

The Impact of Government Budgetary Allocation on Adult Literacy Rates in Nigeria: Implications for Educational Policy and Human Development

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Abstract

This study explores the impact of the government's budgetary allocations on adult literacy rate in Nigeria as well as the implications for educational policy and human development. The study utilizes secondary time-series data from the Central Bank of Nigeria, National Bureau of Statistics, UNESCO Institute for Statistics, and the World Bank for the period 2000 to 2023, and then uses the autoregressive distributed lag (ARDL) technique to estimate the relationship between the allocation of the education budget and adult literacy outcomes. The results indicate that there is a positive and lasting impact of government spending on education on literacy rates among adults; however, the impact is too weak to reach the UNESCO targets. The study also suggests that the Nigerian government should allocate between 15–20% of its total government expenditure to education, placing a particular emphasis on adult literacy programmes, non-formal education, and the development of basic education facilities, especially in the northern part of the country where there is the highest literacy deficit.

Keywords: *N/A*

1. Introduction

Nigeria, Africa's most populous country, with the largest economy, is having a paradoxical problem in the development of human capital – despite significant funding of the education sector in successive budgets, adult literacy rates are still very low and learning outcomes are very poor. In recent years, the adult literacy rate was estimated at around 62 per cent, which is well below the average for the world and the UNESCO target of achieving universal literacy in Nigeria. The gap is significant in the north, among rural residents and among women; in some states, literacy rates are lower than half among women.

The Nigerian government has continually provided the resources for education in the Federal, State and local government budgets. Nevertheless, the share of total education spending in GDP has consistently been at around 1.7%, which is significantly lower than the average for Sub-Saharan Africa (SSA) of about 4.6% of GDP and the UNESCO/World Bank target of 15-20% of total government expenditure. Of the budget for 2024, ₦2.36 trillion was allocated to the education sector, amounting to 8.21% of the total federal budget, of which 65.4% was for personnel costs, 30.1% for capital expenditure, and 4.5% for overheads. However, Nigeria has around 10.2 million out-of-school children at the primary education level, which is the highest in the world.

There has been a great deal of scholarly discussion over the link between public spending and educational outcomes. Some studies have found that government expenditure has a beneficial effect on human capital formation, but others have suggested that if the effect is positive, it can only be obtained if the expenditure is allocatively efficient, institutions are of high quality, and vulnerable groups are targeted. The large and ongoing disparity between literacy outcomes and the amount of resources allocated to education in Nigeria is an important issue to consider in terms of the effectiveness of the current expenditure pattern and the structural limitations that hinder educational development. In this study, emphasis is placed on adult literacy, an area that is frequently

neglected in the emphasis on primary and secondary enrolment, and the impact of budgetary allocations on measurable outcomes in terms of literacy gains. Beyond the education policy implications, these extend to the broader human development goals of reducing poverty, achieving gender equality and sustainable economic growth. This study therefore aims at analysing the effect of budgetary allocation on adult literacy in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Framework

Government Budgetary Allocation means that the share of public financial resources allocated by the Government for education via appropriation bills in a particular year. That includes providing the Federal Ministry of Education, Universal Basic Education Commission (UBEC), National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC), and other tertiary institutions in Nigeria.

Adult Literacy Rate is the proportion of people aged 15 years and above that can read and write a short simple statement about their daily lives with understanding. This indicator is a proxy for the stock of human capital and a factor of labour productivity, technological absorption capacity and civic participation.

According to the United Nations Development Programme (UNDP), Human Development is the ability of people to increase their freedoms and capabilities by enhancing their health, education and standard of living. Adult literacy is an important component of the education dimension in the Human Development Index (HDI).

2.2 Theoretical Framework

Human Capital theory, which was formulated by Becker (1964) and Schultz (1961), argues that the investments in education and training improve the productivity of individuals and consequently the national level of economic production. In this view, the government's spending on education is a worthwhile investment that pays off in better-trained workforce, innovation and economic diversification.

The Public Choice Theory provides an additional prism, which proposes that government decision-making on resources allocation is driven by political bargaining and institutional incentives, rather than just welfare maximisation. This theory provides an explanation for some possible education spending inefficiencies, such as the failure to allocate sufficient amount to recurrent spending, to geographic allocation, and to the neglect of adult literacy programmes in favor of tertiary.

2.3 Empirical Literature

Bassey et al (2022) used the ARDL technique to analyze government expenditure on human capital development in Nigeria between 1981 and 2019. In short-run and long-run government education spending, their results showed that human capital development (measured by the Human Development Index) was increased by 16% cumulatively in the long run. But the study pointed out that there were continued shortfalls between spending growth and an improvement in outcomes, which it blamed on implementation inefficiencies and inadequate targeting.

African Economic Research Consortium (2020) presented evidence that shows that education at every level has a positive effect on per capita GDP for Nigeria with varying magnitudes. At 10% level of significance, primary school enrolment shows a coefficient of 0.134 and at 1% level of significance, secondary school enrolment shows a coefficient of 0.101. The study showed that the adult literacy rate of 39.2% in Nigeria in 2009 presents a serious challenge to human capital formation and should be compared with the 60.3% adult literacy rate in Benin in 2006.

The World Bank (2018) Human Capital Project ranked Nigeria's Human Capital Index as 0.34, representing the gap in education and health that would result in a child being only 34% productive at birth. The expected years of schooling was 8.2 years while the learning adjusted years was 4.2 years, which implies that there is a gap of four years in schooling due to poor quality of education and inadequate investment in foundational skills.

The Federal Ministry of Education reported in the Education Sector Analysis (2021) that despite the magnitude of the adult illiteracy challenge, the Government spent less than 0.3% (₦4.725 billion) on literacy and non-formal education in consolidated budget of the education sector. Additionally, the analysis revealed a high degree of inaccessibility and awareness of literacy centres in the form of adult population (57.9% were not literate in English, and 30.2% did not know of literacy centres).

In 2024, BudgIT's budget analysis revealed that the Universal Basic Education Commission (UBEC) budgeted only 8.2% (N122.3 billion) for capital expenditure while 92% was spent on recurrent expenditure. This imbalance in structure will negatively affect the ability to effectively address the challenges of out of school children and adult literacy, the report said.

A recent study by the Development Research and Projects Centre (2026) showed that Nigeria's education spending of only 1.7% of GDP is low compared to the regional and international standards. The study pointed out that investment in digital and AI in education is accelerating in the post-basic technical education but little integration in basic education and in equity objectives, and that adult literacy programmes are underfunded.

3. METHODOLOGY

3.1 Research Design

This study is of ex-post facto type, and used a secondary time-series data analysis method. The design is suitable as a research design for investigating the historical relationships between the dependent variable (educational outcomes) and the independent variable (government expenditure) when the researcher has no control over the second variable.

3.2 Research Objective

This study aims to:

To explore the impact of government spending on education on adult literacy rate in Nigeria.

3.3 Research Question

This study attempts to answer the following research question:

How does the allocation of resources to education in Nigeria affect the literacy rate among the adult population?

3.4 Research Hypothesis

The following null hypothesis is tested at 5% level of significance:

H₀: adult literacy rates in Nigeria are not significantly affected by the allocation of budget for education by the government.

3.5 Model Specification

Drawing from Bassey et al. (2022) and the human capital production function literature, the study specifies the following ARDL model:

$$ALR_t = \alpha_0 + \alpha_1 GBAt + \alpha_2 GDP_t + \alpha_3 POP_t + \alpha_4 URB_t + \varepsilon_t$$

Where:

- ALR_t = Adult Literacy Rate (% of population aged 15+)
- $GBAt$ = Government Budgetary Allocation to Education (₦ billion, real terms)
- GDP_t = Gross Domestic Product per capita (proxy for economic development)
- POP_t = Total Population (millions, control for demographic pressure)
- URB_t = Urbanisation Rate (%)
- ε_t = Error term
- α_0 = Intercept; $\alpha_1 - \alpha_4$ = Coefficients

3.6 Data Sources and Measurement

Data for the study are sourced from:

- Central Bank of Nigeria (CBN) Statistical Bulletin (various issues) — for budgetary allocations and GDP
- National Bureau of Statistics (NBS) — for population and urbanisation data
- UNESCO Institute for Statistics — for adult literacy rates
- World Bank World Development Indicators — for supplementary macroeconomic variables

The study period covers 2000–2023, providing 24 annual observations sufficient for ARDL bounds testing procedures.

3.7 Estimation Technique

The Autoregressive Distributed Lag (ARDL) bounds testing approach developed by Pesaran et al. (2001) is employed. This technique is preferred because: (a) it can be applied irrespective of whether variables are I(0), I(1), or fractionally integrated; (b) it accommodates small sample sizes; and (c) it distinguishes between short-run and long-run relationships.

The bounds testing procedure involves:

1. Testing for unit roots to confirm absence of I(2) variables
2. Estimating the unrestricted error correction model (UECM)
3. Conducting the F-test for cointegration using Pesaran critical values
4. Estimating the long-run coefficients and short-run dynamics

Diagnostic tests for serial correlation, heteroscedasticity, functional form misspecification, and parameter stability (CUSUM and CUSUMSQ) are conducted to ensure model robustness.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Overall, the trend of government expenditure on education in Nigeria from 2000 to 2023 is shown in Table 1. The data shows that although the nominal amount of money spent on education grew significantly, from ₦48.2 billion in 2000 to ₦2.36 trillion in 2024, spending on education as a percentage of GDP has decreased from 2.37% in 2000 to about 1.7% in recent years. Likewise, the proportion of education spending to total government spending dropped from 9.26 per cent in 2015 to only 2.98 per cent in 2024, which is significantly lower than the UNESCO target of 15-20 per cent.

Table 1: Trend of Government Budgetary Allocation to Education and Adult Literacy Rates in Nigeria, 2000–2024

Year	Education Budget (₦ billion)	Education Expenditure (% of GDP)	Education Expenditure (% of Total Govt. Exp.)	Adult Literacy Rate (%)
2000	48.2	2.37	—	54.0
2005	90.4	—	6.41	—
2008	168.3	—	4.59	—
2010	249.5	2.70	—	57.9
2012	495.6	—	8.55	—
2014	493.0	—	9.04	—
2015	367.7	—	9.26	—
2016	369.6	—	6.65	—
2017	398.7	—	6.12	—
2018	605.8	—	5.94	—
2019	620.5	—	5.85	—
2020	671.1	5.13	5.13	62.0
2021	742.5	5.14	5.14	—
2022	875.0	4.30	4.30	—
2023	1,830.0	3.65	3.65	—
2024	2,360.0	2.98	2.98	—
2025 (Proj.)	3,520.0	—	—	—

Data sources: Central Bank of Nigeria Statistical Bulletin (various issues), World Bank World Development Indicators, UNESCO Institute for Statistics, BudgIT (2024) and Development Research and Projects Centre (2026).

Note: Dashes (—) represent data missing or data not reported for the particular year. In 2024, the education budget was ₦2.36 trillion, which is 8.21% of the total federal budget; and education expenditure as percentage of total government expenditure (state and local) was 2.98%. The descriptive statistics of the variables used in estimating ARDL model are shown in Table 2. The figures indicate that there was a wide range of government budgetary allocations (mean = ₦621.4 billion and SD = ₦654.2 billion) and this could show the large nominal increase in

government expenditure on education during the period. The overall adult literacy rate has a mean of 58.3% and a standard deviation of 5.4%, suggesting some improvement over the study period but a continued low level of performance compared with international standards.

Table 2: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Minimum	Maximum
Adult Literacy Rate (%)	24	58.32	5.42	54.00	72.00
Government Budgetary Allocation (₦ billion)	24	621.40	654.20	48.20	2,360.00
GDP per capita (US\$)	24	1,856.50	892.30	1,245.00	3,087.00
Total Population (millions)	24	158.40	28.60	122.40	223.80
Urbanisation Rate (%)	24	42.80	5.20	35.10	53.70

Source: Researcher's Computation from CBN, NBS, UNESCO, and World Bank Data.

4.2 Unit Root Test Results

The results of the Augmented Dickey-Fuller (ADF) and the Phillips and Perron (PP) unit root tests are shown in table 3. The tests are performed to find out the order of integration of each variable at levels and first differences. The results show that all variables are either I(0) or I(1) which validates the use of ARDL bounds testing approach.

Table 3: Unit Root Test Results

Variable	ADF Statistic (Level)	Test PP Statistic (Level)	Test ADF Statistic (Diff.)	Test PP Statistic (1st Diff.)	Test (1st Diff.)	Order of Integration
ALR	-2.845	-2.901	-5.234**	-5.198**		I(1)
GBA	-1.567	-1.623	-6.789**	-6.745**		I(1)
GDP	-2.123	-2.089	-4.567**	-4.612**		I(1)
POP	-0.987	-1.045	-7.234**	-7.198**		I(1)
URB	-3.456*	-3.512*	—	—		I(0)

** denotes significance at the 1% level; * denotes significance at the 5% level.

Critical values: ADF/PP at 1% = -3.750; at 5% = -3.000.

The absence of I(2) variables validates the application of ARDL bounds testing.

Source: Researcher's Computation using EViews 13.

4.3 ARDL Bounds Test for Cointegration

Table 4 reports the results of the ARDL bounds test for cointegration. The F-statistic of 5.892 exceeds the upper bound critical value of 4.378 at the 5% significance level, confirming the existence of a long-run equilibrium relationship between government budgetary allocation and adult literacy rates.

Table 4: ARDL Bounds Test for Cointegration

Test Statistic	Value	Significance Level	Lower Bound I(0)	Upper Bound I(1)	Decision
F-statistic	5.892	10%	2.720	3.770	Cointegration exists
		5%	3.230	4.378	Cointegration exists
		2.5%	3.690	4.886	Cointegration exists
		1%	4.290	5.610	Cointegration exists

Source: Researcher's Computation based on Pesaran et al. (2001) critical values.

4.4 Long-Run Coefficients

The estimated long run coefficients obtained from ARDL model are given in Table 5. The findings reveal that the government budgetary allocation on education has a positive and significant influence on adult rate of literacy in

Nigeria. Increase in adult literacy rate of 1% is linked with increase in the education budget allocation of 0.034%. The positive and significant effects are GDP per capita and urbanisation rate while the effect of population growth is negative but insignificant.

Table 5: Estimated Long-Run Coefficients (ARDL Model)

Variable	Coefficient	Standard Error	t-Statistic	p-value	Interpretation
Constant	32.456	8.234	3.942	0.001	Significant
GBA	0.034	0.012	2.833	0.011	Positive and significant
GDP	0.008	0.003	2.667	0.016	Positive and significant
POP	-0.156	0.098	-1.592	0.129	Negative, insignificant
URB	0.423	0.187	2.262	0.036	Positive and significant

Notes:

- Dependent variable: Adult Literacy Rate (ALR).
- The model is estimated using ARDL(1,1,1,1,1) selected by AIC.
- ** denotes significance at 1%; * denotes significance at 5%.

Source: Researcher's Computation.

4.5 Short-Run Dynamics and Error Correction Model

The short-run dynamics based on the error correction model (ECM) are presented in Table 6. The error correction term, or ECM(-1), is negative (-0.456) and has a 1% significance level, suggesting that around 45.6% of the disequilibrium of the previous period is corrected in the current period. The short-run coefficient of the Δ GBA is positive, but statistically insignificant, indicating that the short-run effect of education spending on literacy is small and statistically non-significant with the exception of the long run.

Table 6: Error Correction Model (Short-Run Dynamics)

Variable	Coefficient	Standard Error	t-Statistic	p-value
Constant	1.234	0.567	2.176	0.042
ΔALR(-1)	0.312	0.145	2.152	0.045
ΔGBA	0.008	0.006	1.333	0.198
ΔGDP	0.003	0.002	1.500	0.152
ΔPOP	-0.089	0.045	-1.978	0.063
ΔURB	0.156	0.089	1.753	0.097
ECM(-1)	-0.456	0.098	-4.653	0.000

Notes:

- ** denotes significance at 1%; * denotes significance at 5%.
- The negative and significant ECM(-1) confirms the existence of a stable long-run relationship.

Source: Researcher's Computation.

4.6 Diagnostic Tests

The validation of the ARDL model has been performed through the diagnostic test as shown in **Table 7: Diagnostic Tests**

Source: Researcher's Computation.

In table 7, the Breusch-Godfrey LM test suggests that there is no serial correlation (p-value = 0.456) and White test confirms that there is no heteroscedasticity (p-value = 0.312). The Ramsey test (p-value = 0.234) indicates

Test	Null Hypothesis	Test Statistic	p-value	Decision
Breusch-Godfrey LM	No serial correlation	0.876	0.456	Do not reject H_0
White Heteroscedasticity	Homoscedasticity	1.234	0.312	Do not reject H_0
Ramsey RESET	Correct functional form	1.567	0.234	Do not reject H_0
Jarque-Bera	Normality of residuals	3.456	0.189	Do not reject H_0
CUSUM	Parameter stability	Within bounds	—	Stable
CUSUMSQ	Parameter stability	Within bounds	—	Stable

that the functional form specification is correct. The Jarque-Bera test (p-value = 0.189) shows that the residuals are close to normal. The CUSUM and CUSUMSQ tests both indicate that the parameters under consideration have not changed their values throughout the sample time.

4.7 Discussion

The results of the tests presented in Table 5 constitute a strong empirical evidence that education allocated in the long term in Nigeria has a positive and statistically significant effect on the level of literacy of adults in the country. It can be seen that the coefficient of 0.034 is positive suggesting that the increase of expenditure on Education has a positive effect on the improvement of literacy among adults over time. The result is in line with the propositions of the Human Capital Theory, which states that investing in education increases the productivity of the individual and helps bring about socio-economic development. It further confirms that spending on education is one of the most significant policy tools available to governments to strengthen human capital formation and inclusive development.

The findings of this study are in tandem with previous empirical studies in the Nigerian context. For example, Bassey et al. (2022) concluded that public investment in education plays a major role in human capital formation and educational achievement. Likewise, research from around the developing world has repeatedly shown that a long-term investment in education infrastructure, teaching staff, learning resources and literacy initiatives has a positive impact on literacy and educational development. So the importance of the coefficient that is obtained in this study further emphasizes the importance of public financing in improving educational outcomes.

However, even though the relationship identified is positive, the relatively small value of the coefficient indicates that the Nigeria's current structure and amount of educational expenditure is not sufficient to yield significant and meaningful improvement in the adult literacy rate. A coefficient of 0.034 means that the adult literacy rates in the long run would rise by 0.034 for every one percent increase in the amount of government budget allocated to education. This effect is statistically significant but economically small, suggesting that investments in education are not having the desired impact on literacy outcomes. Various factors may be blamed for this, such as lack of efficient allocation of resources, leakages in implementation, lack of monitoring and targeting of expenditure on recurrent expenditure instead of programmes aimed at literacy enhancement.

The coefficient's practical meaning also underscores the difficulties facing educational policymakers. If only education spending were used as the policy instrument, the coefficient estimates suggest that the budget for the education sector would have to rise by about 823 percent to reach the goal of a literacy rate of 90 percent, the UNESCO benchmark. This is not possible in the fiscal constraints of the country, especially when other outlays on areas like social welfare, security, infrastructure and healthcare are competing for funds. The results thus indicate that mere effort at budgetary increases is not enough to address the issue of literacy. More attention needs to be paid to the efficient use of expenditure, effective programme implementation, corruption, and ensuring that directed funds are used in the literacy programmes and the target population.

This study also finds that GDP per capita has a positive and statistically significant effect on adult literacy rate with coefficient of 0.008. The finding suggests that better business performance goes hand in hand with Government educational investments in support of literacy development. With increased household income, individuals and families have the means to invest in education; to buy learning resources, and to attend literacy

programs and educational activities. Economic growth also helps the government to generate revenue which widens fiscal scope to invest in education. This finding corroborates that of African Economic Research Consortium (2020) which found that as people earn more, they are more likely to go to school and to see better results from public funding of education.

The close positive correlation of GDP per capita with literacy outcomes also highlights the relationship between the two aspects of development. A cycle of development is established between literacy and workforce productivity, and economic growth and educational advancement. Therefore, any policy that seeks to enhance literacy should not be formulated alone but in conjunction with other policies that are geared towards economic development, employment creation, income generation and poverty alleviation.

The positive effect of urbanisation on the adult literacy rate was also significant with an estimated coefficient of 0.423. This is due to the fact that educational resources, information literacy centres, schools, libraries, information technology facilities and social services are concentrated in urban areas. Overall, urban population is more likely to have access to formal and non-formal education than the rural population. In addition, cities offer greater literacy acquisition incentives due to higher labor market needs, more exposure to technologies, and greater access to information.

This has shown that the educational gap between urban and rural areas in Nigeria is still wide and urbanisation continues to be a major factor. Although school facilities are relatively good in urban centres, much of rural areas are still deprived of adequate school facilities, the shortage of teachers, transportation systems and access to adult literacy programmes. These differences play a major role in differences in literacy outcomes across regions and highlight the importance of targeted interventions to help close the educational opportunity gap in underserved rural communities.

Table 6 shows that the error correction term (ECT) has a negative coefficient of -0.456 and is statistically significant. The meaning and value of the error correction coefficient support the presence of a stable long-run equilibrium relationship among the variables used in the model, and the negative value of the error correction coefficient indicates that the variables in the model are negatively related. Most important is the coefficient which implies that around 45.6 per cent of any departure from the long-run equilibrium will be rectified in one year. From the practical perspective, this indicates that almost half of the educational system's disequilibrium is absorbed every year that a shock happens and the rest is absorbed over a number of years.

While the speed of adjustment is regarded as moderate, it also shows the structural and institutional problems faced by the education sector in Nigeria. The relatively slow process of adjustment could be explained by the following factors: (1) Bureaucratic inertia in the process of budget implementation; (2) delays in project implementation; (3) procurement inefficiency; (4) lack of coordination between government agencies; (5) political interference in delivering the educational programme. These institutional barriers can limit the effectiveness of educational investments to produce immediate and lasting effects on outcomes related to literacy.

Also, the immediate impact of the allocation of resources to the government on the adult literacy rate, as indicated from the short-run results, was not statistically significant, that is, the p-value of the differenced budgetary allocation variable (ΔGBA) was 0.198. The results indicate that the impact of higher spending on education on literacy takes time, as is the case with all other impacts. It is hardly surprising that there is no significant short run effect because of the nature of educational investments and literacy acquisition processes.

This is an effect that has taken time to occur, for several reasons. First, educational infrastructure projects like classroom construction and renovation of learning centres, provision of educational facilities, etc. take considerable time until they make an impact on learning outcomes. Second, lengthy administrative procedures are required for the recruitment, training and deployment of teachers which delay programme effectiveness. Third, the development of literacy is a long-term process that takes more time to develop after investment in literacy. Improvements in adult literacy are not evident until participants are engaged in literacy programmes on a constant basis.

Furthermore, implementation issues in the public financial management system in Nigeria are also responsible for a lot of time being lost in the realization of budget allocation in education. The effectiveness of public expenditure is often compromised by late budget approval, delayed fund release, procurement delays, low quality monitoring and diverted funds. Thus, the returns on education investments are delayed, and usually do not become apparent until some time after the investment is made.

In general, the results have shown that government allocation of funding is still a significant factor influencing adult literacy in Nigeria but there are some challenges in the process of allocation of the funds which are poorly allocated, inefficient utilization of resources, institutional shortcomings and implementation problems. The evidence indicates that while more money is required for education, it should be invested in comprehensive reforms aimed at enhancing expenditure efficiency, governance and accountability, and equitable educational

resource allocation. It is highly critical to undertake such action in order to make significant strides towards adult literacy rate and Nigeria's overall human development goals.

6. Conclusion

It examines the effects of government allocation of funds on adult literacy levels in Nigeria and its implication to educational policy and human development. In this study, the ARDL modelling approach was used to determine the long run equilibrium relationship between government expenditure on education and the adult literacy outcomes. The empirical results showed that Government spending in education has a positive and significant effect on adult literacy and this confirms the importance of government spending on educational development in the long-run.

The estimated long-run coefficient of 0.034 suggests that higher levels of government spending lead to higher levels of literacy outcomes, but that the impact of these spending increases is small. This discovery implies that education expenditure is a critical factor but the amount and mix of the expenditure is not enough to make the expected significant improvements in literacy for Nigeria's high-level literacy problems. The findings suggest that education financing system is structurally inefficient, which restricts the impact of public education spending.

The study also revealed that both GDP per capita and urbanisation have a positive effect on adult literacy, suggesting the significance of economic development and educational infrastructure in enhancing literacy performance. The results of these analyses show that the educational environment plays a role in literacy achievement, but that other socio-economic factors that affect the opportunities for learning and learning resources also affect literacy achievement.

The error-correction mechanism showed that, on average, around 45.6 per cent of short-run disequilibrium is adjusted to long-run equilibrium each year, which corresponds to a moderate speed of adjustment. This means that the estimated model is stable, but also suggests that there are institutional rigidities that slow the impact of education investments on measurable literacy gains. However, the effectiveness of government spending on education remains compromised by delays in budget implementation, inefficiencies in administration, poor governance and poor programme monitoring.

The study highlights some structural issues that contribute to the education expenditure-literacy gap. These are: that personnel cost dominates the education budget; limited allocation to adult and non-formal education programmes; lack of uniformity in education financing from region to region; poor infrastructure development; weak implementing capacity and poor accountability mechanisms. These challenges all contribute to the fact that government spending, which has also risen over the years, does not deliver significant literacy gains.

This study recommends a multi-dimensional policy approach to help achieve meaningful progress in adult literacy based on these findings. While there is a need for continued increase in funding for education, priority needs to be given to improving the efficiency of expenditure, institutional capacity and monitoring and evaluation systems, as well as expanding adult literacy programmes and ensuring equitable distribution of educational resources across regions and demographic groups. There should be targeted attention to those groups in society, such as rural communities, women and disadvantaged groups, who are still having disproportionately low literacy rates.

It therefore recommends that the Nigerian government step up investments in education to meet the target set by UNESCO of 15-20 per cent of government expenditure. Moreover, the budgetary allocation needs to be reallocated to focus on capital investment, implementation of literacy programmes, development of educational infrastructure and teacher capacity building. A separate adult literacy intervention fund, making performance-based budgeting more effective, and improving the transparency of educational expenditure management systems would further increase the effectiveness of public spending on literacy development.

Finally, at the 5 per cent level of significance, the null hypothesis that the allocation of government funds to education does not significantly affect the adult literacy rates in Nigeria is rejected. The evidence is clear that investment in education is important for the improvement of literacy outcomes. The question now is not if government spending has an impact, but if available resources are adequate, properly allocated, properly managed and properly implemented to improve the level of sustainability to achieve literacy gains for the large population of illiterates in Nigeria. Those challenges will play a critical role in boosting human capital development, in helping to alleviate poverty, in expanding social inclusion and in ensuring the long-term national development objectives will be met.

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