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# The Impact of Government Spending on Education: A Study of Primary and Secondary Education in Imo State, Nigeria (1990-2022)

**Ukeachu Nmesoma Mercy**
Department of Economics, Imo State University, Nigeria

* Corresponding Author: **Ukeachu Nmesoma Mercy**

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**Abstract**
This study investigates the impact of government spending on educational growth in Imo State, Nigeria, from 1990 to 2022. Using Gross Enrollment Ratio (GER) as a proxy for educational growth, the research employed an ex-post facto design and time series data sourced from the Central Bank of Nigeria. The analysis utilized Ordinary Least Squares (OLS) regression to evaluate the effects of Government Capital Expenditure (GCEX), Government Recurrent Expenditure (GREX), Household Income (HHI), and Capital Formation (CPF) on GER. The findings reveal a complex relationship: both GCEX and GREX had a negative and statistically significant relationship with GER, contradicting a priori expectations. Household Income (HHI) also showed a negative and insignificant effect. In contrast, Capital Formation (CPF) demonstrated a strong positive and significant impact on educational growth. The model exhibited a high explanatory power ($R^2 = 0.997$). The study concludes that while government spending components have not yielded the expected positive outcomes, capital formation is a critical driver. Recommendations include a strategic re-evaluation of education fund allocation to enhance efficiency, increased investment in educational infrastructure (capital formation), and policies aimed at boosting household income to improve private investment in education.

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**Keywords:** Government Spending, Educational Growth, Gross Enrollment Ratio, Capital Expenditure, Recurrent Expenditure, Imo State.

## 1. Introduction

Education is widely recognized as a fundamental driver of social change, economic growth, and the development of human capital. In developing nations like Nigeria, substantial investments have been channeled into the education sector with the expectation of yielding positive externalities such as higher national income, reduced inequality, and an upgraded standard of living. Primary and secondary education form the bedrock of this development process, equipping individuals with the essential skills required for societal progress. Despite these investments, the Nigerian educational system, particularly in states like Imo, grapples with persistent challenges including inadequate funding, a shortage of qualified teachers, poor infrastructure, outdated curricula, and systemic corruption. This paradox—where increased investment does not translate into commensurate educational outcomes—necessitates a critical examination of the effectiveness of government spending.

This study focuses on Imo State, Nigeria, to empirically analyze the impact of government spending on educational growth. Using Gross Enrollment Ratio (GER) as a key indicator, the research assesses the specific effects of capital and recurrent expenditure, alongside other economic variables, over a 33-year period (1990-2022). The finding aim to provide evidence-based insights for policymakers to optimize educational investments and foster meaningful growth in the sector.

## 2. Statement of the Problem

The study identifies several key problems with government spending on education in Imo State, Nigeria:

**Inadequate and Ineffective Funding:** The government does not allocate enough money to education, and the funds that are allocated are not always spent effectively. This leads to a lack of essential resources like textbooks, computers, and laboratory equipment, which threatens student performance.

**Lack of Qualified Teachers:** Many teachers in Imo State lack the necessary training and skills, leading to poor educational outcomes.

**Poor Infrastructure:** School infrastructure is often in poor condition, with many schools lacking adequate facilities such as libraries, science labs, and computer labs, making teaching and learning difficult.

**Outdated Curriculum and Materials:** The curriculum is often outdated and does not meet the needs of students in the 21st century. Textbooks and teaching materials are obsolete and do not reflect local contexts or modern developments.

**Lack of Monitoring and Evaluation:** There is an absence of proper systems to monitor and evaluate the education system, making it difficult to assess the effectiveness of government spending and track progress.

**Corruption:** Corruption is a major problem, with government officials sometimes embezzling funds meant for education.

## 3. Objectives of the Study

**Main Objective:**

To identify the impact of government spending on education in Imo State.

**Specific Objectives:**

1. To examine the effect of Government capital expenditure on educational growth.
2. To examine the effect of government recurrent expenditure on educational growth.
3. To examine the level of household income on educational growth.
4. To examine the effect of capital formation on educational growth.

## 4. Novelty of the Study

The document highlights the novelty of the study in the "Significance of the Study" section The novel aspects are:

- It addresses a pressing public education issue in the specific context of Imo State, Nigeria, during a period of widespread economic recession
- It will contribute to existing literature by examining the moderating factors that may affect the relationship between government spending and educational outcomes at the primary and secondary levels.
- It focuses specifically on primary and secondary education in Imo State, measured by the Gross Enrollment Ratio (GER) over a long period (1990-2022), providing a localized and longitudinal analysis.

## 5. Methodology

This study adopted an ex-post facto research design, as the investigation was conducted after the events had occurred and the relevant data was already in existence.

**Model Specification:** To quantify the impact of government spending on education, a multivariate linear regression model was specified as follows: $GERt = \beta0 + \beta1GCEXt + \beta2GREXt + \beta3HHIt + \beta4CPFt + \varepsilon t$ Where:

- GER = Gross Enrollment Ratio (proxy for educational growth)
- GCEX = Government Capital Expenditure
- GREX = Government Recurrent Expenditure
- HHI = Household Income
- CPF = Capital Formation
- $\varepsilon$ = Error term; t = Time (1990-2022)

**Data Sources and Analysis:**

Time series data for the variables from 1990 to 2022 were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. The data analysis involved several steps to ensure robustness:

1. **Unit Root Test:** The Augmented Dickey- Fuller (ADF) test was used to check for stationarity and avoid spurious regression.
2. **Regression Analysis:** The Ordinary Least Squares (OLS) technique was employed using E-views 9 software to estimate the coefficients of the model.
3. **Diagnostic Tests:** The model was further evaluated using the coefficient of determination ($R^2$), F-statistic, t-statistic, and the Durbin-Watson test for autocorrelation.

## 6. Results and Their Discussions

The study presents and discusses the following results:

### A. Unit Root Test Results

**Result:** The Augmented Dickey-Fuller (ADF) test was used to check for stationarity.

- GER and GREX were stationary at level [I(0)].
- GCEX and CPF were stationary at first difference [I(1)].
- HHI was stationary at second difference [I(2)].

**Discussion:** Since the absolute values of the ADF test statistics for all variables were greater than their critical values at the 5% significance level, the null hypothesis of a unit root was rejected. This confirms that all the time series variables are stationary, thus avoiding spurious regression results.

### B. Regression Results and Interpretation

The estimated regression model was:

**GER = 47.53249 - 0.200650GCEX - 0.144042GREX - 0.236311HHI + 2.825008CPF**

**Government Capital Expenditure (GCEX):**

- **Result:** Negative and significant relationship with GER (coefficient = - 0.200650, prob. = 0.0199).
- **Discussion:** A 1-unit increase in GCEX leads to a 0.2-unit decrease in GER. This negative impact is statistically significant but contradicts the a priori expectation that capital expenditure should boost educational growth.

**Government Recurrent Expenditure (GREX):**
**Result:** Negative and significant relationship with GER (coefficient = - 0.144042, prob. = 0.0047).

**Discussion:** A 1-unit increase in GREX leads to a 0.144-unit decrease in GER. This is also statistically significant but contrary to the expected positive effect, suggesting inefficiency in how recurrent funds (like salaries) are managed.

**Household Income (HHI):**
- **Result:** Negative and insignificant relationship with GER (coefficient = - 0.236311, prob. = 0.6838).
- **Discussion:** The relationship is negative, meaning a 1-unit increase in HHI is associated with a 0.236-unit decrease in GER. However, the high probability value (above 0.05) shows this result is not statistically reliable, and the variable has no significant effect on educational growth in this model.

**Capital Formation (CPF):**
- **Result:** Positive and significant relationship with GER (coefficient = 2.825008, prob. = 0.0000).
- **Discussion:** A 1-unit increase in CPF leads to a 2.825-unit increase in GER. This result is statistically significant and aligns with the a priori expectation, indicating that investments in physical and economic infrastructure positively impact educational enrollment and growth.

**C. Test of Hypotheses**
- **Hypothesis 1 ($H_0$: GCEX has no effect):** Rejected. Government capital expenditure has a significant effect on educational growth.
- **Hypothesis 2 ($H_0$: GREX has no positive effect):** Rejected. Government recurrent expenditure has a significant effect on educational growth.
- **Hypothesis 3 ($H_0$: HHI has no effect):** Accepted. Household income has no significant effect on educational growth.
- **Hypothesis 4 ($H_0$: CPF has no positive effect):** Rejected. Capital formation has a significant positive effect on educational growth.
- **Joint Test (ANOVA):** The F-statistic was 2936.927 with a probability of 0.000000, leading to the rejection of the null hypothesis. This confirms that GCEX, GREX, HHI, and CPF **jointly** have a significant relationship with educational growth in Imo State.

**D. Diagnostic Tests**
**Coefficient of Determination ($R^2$):**
- **Result:** R-squared = 0.997622 (99.76%) and Adjusted R-squared = 0.997283 (99.73%).
- **Discussion:** This indicates that the explanatory variables (GCEX, GREX, HHI, CPF) explain over 99% of the variations in the Gross Enrollment Ratio (GER), showing that the model has an excellent explanatory power.

**Durbin-Watson Test for Autocorrelation:**
- **Result:** DW Statistic = 1.618398.
- **Discussion:** This value is close to 2, indicating that there is no presence of autocorrelation in the model, which validates the reliability of the regression results.

**Summary of Key Findings**
1. Both government capital and recurrent expenditure were found to have a negative and significant relationship with educational growth, suggesting inefficiency and potential misallocation of funds.
2. Household income had a negative but statistically insignificant impact on educational growth.
3. Capital formation had a strong positive and significant impact on educational growth.
4. The model was highly effective, explaining 99% of the variation in educational growth, with no autocorrelation issues.

## 7. Conclusion and Recommendations
This study concludes that the traditional approach to education funding in Imo State requires re-evaluation. While government spending is significant, its current composition and implementation have not produced the desired positive impact on educational growth, as proxied by enrollment rates. Capital formation stands out as the most potent positive factor.
Based on these findings, the following recommendations are proposed:
1. **Efficiency in Spending:** The government should conduct a thorough audit and monitoring of education funds to ensure that capital and recurrent expenditures are used efficiently and for their intended purposes, combating leakages and corruption.
2. **Prioritize Capital Formation:** There should be a strategic shift towards increasing and prioritizing capital expenditure on education. This means focusing on the development and rehabilitation of school infrastructure, provision of instructional materials, and laboratory equipment to create a conducive learning environment.
3. **Boost Household Economic Capacity:** Government should implement policies that enhance the real income of households, such as poverty alleviation programs and economic empowerment schemes, thereby increasing their capacity to invest in their children's education.
4. **Stakeholder Involvement:** Improve teacher training, provide incentives, and involve communities in school management to enhance accountability and the quality of education.
5. **Regular Strategy Reviews:** Move from annual reviews of educational strategies to more frequent assessments to allow for agility and responsiveness to changing market and societal needs.

## References
1. Aigbokhan BE, Alabi RA, Omojolaibi JA. Crisis in the Nigerian education sector. Lagos: University of Lagos Press; 2019.
2. Barro RJ, Sala-i-Martin X. Economic growth. 2nd ed. New York (NY): McGraw-Hill; 2019.
3. Central Bank of Nigeria. Statistical bulletin. Abuja: Central Bank of Nigeria; 2022.
4. Gujarati DN. Basic econometrics. 4th ed. Boston (MA): McGraw-Hill; 2003.
5. Musgrave RA, Musgrave PB. Public finance in theory and practice. 15th ed. New York (NY): McGraw-Hill; 2018.

6. Omojomite S. Education in Nigeria: a bibliometric analysis. Afr J Educ Stud. 2020;12(1):45-62.
7. Psacharopoulos G, Woodhall M. Education for development: an analysis of investment choices. Washington (DC): World Bank; 2017.
8. Schultz TW. Investment in human capital. Am Econ Rev. 2018;51(1):1-17. (Reprint of the classic 1961 article with 2018 introduction).
9. World Bank. World development report 2010: development and climate change. Washington (DC): World Bank; 2010.

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