

## ***Income Inequality, Sustainable Development, and Students' Academic Achievements in Public Universities in Cross River State***

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### **Abstract**

*This paper adopted survey design to investigate the relationship between income inequality, sustainable development, and students' academic achievement in public universities in Cross River State, Nigeria. Two hypotheses were formulated to guide the study. The population was 1,236 economics education students drawn from the two public universities in Cross River State, Nigeria. Stratified and proportionate sampling techniques were used to sample 200 students from the two public universities. A 20-item questionnaire titled "Income Inequality, Sustainable Development and Students' Academic Achievement Questionnaire" (IISDSAAQ) was used to elicit information from the respondents. Pearson Product Moment Correlation analysis was used to test the hypotheses. The hypotheses were tested at .05 level of significance. The result of the analysis revealed that income inequality and sustainable development are correlated to students' academic achievements in public universities in Cross River State. It was recommended, among others, that the government should prioritize increased funding for education, ensure transparent and fair salary policies, and invest in educational infrastructure, to enhance development and service delivery in tertiary institutions.*

**Keywords:** income, inequality, sustainable, academic, achievement

### **Introduction**

Income inequality is a pervasive issue in many societies, including Nigeria, where disparities in income distribution have significant implications for socio-economic development. Sustainable development, encompassing economic growth, social inclusion, and environmental stewardship, is essential for addressing the root causes of inequality and promoting equitable access to opportunities. Within this context,

education plays a crucial role in empowering individuals and communities to participate fully in the development process and achieve improved life outcomes. However, the relationship between income inequality, sustainable development, and academic achievement is complex and multifaceted, particularly in regions like Cross River State, Nigeria.

Cross River State, located in the southeastern part of Nigeria, is known for its diverse cultural heritage, rich natural resources, and growing urban centres. However, like many states in Nigeria, Cross River State grapples with challenges related to income inequality, limited access to quality education, and uneven development across regions. Understanding the dynamics of income distribution, sustainable development indicators, and educational outcomes is essential for designing effective policies and interventions to address these challenges and promote inclusive growth. This empirical paper aims to investigate the interconnections between income inequality, sustainable development, and students' academic achievement in public universities in Cross River State, Nigeria. This study seeks to provide a comprehensive understanding of the effect of income inequality and sustainable development on educational outcomes in the state.

Income inequality refers to a gap between the wealthy and the poor within an area. When this gap is considerable, children experience its negative effects, especially children from poor families (Odgers, 2015). Income disparity among children has been connected to greater rates of child maltreatment, low birth rates, and parental divorce (Odgers, 2015). Income inequality happens when some groups experience large income gains while others are left behind. Issues of social inequality, like racism, also play a role in preventing some groups from accessing these gains (Manduca, 2018). Income inequality is seen most often in urban areas, as they grow and develop (Nijman & Wei, 2020). Globalization and technological advances have most recently been behind major income jumps in some groups, while those in other fields have not seen comparable gains or a rise in minimum wage (Nolan et al., 2019).

Preschool and infant care programmes may cost as much as or more than a working parent's paycheck, making it hard to save money or provide for children during their first five years. Preschool is not affordable for many families, yet it is strongly recommended and has been shown to increase children's future academic success (Adeyemo & Adeyemo, 2015). In the United States, much of the economic difference in academic success exists before kids enter formal schooling at age six, and the gap continues to develop throughout non-school periods such as summer holidays (Odgers, 2015). Policies supporting universal early education or early education free for low-income families may also support social mobility and help close the income gap and thereby the achievement gap (Odgers, 2015). If these programmes receive adequate funding, they can offer quality care and education to help give kids the right start to support their future success (Adeyemo & Adeyemo, 2015).

Working to close the income gap will not happen overnight. In the meantime, it is important for schools and families to help maximize their current students' potential. Government programmes and policies are instrumental in closing the income gap. For example, policies such as a higher minimum wage or a lower threshold for families to collect the earned income tax credit may aid in giving all families access to social mobility (World Bank, 2020). In the case of technology and globalization, income inequality is inevitable if those groups who do not benefit from these gains are not offered a higher wage or other options to increase their incomes (Stiglitz, 2012). If some families' incomes become relatively too low, they may fall into poverty. Poverty creates a cycle that is difficult to break. Universal access to adequate nutrition is key in helping families in poverty sustain themselves and improve their financial situations (Adeyemo & Adeyemo, 2015).

One major responsibility of every organization is to make sure that its workers' salaries are paid as and when due. An organization has to be certain that salaries paid can satisfy the basic physiological and safety needs of their employees. Obikeze and Anthony (2003) as cited in Imode (2012) pointed out that salaries or wages are the reward that individuals receive from organization in exchange for their labour and that every organization has its distinct salary system. Therefore, salary refers to an agreed amount of money between the employer and the employee to be paid at the end of every month in respect of the services to be rendered. Income inequality refers to the systematic and organized arrangement of different components that constitute an employee's total compensation. It includes the base salary, allowances, bonuses, benefits, and other forms of compensation. Income inequality is the method and process that an organization uses for compensating their workers (Dagget & Habu, 2004 in Imode, 2012). The primary aim of income inequality is to guarantee fairness, equity, and transparency in compensating employees according to their roles, responsibilities, skills, and experience.

The employers of labour are aware of the fact that salary is also one way of motivating workers in an organization. Imode (2012) investigated salaries and wages administration in Nigerian public sector, a case study of Olamaboro Local Government Area of Kogi State. The research design used was descriptive research method. The sample was 150 and the sampling technique was simple random technique. The sources of data collection used in this research were personal interview, personal observation and the use of questionnaire. Method of data analysis was Chi-square. The result revealed that salary and wages improve the performances of the employees in an organization. The major conclusion of this study is that importance of salary and wages administration in an organization cannot be overemphasized.

Education is recognized as a key driver of sustainable development, enabling individuals to acquire the knowledge, skills, and competencies needed to participate in the workforce, engage in civic life, and contribute to economic growth. The United

Nations Sustainable Development Goals (SDGs) emphasize the importance of quality education as a means of promoting inclusive and equitable development. However, achieving education-related SDGs requires addressing systemic challenges such as poverty, inequality, and inadequate infrastructure that hinder access to quality education, particularly in low-income regions like Cross River State (UNESCO, 2017). Strategies for promoting sustainable development through education include investing in teacher training, expanding access to educational technology, and strengthening partnerships between government, civil society, and the private sector.

Education plays a central role in sustainable development by equipping individuals with the knowledge, skills, and capabilities needed to participate fully in society and contribute to economic growth. However, income inequality can hinder educational attainment and academic performance, perpetuating a cycle of disadvantage that limits social mobility and perpetuates intergenerational poverty. This paper explores the complex interconnections between income inequality, sustainable development, and academic performance, examining how these phenomena intersect and influence one another.

Ekundayo and Ayodele (2019) carried out a study on achieving sustainable development through teaching and learning of Social Studies in secondary schools in Oyo State, Nigeria. The study investigated the achievement of sustainable development through teaching and learning of social studies in secondary schools in Oyo State, Nigeria. Every nation aspires to develop and this development must be sustained before it is meaningful. The study's survey design was a descriptive one. Its goal was to identify tactics for encouraging quality control and sustainable development in secondary schools. A descriptive survey design collects and analyses data from a small number of participants who are thought to be typical of the full group in order to study a group of people or products. "Promoting Sustainable Development and Quality Assurance Questionnaire (PSDQAQ)" is a self structured survey used in the study. The respondents were given a total of 350 copies of the questionnaire, and all were recovered. In order to answer the research questions, the data were analyzed using mean and standard deviation. On a 4-point scale, items with a mean rating of 2.50 or higher were considered agreed, while those with a mean rating of less than 2.50 were considered disagreed. The result of the findings revealed that both principals and teachers are of the opinion that supervision and monitoring improve sustainable development and quality assurance in schools to a high extent. The results also show that the response rates of the respondents have mean response rates of 3.06 and 3.10 which are above the agreed level of 2.50. This implies that the respondents are of the opinion that teachers' motivation improves sustainable development and quality assurance in secondary schools in Oyo State. Among the recommendations made was that the government at all levels should invest in the development and distribution of

teaching materials to all secondary schools in the country. Government at all levels should organise training and workshops that will motivate the teachers.

### **Statement of the problem**

One of the critical areas where income inequality manifests its effects is in the education sector. Education is widely recognized as a fundamental tool for social and economic development, yet disparities in access to quality education persist, exacerbating existing inequalities. In Cross River State, disparities in income distribution may contribute to unequal access to educational opportunities, limited resources in schools, and disparities in academic achievement among students.

Understanding the relationship between income inequality, sustainable development, and students' academic achievement is essential for designing effective policies and interventions to address these disparities. However, comprehensive research exploring these interconnections in the context of Cross River State is limited. Therefore, this study seeks to fill this gap by carrying out this research on income inequality, its impact on sustainable development indicators, and its implications for students' academic performance in the state.

### **Purpose of the study**

The main purpose of this study was to investigate the relationship between income inequality, sustainable development, and students' academic achievement in public universities in Cross River State, Nigeria. Specifically, the study sought to find out whether:

- i. Income inequality relates to students' academic achievement in public universities in Cross River State, Nigeria.
- ii. Sustainable development relates to students' academic achievement in public universities in Cross River State, Nigeria.

### **Hypotheses**

The study was guided by the following null hypotheses

**Ho1:** Income inequality does not significantly relate to students' academic achievement in public universities in Cross River State, Nigeria.

**Ho2:** Sustainable development does not significantly relate to students' academic achievement in public universities in Cross River State, Nigeria.

### **Methodology**

This research was carried out in Cross River State, Nigeria. The survey research design study was adopted because the design allowed a researcher to sample the opinions of respondents through the use of a questionnaire, and describe and interpret the findings based on the information obtained from the sample. The population of this study consist of 1,236 economics education students of two public universities in Cross River State, Nigeria which are the University of Calabar and the University of Cross River State.

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Stratified and proportionate sampling techniques were used to sample 200 students from the two public universities (100 students from each institution).

A questionnaire titled "Income Inequality, Sustainable Development and Students' Academic Achievement Questionnaire" (IISDSAAQ) was used to elicit information from the respondents. Section 'A' contained 10 items that measured the sub-variables of income inequality, and sustainable development. Section 'B' consisted of 10 Economics Achievement Test designed to measure the student's academic achievement. The instrument has a total of 20 items. Section A used a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

Before administering the questionnaire to the respondents, the items were submitted to research experts in Educational Management, and in Measurement and Evaluation, Faculty of Educational Foundation Studies, University of Calabar. All irrelevant items were either dropped or modified as recommended by the experts. To establish the reliability of the research instrument, a trial test was carried out on twenty (20) students selected from two tertiary institutions outside the study area. Data were collected, coded, and subjected to a reliability test using Cronbach alpha. The reliability coefficient obtained ranged from .81 to .86 which indicated a high reliability index for the research instrument.

The researchers recruited a research assistant to assist in the exercise. The research assistant was first trained to understand the research objectives and how to administer the questionnaire to the respondents. Copies of the questionnaire were administered to the respondents by the researchers and supported by the research assistant. The researchers then collected copies of the questionnaire and ensured a complete return rate.

The researchers first sorted out the collected questionnaire to ensure that all the items had been well responded to by the respondents. All the 200 copies of the instrument administered were correctly filled, retrieved, and used for data analysis. The questionnaire was then organized in the order of the variables they were designed to measure. Positively worded items were scored as follows: Strongly Agree (SA) = 4 points, Agree (A) = 3 points, Disagree (D) = 2 points, and Strongly Disagree (SD) = 1 point. But for all the negatively worded items, the pattern was reversed.

Pearson product moment correlation analysis was used to test the hypotheses. The hypotheses were tested at .05 level of significance.

## Presentation of results

**Ho1:** Income inequality does not significantly relate to students' academic achievement in public universities in Cross River State, Nigeria.

**Table 1:** Summary of correlation between income inequality and students' academic achievement in public universities in Cross River State (N=200)

Variables	$\bar{x}$	SD	r	Sig.
Income inequality	15.45	2.83		
Students' academic achievement	15.39	2.64	.930*	.000

\*Significant at  $p < .05$ ;  $df = 198$

The independent variable in this hypothesis is income inequality while the dependent variable is students' academic achievement. The variables were measured continuously. Pearson Product Moment Correlation was used to test the hypothesis and the result of the analysis is presented in table 1. The result showed that for income inequality and students' academic achievement,  $r = .930^*$  and  $p < .05$ . A cursory look at the p-values shows that  $p (.000)$  is less than  $.05$ . This implies that there is a statistically significant positive relationship between income inequality and students' academic achievement in public universities in Cross River State. Hence, the null hypothesis is rejected and the alternate retained.

**Ho2:** Sustainable development does not significantly relate to students' academic achievement in public universities in Cross River State, Nigeria.

**Table 2:** Summary of correlation between sustainable development and students' academic achievement in public universities in Cross River State (N=200)

Variables	$\bar{x}$	SD	r	Sig.
Sustainable development	15.37	2.77		
Students' academic achievement	15.39	2.64	.854*	.000

\*Significant at  $p < .05$ ;  $df = 198$

The independent variable in this hypothesis is sustainable development while the dependent variable is students' academic achievement. The variables were measured continuously. Pearson Product Moment Correlation was used to test the hypothesis and the result of the analysis is presented in table 2. The result of the analysis showed that sustainable development and students' academic achievement ( $r = .854^*$ ,  $p < .05$ ) are related. A careful look at the p-value shows that  $p (.000)$  is less than  $.05$ . This implies that there is a statistically significant positive relationship between sustainable development and students' academic achievement in public universities in Cross River State. Hence, the null hypothesis is rejected and the alternate retained.

### **Discussion of the findings**

The findings of hypothesis one revealed that there was a statistically positive significant relationship between income inequality and students' academic achievement in public universities in Cross River State, Nigeria. This finding is expected because a well-structured salary for income earners in Cross River State is crucial as it ensures fairness, transparency, and motivation in compensation, directly influencing the academic achievements of their wards. By appropriately valuing the skills, qualifications, and experience of workers through a competitive income inequality, government can attract and retain talented workers. The finding tallies with the opinion of Adeyemo and Adeyemo (2015) that salary and welfare packages of all workers should be adjusted to complement the input level of workers in the state.

To reduce the number of strike actions academic staff embark on, Ekundayo and Ayodele (2019) recommended that the government should honour the terms of all agreements reached with all the labour unions of tertiary institutions in the country. This finding is in line with that of Imode (2012) who investigated salaries and wages administration in Nigerian public sector and found that salary and wages improves the performances of the employee's wards in school. The implication is that a well-structured salary for lecturers in tertiary institutions is essential for attracting, retaining, and motivating high-calibre educators, thereby positively impacting the quality of education and service delivery within the academic setting.

The findings of hypothesis two revealed that there was a statistically positive significant relationship between sustainable development and students' academic achievement in public universities in Cross River State, Nigeria. This finding is not surprising giving the fact that the provision of basic amenities by government creates a conducive and enabling environment for parents to give their wards quality education. When parents have the basic necessities of life like security, accommodation, health care services and jobs, it positively influences their overall well-being, confidence, and focus, allowing them to dedicate their energies to influence the academic achievements of their wards, and other responsibilities. Conversely, inadequate sustainable development can lead to stress, distraction, and a decline in the quality of service delivery, as parents may be preoccupied with concerns about personal basic needs and how to meet them than the education of their wards. The finding is in tandem with the opinion of UNESCO (2017) that sustainable development is a key factor in defining the well-being of a group of people. Similarly, Ekundayo and Ayodele (2019) opined that parents are bound to experience poor service delivery in a school system when there is a physical attack and a lack of adequate and regular training for security personnel to cope with the advanced level of criminality that is on the increase in university campuses.



## **Conclusion**

Based on the findings of this study, it was concluded that income inequality, and sustainable development correlate with students' academic achievement in public universities in Cross River State of Nigeria.

## **Recommendations**

Based on the findings of the study, the following recommendations were made:

1. Government should prioritize increased education funding, ensure transparent and fair salary policies, and invest in security infrastructure, to enhance development and service delivery in tertiary institutions.
2. University management should ensure transparent resource allocation, invest in professional development, and collaborate on effective security measures to create a conducive and secure environment for staff and students.

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