indicates that a 1% increase in GDP per capita leads to an increase in household's final consumption expenditure per capita by 0.688%. Thus, increasing economic growth is associated with high household's final consumption expenditure per capita and poverty eradication in West African countries. However, the finding revealed that the inflation and population growth rate have negative impact on household's final consumption expenditure. This implies that when inflation and population growth rate increase, the household's final consumption expenditure decreases and vice-versa.

The short-run results of other control variables are very different as compared to the long-run coefficients. Most of the estimated coefficients are statistically insignificant even at 10% significance level. However, the coefficient of the

error correction term lagged by one period (ECTt-1) is negative and statistically significant at 1%, and therefore meets the Apriori expectation. The adjustment from the short run to the long run will take place as suggested by the negative and statistically significant one-lagged error correction terms (ECTt-1). The coefficient (-0.632) implies that 63.2% of substantial portion of the deviations from the equilibrium path, is adjusted in one year.

#### 4. Conclusion

The purpose of this study is to investigate the impact of Government Expenditure on Poverty Eradication in West African Countries, using the Panel Data of the sampled West African Countries. The overall findings from this study revealed that, Government Expenditure used in this study as independent variable has a positive and statistically significant impact on the proxy of poverty eradication (i.e.: household's final consumption expenditure per capita). The policy implication of this finding is that, government expenditure particularly on social and economic facilities raises the household's final consumption expenditure per capita which has been used in this study as a measure of the rate of poverty in the sampled countries for this study.

Therefore, this study in line with its theoretical framework and the methodology adopted, reiterates the significant impact of government expenditure on poverty eradication in West African Countries as being debated currently in literature across the globe.

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