Poverty Alleviation Programmes and Economic Development in Bayelsa State

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Abstract

This study investigates the relationship between poverty alleviation programs and economic development in Bayelsa State, focusing on their impact on household living standards and human capital development. Data were collected from 299 respondents and analyzed using the Ordinary Least Squares (OLS) technique. The results indicate that poverty alleviation programs, education, and occupation positively and significantly influence household living standards. Conversely, age and household size negatively and significantly impact living standards. Additionally, the gender of the household head has a positive but insignificant effect on living standards. The study also reveals that while poverty alleviation programs have a positive but insignificant effect on human capital development, age and occupation positively and significantly impact human capital development. However, household size negatively and significantly affects human capital development at the household level. Based on these findings, it is recommended that policymakers adopt a comprehensive approach to poverty alleviation. This should integrate strategies aimed at promoting human capital development alongside income support measures. Such strategies could include investments in education and skills training programs, improved access to healthcare, and addressing social determinants that influence household living standards.

Keywords*: Alleviation, Poverty, Economic Development, Human Capital, Bayelsa*

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Background to the Study

Economic development entails transforming low-income economies into industrialized ones, involving both qualitative and quantitative improvements. It is often measured by improvements in living standards or economic well-being, typically represented by per capita national income or per capita household income. Other indicators include improvements in human capital development. Economic development promotes entrepreneurial spirit and employment growth, leading to higher incomes, better goods and services, and improved living conditions (Panth, 2020; Ivic, 2015). However, poverty remains a significant impediment to economic development, especially in developing countries.

Poverty is characterized by involuntary deprivation in economic and social indicators, such as access to good health, education, social status, potable water, and adequate nutrition (Justine, Ighodalo & Oteh, 2012). Beyond economic hindrances, poverty leads to physical and psychological misery due to inadequate medical care, education, and job opportunities, resulting in labor market marginalization (Bello et al., 2009). Nationally, poverty exacerbates economic problems through agricultural sector exploitation and underemployment, encouraging power structures that deprive segments of the population of privileges and foster corrupt elites.

Governments worldwide recognize the need for poverty alleviation programs to mitigate these effects. Such programs aim to reduce poverty by providing access to quality food, monetary support, and essential services to poor households. Key players in poverty alleviation include government bodies, bilateral or multilateral international organizations, and Non-Governmental Organizations (NGOs). Government efforts often face challenges like public sector deficits, which reduce public social services and lower living standards. International organizations, such as the World Bank, invest in human resource development and implement policies to alleviate poverty conditions through targeted nutrition and employment measures (Kolawole, 2021; World Bank Group, 2020).

There are four main approaches to poverty alleviation: economic growth, rural development, basic needs, and targeted approaches. The economic growth approach focuses on enhancing capital stock and human capital, addressing housing needs, education, health, and nutrition (Edralin, Tibon & Tugas, 2015). The rural development approach targets radical changes in credit structure and asset ownership, providing necessities like food, employment, and income opportunities, especially in rural areas. The basic needs approach directs resources towards essential services such as education, transportation, food, and healthcare. The target approach involves specific programs like social safety nets or microcredit schemes aimed at vulnerable groups (Kolawole, 2021).

In Nigeria, poverty alleviation programs have employed these approaches, often focusing on the targeted strategy. Programs like N-Power for unemployed youth and the school feeding program in northern Nigeria exemplify this. Other strategies include the National Economic Empowerment and Development Strategy (NEEDS) and the State Economic Empowerment and Development Strategy (SEEDS), primary healthcare schemes, and housing initiatives.

Despite numerous programs, the impact on poverty levels in Bayelsa State and Nigeria as a whole appears minimal. Reports indicate rising poverty levels, with 2.61 million people living in extreme poverty out of a population of about 2.9 million in Bayelsa State in 2022, making it the poorest state in Nigeria after Sokoto (James, 2023). The state ranks high in multidimensional poverty, with significant portions of the population deprived of education, health, living standards, and security (Oludiran, 2023). Despite increasing poverty alleviation efforts, the unemployment rate remains high, with significant underemployment and manpower wastage. Most of the population lives below the global poverty line of US$1.90 per day (World Bank, 2022). Access to basic needs like shelter, food, healthcare, education, and potable water remains a challenge, placing Bayelsa among the least developed states in Nigeria. This study, therefore, aims to examine the relationship between poverty alleviation programs and economic development in Bayelsa State.

While previous studies have explored poverty and economic development, this study uniquely focuses on the specific effects of poverty alleviation efforts at the state level. It seeks to add value by examining the impact of these programs on economic development in Bayelsa State. The research questions are: What is the effect of poverty alleviation programs on the standard of living or economic well-being of households in Bayelsa State? What impact do poverty alleviation programs have on human capital development in Bayelsa State? The objectives formulated to answer these questions are: (i) to examine the effect of poverty alleviation programs on the standard of living or economic well-being of households in Bayelsa State. (ii) to determine the effect of poverty alleviation programs on human capital development in Bayelsa State.

Theoretical Literature
Structural-Change Theory
The study is grounded in the structural-change theory, which focuses on utilizing policies to transform the economic framework of developing countries from predominantly subsistence agriculture to a more modern, urbanized, and industrially diverse economy based on manufacturing and services (Hussain, 2007). Structural changes represent the typical development patterns observed among nations. The core premise of the structural-change theory is that development is a growth process with identifiable patterns across countries, characterized by similar key features (Todaro & Smith, 2009).

The theory acknowledges that there can be variations in the pace and pattern of development across different countries, influenced by specific national circumstances. Factors such as resource endowment, country size, government policies and objectives, access to external capital and technology, and favorable international trade conditions can affect the development trajectory of developing countries. Structural-change theorists assert that the right combination of economic policies can lead to beneficial and self-sustaining economic growth and development (Todaro & Smith, 2009). Two notable models within the structural-change theory are the "two-sector surplus labor" theory by W. Arthur Lewis and Hollis Chenery's empirical analysis of development patterns.

New Growth Theory

The origins of the new growth, or endogenous growth, theory date back to the 1990s. Prominent theorists in this field, as noted by Dang and Pheng (2015), include Romer (1986), Lucas (1988), and Aghion & Howitt (1992). This theory provides insight into why many underdeveloped nations struggle economically despite implementing policies recommended by neoclassical theories. The new growth theory posits that technological change has neither been uniform nor exogenously transmitted in some developing countries.

The core of the new growth theory is that economic growth results from increasing returns to the use of knowledge rather than just labor and capital. It argues that the higher rates of return anticipated in the Solow model are significantly diminished by a lack of complementary investments in human capital (education), infrastructure, and research and development (R&D). Dang and Pheng (2015) highlight that knowledge or innovation differs from other economic goods because it can grow indefinitely, be reused at zero additional cost, and provide spillover benefits to other firms once acquired. Consequently, investing in knowledge is seen as a catalyst for sustained growth. However, market failures can hinder the production of sufficient knowledge because individuals cannot capture all the benefits of their investments in creating new knowledge. Therefore, government intervention is deemed necessary to influence long-term growth. This implies that the new growth theory supports the role of government in fostering modern investments in human capital and encourages foreign private investments in knowledge-intensive industries, such as computer software and telecommunications (Meier, 2000). The new growth theory faces criticism for overlooking the role of social and institutional structures. Its limited applicability stems from its assumptions. For example, the theory treats the economy as a single firm, which does not account for the essential reallocation of labor and capital within the economy during structural changes. Additionally, other factors can stimulate economic growth, which many developing countries lack, including poor infrastructure, inadequate institutional structures, and imperfect capital and goods markets (Cornwall & Cornwall, 1994).

Theory of Coordination Failure

Rosenstein-Rodan (1943) and Nurkse (1953) were among the first to address the issue of coordination failure, a concept later elaborated by Dang & Pheng (2015). The theory of coordination failure, which gained prominence in the 1990s, suggests that markets may struggle to synchronize complementary activities. This issue arises in two scenarios: first, all investors would generally benefit more if investments were made simultaneously; second, individual investors might be hesitant to act if they doubt others will also invest. This lack of coordination can lead the market to an equilibrium that is less efficient than a scenario where resources are optimally allocated, resulting in a state of underdevelopment (Dang & Pheng, 2015).

The government's role is crucial in addressing coordination failures. The proposed solution is a "big push" strategy, a large-scale public investment program designed to generate complementarities across the economy. This approach is essential for developing countries to escape the poverty trap. The United Nations Development Programme recommended this

strategy in 2005 (Dang & Pheng, 2015). Dang & Pheng (2015) argue that uncertainties in a market system can lead to either good or bad equilibrium. Bad equilibrium occurs when firms are pessimistic about their prospects and thus reluctant to invest, leading to poor coordination. When the market mechanism fails, government intervention becomes vital to coordinate firms' actions. The theory highlights the necessity of selective government intervention to ensure simultaneous coordination of various economic activities.

However, this theory is criticized for overemphasizing the role of government. Governments can be ineffective and might implement poor policies, potentially pushing the economy into a worse equilibrium than its starting point. Furthermore, the theory of coordination failure does not clearly explain how the government should coordinate the economy (Dang & Pheng, 2015).

Empirical Literature

Huang, Huang, Li, and Cheng (2023) investigated the indirect effects of various poverty alleviation measures on economic development in China, using data from 2013 to 2019. Analyzing the data with the difference-in-difference technique, they discovered that the implementation of poverty alleviation policies significantly enhanced county-level economic development. Notably, the policies had a more substantial impact in minority counties compared to non-minority counties. Additionally, industrial and educational poverty alleviation efforts were found to significantly contribute to economic development.

Cui, Li, Li, Deng, and Shahtahmassebi (2023) explored the implications of poverty alleviation policies on rural economic resilience in Lankao County, China, utilizing regression analysis techniques on a sample of 338 respondents. Their findings indicated a significant positive impact of these policies on rural economic resilience. In Nigeria, Gidigbi (2023) analyzed the impact of selected poverty alleviation programs on poverty reduction from 1981 to 2015, using the Autoregressive Distributed Lag technique. Although the results showed that increased access and empowerment programs reduced poverty rates, these effects were statistically insignificant.

Adeleke, Kolapo, and Edewusi (2022) examined the relationship between poverty reduction and economic development in Nigeria from the first quarter of 2003 to the fourth quarter of 2019. They employed the Autoregressive Distributed Lag Model-Error Correction Modelling (ARDL-ECM) estimator, finding that poverty reduction, financial development, economic growth, trade openness, and internet usage positively and significantly affected human development in both the short and long term. Itiveh (2022) studied the effects of poverty alleviation policies on Nigeria's economic development from 1980 to 1997, using descriptive techniques. The study concluded that the lack of democratization and underutilization of human and natural resources were major contributors to poverty in Nigeria.

Ugwoke, Okonkwo, and Obidebube (2022) analyzed the impact of Poverty Alleviation Programmes on youth unemployment in developing countries from 2017 to 2021, using descriptive data analysis techniques. They found that resource mismanagement and

corruption significantly undermined the effectiveness of capacity enhancement programs in Nigeria and other developing nations. Aderounmu et al. (2019) investigated the key factors influencing poverty rates in Nigeria from 1992 to 2016, using the Autoregressive Distributed Lag (ARDL) model. Their study revealed that unemployment significantly increased poverty, while inflation significantly reduced poverty, particularly in the short run.

Ibekwe et al. (2018) assessed the impact of poverty alleviation programs on sustainable human development among the physically challenged in Imo State, Nigeria. Using a sample of 150 respondents and descriptive analysis techniques, the study found that these programs had an insignificant impact on physically challenged individuals. In Yobe State, Nigeria, Tomsu, Mu'azu, and Umar (2018) examined the impact of poverty alleviation on job creation and income generation, analyzing a sample of 300 beneficiaries using descriptive statistics. They concluded that poverty alleviation programs positively affected job creation and income generation in Damaturu Local Government Area.

Yang (2017) studied the impact of national poverty alleviation policy on economic development from 1997 to 2010, using the difference-in-difference technique. The results indicated that the national poverty alleviation program effectively promoted economic development. Abdussalam (2015) analyzed the impact of the Youth Empowerment Scheme (YES) on poverty alleviation from 2011 to 2015, with a sample of 85 respondents. The study found a strong positive correlation between poverty alleviation and the Youth Empowerment Scheme. Baghebo and Emmanuel (2015) investigated the impact of poverty alleviation programs on economic growth in Nigeria from 1981 to 2013, using the Autoregressive Distributed Lag technique. Their findings indicated that government expenditure on economic services and per capita expenditure on social and community services positively contributed to poverty alleviation in Nigeria.

Deedam and Onoja (2015) examined the participation of Port Harcourt indigenous women in poverty eradication programs in Rivers State, Nigeria, using a sample of 385 women. Analyzing the data with descriptive statistics and t-tests, they found a significant increase in the women's income from various economic activities after joining poverty alleviation programs. Oloyede (2014) assessed the effect of poverty reduction programs on Nigeria's economic development from 1980 to 2010, using the Ordinary Least Square technique. The study concluded that poverty reduction programs had a significant overall effect on economic development in Nigeria.

Methodology
Research Design
This study utilized a sample survey research design, which involves collecting data from individuals concerning the variables under investigation. In a sample survey research design, a subset of the population is selected for analysis, and the findings from this sample are then generalized to the entire population to draw conclusions. Surveys serve as tools for gathering data in survey research studies, enabling the collection of information on the characteristics, actions, or opinions of a large group of individuals.

The Study Area

The study was conducted in Bayelsa State, one of the 36 states in Nigeria. The state capital is Yenagoa. Bayelsa is bordered by Rivers State to the west, the Atlantic Ocean to the east and south, and Delta State to the north. Bayelsa State was established on October 1, 1996, from Rivers State. Its name is derived from the initial letters of the major local government areas from which it was formed: Brass LGA (BALGA), Yenagoa (YELGA), and Sagbama (SALGA), creating the name BAYELSA from BA + YEL + SA. The local population primarily engages in fishing, both for subsistence and commercial purposes. Bayelsa State is known for having some of the largest crude oil and natural gas deposits in Nigeria, with a flourishing petroleum sector. The state covers an area of 10,773 km². According to the 2006 census by the National Population Commission, the population of Bayelsa State is 1,704,515.

Population of the Study

The study population includes all indigenes of Bayelsa State, encompassing both beneficiaries and non-beneficiaries of poverty alleviation programs. As of 2016, the state had an estimated population of approximately 2,277,961 people, according to the National Population Commission and the National Bureau of Statistics.

Sample and Sampling Technique

Sampling involves selecting units or groups from the population under study. The sample size refers to the number of individuals or units selected for analysis. For this study, a sample of 300 respondents was chosen. A mixed sampling technique was employed. Initially, the researcher purposively determined the sample size, considering it appropriate for the study. Subsequently, a random sampling method was used to select four out of the eight local government areas in the state. From each of these selected local government areas, 75 respondents were randomly chosen. Then, the purposive sampling technique was applied to select five communities from each of the chosen local government areas. Finally, 15 respondents were selected from each community, resulting in a total sample of 300 respondents across the four local government areas.

Instrumentation

Data for the study will be collected using a structured questionnaire. This instrument will consist of multiple-choice, close-ended questions. Additionally, it will include 4-point Likert Scale questions. The scoring method for the 4-point Likert scale questions is as follows: Strongly Agree (SA) = 4 points, agree (A) = 3 points, disagree (D) = 2 points, and Strongly Disagree (SD) = 1 point.

Where:

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Validation of Instrument

The research instrument will be validated by my supervisor and another lecturer from the Department of Economics at Niger Delta University in Bayelsa State. Their feedback and recommendations will be incorporated to refine and finalize the instrument for the study.

Reliability of the Instrument

To ensure the reliability of the instrument, its internal consistency was assessed through a pilot survey. Additionally, Cronbach's Alpha coefficient was calculated to evaluate the reliability. The formula for Cronbach's Alpha coefficient is:

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum \sigma^2}{\sigma_x^2}\right)$$

Where

σ = Cronbach's Alpha coefficient of Reliability

K = No of the question in the questionnaire

σ_x^2 = The variance of the observed total test scores

$\sum \sigma^2$ = The sum of the variance of the component, i for the pilot sample of the (female) entrepreneurs

In the Cronbach's Alpha Coefficient Reliability test, a value of 0.5 or higher is considered significant, indicating acceptable reliability, while a value below 0.5 is deemed insignificant. The test results revealed a Cronbach's Alpha coefficient of 0.65, signifying a reliable instrument. Therefore, the instruments are regarded as reliable for this study.

Method of Data Collection

The data collection process involves the distribution of 300 questionnaires to respondents, facilitated by an educated assistant briefed on the study's purpose. Completed questionnaires will be collected on-site by the researcher and assistant as needed.

Methods of Data Analysis

For data analysis, objectives one and two will be examined using the Ordinary Least Square (OLS) technique. The model's functional form for objective one is provided as follows:

$$STLIVING = f(PAP, CONT) \qquad (1)$$

Where:

$STLIVING$ = standard of living (measured by household income divided by household size)

PAP = poverty alleviation programs

CONT = other variables including demographic variables such as household size, marital status, etc.

Presenting equation (1) in econometric form results to;

$$STLIVING = a_0 + a_1 PAP + a_2 CONT + e_1 \qquad (2)$$

Where e_1 is the error term, while other variables remained has defined earlier? To capture objective two, the following model is specified;

$$HKD = f(PAP, CONT) \qquad\qquad (3)$$

Where:

HKD = Human capital development (measured by the highest number of years of schooling of a household member)

PAP = poverty alleviation programs

CONT = other variables including demographic variables such as household size, marital status, etc.

Presenting equation (3) in econometric form results to;

$$HKD = a_0 + a_1 PAP + a_2 CONT + e_2 \qquad\qquad (4)$$

Where e1e_1e1 represents the error term, while the other variables are defined as previously stated.

The OLS estimator is considered the Best Linear Unbiased Estimator (BLUE) within the class of all available estimators, provided assumptions such as linearity and a zero expected value of the disturbance term hold. A multicollinearity test will be conducted to verify the linear relationship among the explanatory variables. This test is crucial for mitigating the adverse effects of multicollinearity in regression analysis, such as incorrect variances and reduced estimation precision.

Source of Data and Software Used

The data for this study originates primarily from structured questionnaires distributed to households, serving as the direct sources of information. Distribution of the questionnaire will be conducted by both the researcher and a designated research assistant. Data analysis will be conducted using STATA 17 econometric software.

Results and Discussion

Out of the 300 questionnaires distributed, 299 were coded and utilized for analysis. Ordinary Least Square technique was employed for the analysis. Before delving into the objectives, demographic characteristics of the respondents were examined. This chapter presents the results and discusses the findings, starting with an exploration of demographic characteristics, providing insights into the personal attributes of the respondents, followed by a detailed discussion of the findings related to the objectives.

Demographic Characteristics of the Respondents
Table 1: Descriptive Statistics of the Respondents' Profiles

	Frequency	Percentage (%)
Gender		
Female	150	50.17
Male	149	49.83
Total	299	100.00
Age Group		
Below 30 years	117	39.13
30 - 40 years	91	30.43
41 - 50 years	89	29.77
Above 50 years	2	0.67
Total	299	100.00
Marital Status		
Single	163	54.52
Married	128	42.81
Separated	1	0.33
Divorced	7	2.34
Total	299	100.00
Educational Level		
None	4	1.34
Primary	24	8.03
Secondary	93	31.10
Tertiary	178	59.53
Total	299	100.00
Household Size		
Below 5	105	35.12
5-10	176	58.86
10-15	18	6.02
Above 15	0	0
Total	299	100.00
Occupation		
None	2	0.67
Farmer	31	10.37
Civil servant	77	25.75
Entrepreneur	68	22.74
Other forms of occupation	121	40.47
Total	299	100.00

**Source**: Author's computation from field survey, 2024

Females constituted 150 respondents, accounting for 50.17% of the total, while males accounted for 149 respondents, representing 49.83%. This indicates a slight majority of female respondents. Regarding age distribution, 117 respondents (39.13%) were below 30 years old, 91 (30.43%) were between 30 and 40 years old, 89 (29.77%) were between 41 and 50 years old, and 2 (0.67%) were 50 years and above. Thus, the majority fell below the age of 30. In terms of marital status, 163 respondents (54.52%) were single, 128 (42.81%) were married, 1 (0.33%) were separated, and 7 (2.34%) were divorced. Hence, the majority were single.

Regarding household size, 105 respondents (35.12%) had below 5 persons, 176 (58.86%) had 5 to 10 persons, and 18 (6.02%) had 10 to 15 persons. None had a household size of 15 persons

and above. Therefore, the majority had a household size of 5 to 10 persons. Regarding educational attainment, 4 respondents (1.34%) had no formal education, 24 (8.03%) had primary education, 93 (31.10%) had secondary education, and 178 (58.86%) had tertiary education. Thus, the majority had tertiary education.

Regarding occupation, 2 respondents (0.67%) had no occupation, 31 (10.37%) were farmers, 77 (25.75%) were civil servants, 68 (22.74%) were entrepreneurs, and 121 (40.47%) were engaged in other forms of occupation or multiple occupations. Hence, the majority were engaged in other forms of occupation or multiple occupations. Additionally, descriptive characteristics such as household income range and awareness of poverty alleviation programs were examined, with results presented in Figure 1.

Figure 1: Other Descriptive Statistics
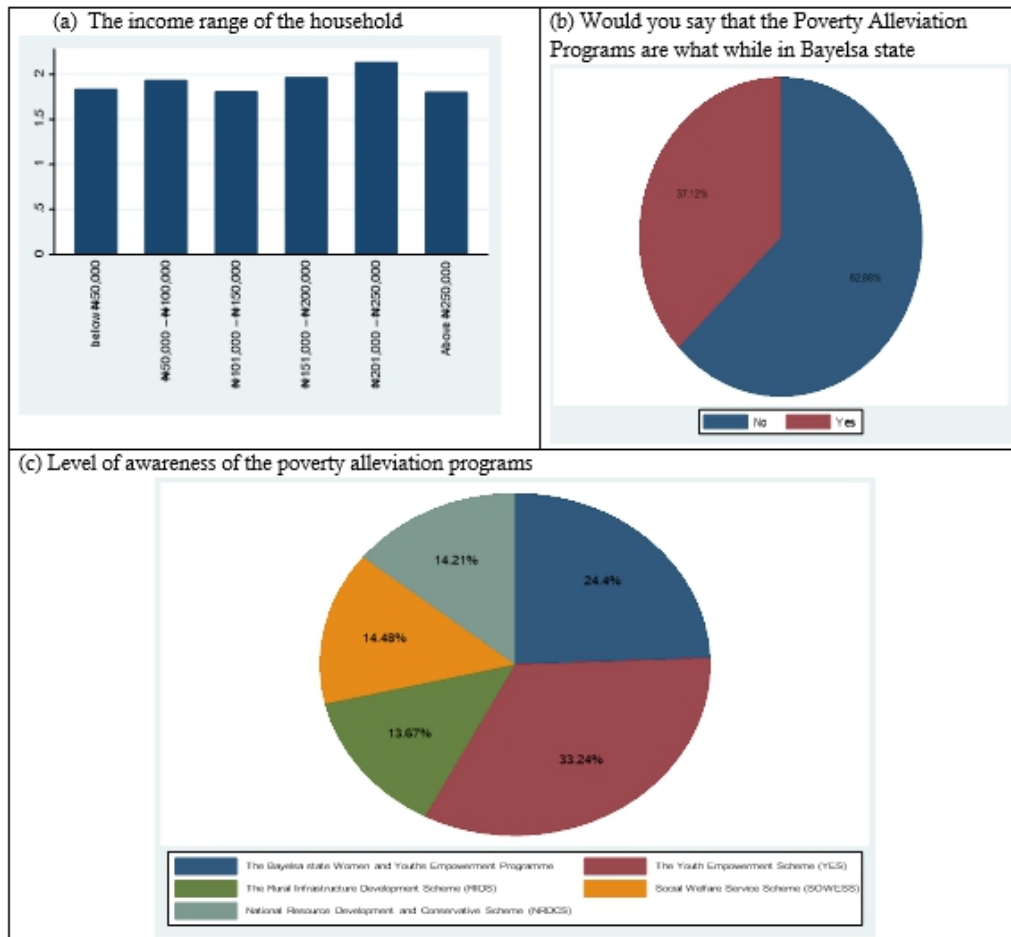
Source: Plot by the author

The income distribution among households reveals that the largest portion of respondents falls within the income range of ₦101,000 to ₦150,000, comprising 63 individuals or 21.07%. Additionally, 37 respondents (12.37%) report incomes below ₦50,000, 47 (15.72%) between ₦50,000 and ₦100,000, 60 (20.07%) between ₦151,000 and ₦200,000, 52 (17.39%) between ₦201,000 and ₦250,000, and 40 (13.38%) above ₦250,000. Concerning perceptions of

Poverty Alleviation Programs in Bayelsa State, 111 respondents (37.12%) believe these programs are effective, while 188 (62.88%) disagree, indicating a majority view against the effectiveness of these initiatives.

Regarding awareness levels, 182 respondents (24.4%) are familiar with the Bayelsa State Women and Youths Empowerment Programme, 248 (33.24%) with the Youth Empowerment Scheme (YES), and 102 (13.67%) with the Rural Infrastructure Development Scheme. Awareness of the Social Welfare Service Scheme (SOWESS) stands at 108 respondents (14.48%), and 105 (14.21%) are aware of the National Resource Development and Conservative Scheme (NRDCS). Notably, the largest awareness percentage is for the Youth Empowerment Scheme (YES), which encompasses programs like N-power, TraderMoni, and MarketMoni.

Effect of Poverty Alleviation Programmes on the Standard of Living of Households
Objective one is to examine the effect of poverty alleviation programs on the standard of living or economic well-being of households. The results are reported in Table 2.

Table 2: Estimates of the effect of poverty alleviation programs on the standard of living

STLIVING	Coefficient	Standard error	t-value	p-value
Programme	1.8102	0.2804	6.41	0.000
Age	-0.3313	0.0608	-5.45	0.000
Education	1.1174	0.1567	7.13	0.000
Occupation	1.4065	0.2679	5.25	0.000
Gender	0.7529	1.1952	0.63	0.526
HHSize	-1.0711	0.1026	-10.44	0.000
Constant	3.2622	0.4391	7.43	0.000
R-squared	0.7820			
Adj R-squared	0.7666			
F-statistics	18.33 (p = 0.0000)			

Source: Estimated by the author

The analysis indicates that poverty alleviation programs have a significant positive impact on household living standards, as evidenced by a coefficient of 1.8102 with a t-value of 6.41 and a p-value of 0.000, thus rejecting the null hypothesis at the 5% significance level. This suggests that an enhancement in these programs results in a notable 1.81% increase in living standards. Furthermore, age exhibits a negative influence on living standards, with a coefficient of -0.3313, a t-value of -5.45, and a significant p-value of 0.000. Hence, each additional year in age corresponds to a 0.33% decrease in living standards.

Education plays a crucial role, with a coefficient of 1.1174, a t-value of 7.13, and a p-value of 0.000, indicating a significant positive impact on living standards. Each additional educational attainment contributes to a noteworthy 1.12% improvement in living standards. Occupation also significantly influences living standards, with a coefficient of 1.41%, indicating that a better occupation leads to a 1.41% increase in living standards. Gender,

however, shows an insignificant effect on living standards, as indicated by a coefficient of 0.7529, with a t-value of 0.63 and a p-value of 0.526. This implies that the gender of the household head has a positive but insignificant impact on living standards.

Household size has a notable negative impact on living standards, with a coefficient of -1.0711, a t-value of -10.44, and a significant p-value of 0.000. This suggests that larger household sizes lead to a 1.0711% decrease in living standards. The coefficient of determination (R-squared) stands at 0.7820, indicating that the independent variables explain approximately 78.20% of the variance in living standards. The F-statistic of 18.33 with a p-value of 0.000 suggests a significant joint effect of the independent variables on living standards. Overall, the analysis underscores the importance of poverty alleviation programs, education, occupation, and household size in shaping household living standards.

Table 3: Multicollinearity test result for objective one

Variable	VIF	1/VIF
Gender	1.04	0.960374
Occupation	1.04	0.965272
Age	1.03	0.967530
Education	1.03	0.967692
HHSize	1.01	0.991464
Programe	1.01	0.993278
Mean VIF	1.03	

The variance inflation factors (VIF) in this analysis are notably low when compared to the conventional threshold of 10. This leads to the rejection of the null hypothesis indicating the presence of multicollinearity. Consequently, the independent variables within the model are deemed free from multicollinearity issues.

Effect of Poverty Alleviation Programs on Human Capital Development
Objective two aims to investigate the impact of poverty alleviation programs on human capital development. The findings corresponding to this objective are detailed in Table .4.

Table 4: Estimates of the effect of poverty alleviation programs on human capital development

Human capital development	Coefficient	Standard error	t-value	p-value
Programme	0.0888	0.1373	0.65	0.519
Age	0.1075	0.0239	4.50	0.000
Occupation	0.0794	0.0229	3.47	0.000
Marital Status	-0.2705	0.3211	-0.84	0.400
HHSize	-0.9888	0.3129	-3.16	0.002
Constant	11.1615	1.4260	7.83	0.000
R-squared	0.5445			
Adj R-squared	0.5248			
F-statistics	21.26 (p = 0.0089)			

Source: Estimated by the author

The analysis reveals that the coefficient for poverty alleviation programs is 0.0888, accompanied by an insignificant t-value of 0.65 and a p-value of 0.519 at the 5% significance level. This indicates an acceptance of the null hypothesis, suggesting that poverty alleviation programs have a positive but insignificant effect on human capital development, with a minor 0.09% increase. In contrast, age demonstrates a significant positive impact on human capital development, with a coefficient of 0.1075 and a significant t-value of 4.50 (p-value = 0.000). Each additional year in age corresponds to a notable 0.11% increase in human capital development.

Occupation also exhibits a positive and significant effect on human capital development, with a coefficient indicating a 0.08% improvement with occupation enhancement. However, marital status shows an insignificant effect on human capital development, with a coefficient of -0.2705, a t-value of -0.84, and a p-value of 0.400. This suggests that marital status has a negative but insignificant influence on human capital development.

Household size, on the other hand, significantly impacts human capital development negatively, with a coefficient of -0.9888, a t-value of -3.16, and a significant p-value of 0.000. Larger household sizes result in a 0.9888% decrease in human capital development.

The coefficient of determination (R-squared) stands at 0.5445, indicating that the independent variables account for approximately 54.45% of the variance in human capital development at the household level. The F-statistic of 21.26, with a significant probability value of 0.0089, suggests a significant joint effect of the independent variables on human capital development. Overall, while poverty alleviation programs show an insignificant impact on human capital development, age, occupation, marital status, and household size significantly contribute to variations in human capital development at the household level.

Table 5: Multicollinearity test result for objective two

Variable	VIF	1/VIF
Occupation	1.03	0.968318
Age	1.03	0.974045
Marital_Stat	1.03	0.974300
Education	1.02	0.978465
HHSize	1.01	0.992206
Programe	1.00	0.995261
Mean VIF	1.02	

The analysis indicates that the variance inflation factors (VIF) are considerably low, in comparison to the conventional threshold of 10. Consequently, the null hypothesis of multicollinearity is rejected, affirming that the independent variables within the model are devoid of multicollinearity issues.

Summary of Findings

The principal findings of this study can be summarized as follows:
   i. Objective One: The investigation revealed that poverty alleviation programs, education, and occupation exerted a positive and statistically significant influence on the standard of living of households. Conversely, age and household size were found to have a negative and significant impact on the standard of living. Additionally, the gender of the household head exhibited a positive but insignificant effect on the standard of living.
   ii. Objective Two: Regarding human capital development, the study uncovered that poverty alleviation programs exhibited a positive yet insignificant effect. Conversely, age and occupation were found to positively and significantly influence human capital development. On the other hand, marital status showed a negative and insignificant impact on human capital development at the household level. Furthermore, household size was identified as having a negative and significant effect on human capital development within households.

Implications of the Findings
The results suggesting that poverty alleviation programs, education, and occupation positively and significantly impact household standard of living indicate their pivotal role in enhancing well-being, reducing disparities, and fostering sustainable development. Thus, initiatives promoting poverty alleviation, quality education, and favorable working conditions bear substantial benefits for individuals, households, and society at large.

Conversely, the findings revealing a negative and significant association between age and household size with the standard of living imply challenges faced by older individuals in maintaining their quality of life over time. Factors such as diminished earning capacity, heightened healthcare needs, or limited access to support services may contribute to this trend. Additionally, larger household sizes often strain resources, potentially leading to a decreased standard of living as financial burdens escalate among more individuals. Furthermore, while the gender of the household head was found to have a positive but insignificant effect on the standard of living, it underscores the imperative of addressing broader gender disparities to foster inclusive and equitable societies.

Concerning objective two, the discovery of poverty alleviation programs exerting a positive yet insignificant effect on human capital development underscores the complexity of poverty alleviation efforts. It underscores the necessity for comprehensive strategies targeting various aspects of economic well-being. Moreover, the positive and significant influence of age and occupation on human capital development highlights the significance of lifelong learning, education, and skill enhancement in facilitating personal growth, economic advancement, and social mobility. However, the revelation that marital status exhibits a negative and insignificant impact on human capital development suggests the need for policymakers to prioritize other determinants that hold stronger sway over educational attainment, skill acquisition, and career progression within households. Similarly, the identified negative and significant effect of household size on human capital development emphasizes the necessity for tailored interventions and policy measures to address the distinctive hurdles encountered by larger households in fostering human capital development.

Conclusion

This study investigated the correlation between poverty alleviation programs and economic development in Bayelsa State, employing the Ordinary Least Squares technique for data analysis. The results highlight significant contributions of poverty alleviation programs, education, and occupation to enhanced household standard of living. Conversely, age and household size were found to diminish the standard of living, with larger families often associated with lower standards of living compared to smaller households.

Regarding human capital development, the study revealed a positive albeit insignificant association with poverty alleviation programs. Age and occupation were identified as significant contributors to human capital development, particularly among younger age groups where government and family support are typically targeted. Interestingly, marital status was found to hold no significant influence on human capital development at the household level. However, households with larger sizes encountered more challenges in fostering human capital development compared to those with fewer members.

Recommendations for Policy

The study proposes the following recommendations:
    i.   Policymakers should embrace a comprehensive strategy for poverty alleviation, integrating initiatives aimed at enhancing human capital development alongside

measures to support income. This entails investing in educational and skills training schemes, enhancing healthcare accessibility, and addressing social determinants affecting household well-being.

ii. Implementing policies that facilitate affordable housing alternatives for larger families, along with offering financial aid and healthcare provisions for the elderly, is essential to counteract negative consequences. These measures can help alleviate challenges associated with household size and the needs of aging populations.

iii. Encouraging initiatives promoting family planning and imparting reproductive health education is crucial. By empowering individuals with knowledge and resources to make informed decisions about family planning, policymakers can contribute to mitigating challenges related to household size and fostering overall welfare.

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