

OUT OF SCHOOL CHILDREN AND CHALLENGES OF ACHIEVING SUSTAINABLE
DEVELOPMENT GOALS (SDGS) IN EDO STATE

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ABSTRACT

The high rates of out-of-school children in Nigeria remain a significant obstacle to achieving the Sustainable Development Goals. In Edo State, 76,446 children are outside the formal education system despite constitutional guarantees of free and compulsory basic education. This study investigated the phenomenon of out-of-school children and its effect on achieving SDG 4 (Quality Education), SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 10 (Reduced Inequalities) in Edo State. A mixed-methods approach was adopted with 1,246 respondents from the three senatorial zones and 20 key informant interviews. Pearson chi-square tests and thematic analysis were employed. Findings reveal that household poverty and child labour are strongly associated with out-of-school prevalence. Educational exclusion demonstrated moderate-to-high associations with progress towards SDG 4, SDG 1, and SDG 5/SDG 10. A substantial majority of respondents indicated that lack of education prevents employment and income generation. Gender-specific patterns were evident, with girls disproportionately affected. The study concludes that the out-of-school phenomenon in Edo State is a multi-dimensional crisis requiring strengthened family income support, reformed school access, and integrated education-poverty-gender equity frameworks.

Keywords: Edo State, educational exclusion, out-of-school children, poverty reduction, Sustainable Development Goals

INTRODUCTION

Education is a major driver of social change, human capital accumulation, and sustainable development (United Nations, 2015). The Sustainable Development Goals operationalised this through SDG 4, which aims to ensure inclusive and equitable quality education for all. Yet globally, 244 million children and young people aged 6-18 remained out of school in 2021, including 98 million in Sub-Saharan Africa (UNESCO, 2022). Educational exclusion not only limits employment prospects but also perpetuates intergenerational poverty (Psacharopoulos and Patrinos, 2018), while simultaneously undermining progress toward SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 10 (Reduced Inequalities) (Ydo, 2022; Cai and Wolff, 2023). Nigeria has one of the largest absolute numbers of out-of-school children globally. An estimated 18.3 million children of school-going age remained out of school as of 2024, despite constitutional guarantees of free and compulsory basic education (UNICEF, 2024). Key drivers include household poverty, limited infrastructure, socio-cultural barriers, gender inequality, and underinvestment (UNICEF, 2021).

While incidence is highest in the north, southern states also face significant exclusion. In Edo State, approximately 76,446 children are out of school, with females at 22% versus males at 8% (Edo State Universal Basic Education Board, 2021; Perrier, 2024). The continued incidence of poverty, child labour, and uneven resource distribution persists despite the EdoBEST reform programme (Obinna, 2023). Existing studies have examined this problem primarily at the national level, with insufficient attention to state-specific contexts and limited empirical evidence on how out-of-school prevalence simultaneously impacts multiple SDGs at the sub-national level. This study addresses that gap by investigating the socio-economic factors driving out-of-school prevalence in Edo State and examining its effects on SDGs 1, 4, 5, and 10.

Specifically, the study seeks to: (1) examine the socio-economic factors causing out-of-school prevalence; (2) identify how this affects SDG 4 attainment; (3) explore how this constrains poverty reduction under SDG 1; and (4) assess how this produces gender inequalities and social disparities under SDGs 5 and 10. Correspondingly, four null hypotheses were tested:

H₀₁: There is no significant association between socio-economic factors and out-of-school prevalence in Edo State.

H₀₂: There is no significant association between out-of-school prevalence and SDG 4 attainment in Edo State.

H₀₃: There is no significant association between out-of-school prevalence and poverty reduction under SDG 1 in Edo State.

H₀₄: There is no significant association between out-of-school prevalence and gender inequalities/social disparities under SDGs 5 and 10 in Edo State.

LITERATURE REVIEW

Concept of Out-of-School Children

The concept ‘out-of-school children’ denotes persons within the designated age for a certain education level who are out of school. Based on the general understanding from UNICEF and UNESCO, out-of-school children are divided into those who never attended school, those who may enrol after the prescribed age and those who were enrolled but then dropped out before completing a level (UNICEF, 2015; Marshall, Nicolai & da Silva 2020). The Five Dimensions of Exclusion further include those who are enrolled in school but at risk of dropping out (UNICEF and UIS, 2016). This categorisation has policy relevance because non-enrolment, late enrolment and dropout each require different responses, even though all three contribute to the aggregate out-of-school population.

The importance of out-of-school populations for analytical purposes cannot be overstated. A considerable proportion of children who have never attended school come from communities less involved in formal schooling; thus, they are most likely to remain permanently excluded. Most late school entrants come from impoverished households and experience delays in completing their schooling cycles once they are in school. The most vulnerable of all are likely to be children who drop out before completing primary education, as early exit significantly compromises their chances of ever completing this first cycle (UNICEF, 2015; Marshall et al., 2020). Every subgroup

requires a different policy response, and collapsing them into a single figure obscures the structural diversity of the problem. Out-of-school children in Edo State are defined, for this study, in line with the approach suggested by UNESCO-UIS, as children of primary or junior secondary school age who do not attend or are not enrolled in school.

Out-of-School Children and the Sustainable Development Goals

SDG 4 aims to deliver inclusive and equitable quality education to all (United Nations, 2015). A high out-of-school population runs contrary to this goal. Countries with a high number of out-of-school children are inherently structurally incapable of achieving the universal enrolment and completion targets required by the goal (Lewin, 2009). SDG 1 targets the eradication of extreme poverty through increased access to employment opportunities and social protection. Without even a basic education, children cannot effectively enter the workforce, and an inability to attend school creates an intergenerational cycle of poverty (Hanushek and Woessmann, 2015). SDG 5 targets gender equality, promoting the empowerment of women and girls, with benefits of education for girls including increased health, delayed marriage, smaller birth rates, and increased economic opportunity (Unterhalter, 2014). SDG 10 targets the reduction of inequalities, both within and between societies, and is deeply interlinked with the out-of-school population as it involves a large proportion of the disadvantaged, resulting in long-term socioeconomic differentials that reinforce inequality (World Bank, 2018).

Educational exclusion simultaneously undermines SDG 4 and generates poverty traps, gender inequality, and social marginalisation across generations (Hanushek and Woessmann, 2015). Countries that sustain out-of-school children thus generate poverty traps, gender inequality, and social marginalisation across generations, compounded by an accumulation of human capital.

Causes of Out-of-School Children

Household poverty is the foremost driver of out-of-school prevalence, restricting parents' ability to afford education while exacerbating child labour opportunity costs (Nwoke et al., 2024). Other causes include school distance and facilities, and socio-cultural factors such as gender roles, early marriage, and domestic labour burdens on girls (Oyekan et al., 2023; Kukawa et al., 2025).

The gender-based dynamics of the above factors need more focus. Jacob (2022) notes that nationally, 38% of out-of-school children in 2019 were girls, citing in particular early marriage, teenage pregnancies, instability, customs and standards, and lack of adequate educational facilities. These gender-based paths to exclusion function through different pathways than those driving male exclusion, and therefore policy interventions focused exclusively on the economic barriers will not fully address girls' exclusion if their exclusion is due to another configuration of household and social pressures.

Empirical Evidence

At the state level, Alika and Egbochuko (2010) identified poverty as the primary driver of girls' dropout in Edo State (53%), with health, pregnancy, and inadequate teacher accommodation as secondary factors. Omoera and Nwaoboli (2025) found that supply-side constraints in digital education access within EdoBEST 2.0 impeded participation, requiring concurrent infrastructure support rather than technology reforms alone. Adelani and Zamani (2015) further noted that non-state interventions in combating out-of-school prevalence yielded non-significant impacts, underscoring the need for stronger government coordination.

Nationally, Oyekan et al. (2023) established that rural and socially disadvantaged children face higher exclusion rates than urban counterparts, with geographic inequality operating independently of household poverty. Adeleke (2023) confirmed state-specific heterogeneity, while Ndanusa et al. (2021) showed that national aggregates obscure the predicament of nomadic, disabled, and conflict-induced out-of-school children. Suleiman et al. (2024) linked rising geographical disparities in educational attainment to socio-economic disadvantage, captured by SDG 1 and SDG 10 frameworks. Jacob (2022) situated gender dimensions within the multi-SDG construct, demonstrating that neglect of girls' education hinders productivity and equity. Collectively, these studies signal that out-of-school prevalence in Nigeria operates through intertwined, location-specific, and gendered mechanisms that single-domain policies cannot address.

Theoretical Framework

This research is grounded in Human Capital Theory, developed by Schultz (1961), Becker (1964), and Mincer (1974). Schultz established that education yields return at individual and aggregate levels; Becker framed it as a capital investment decision; and Mincer demonstrated its positive effect on lifetime earnings. The theory posits that education enhances productivity and economic development, while exclusion impedes human capital formation. Hanushek and Woessmann (2015, 2020) showed that cognitive skills from schooling are the primary driver of economic growth, and that failure to educate children creates an absolute barrier to development. Psacharopoulos and Patrinos (2018) confirmed that educational investments reduce poverty and expand employment; conversely, exclusion denies these returns.

This framework is relevant for four reasons. First, it treats educational exclusion as foregone investment, aligning with the examination of poverty and child labour (H₀₁). Second, it links schooling directly to SDG 4 as human capital accumulation (H₀₂). Third, it explains how out-of-school children perpetuate intergenerational poverty, connecting to SDG 1 (H₀₃). Fourth, it accounts for gendered disparities in returns, since girls' exclusion disproportionately reduces aggregate human capital, compounding inequalities under SDGs 5 and 10 (H₀₄). In Edo State, the sheer number of out-of-school children translates to low human capital and stalled progress across all four SDGs, providing the analytical lens for this study.

METHODOLOGY

A mixed-methods research design incorporating quantitative and qualitative elements was utilised to capture both the breadth and depth of the phenomena being explored (Creswell and Creswell, 2018). The research was carried out in the three senatorial zones of Edo State, namely Edo South, Edo Central and Edo North, with a scope covering the eighteen Local Government Areas. The study population comprised parents and guardians of school-age children, teachers, school administrators, and officials from the Edo State Ministry of Education and SUBEB. Cochran's (1977) formula for large populations was used to determine the sample size ($n = Z^2pq/e^2$), yielding a minimum of 384 respondents at a 95% confidence level. A total of 1,400 questionnaires were distributed across the three senatorial zones; 1,246 were duly returned, thus

yielding an 89% response rate. For the qualitative part of the study, twenty (20) key informants were purposively selected from the Ministry of Education, SUBEB, school administrators, and community leaders. The quantitative tool contained sixteen Likert-scale questions categorised into four sections, each addressing a specific hypothesis.

The instrument was pre-tested with 30 respondents outside the study area, and ethical clearance was obtained from the Edo State Ministry of Education. Pearson's chi-square test of independence was used to test the hypotheses, while Cramer's V and Phi coefficients were used as measures of effect size with a decision rule of $p < .05$. Qualitative data from the interviews were analysed thematically and triangulated with the quantitative results.

DISCUSSION OF FINDINGS

Response Rate and Socio-Demographic Characteristics of Respondents

Table 1: Distribution and Retrieval of Questionnaires by Senatorial District

Senatorial District	Questionnaires Distributed	Questionnaires Retrieved	Retrieval Rate (%)
Edo South	560	497	88.8
Edo Central	476	422	88.7
Edo North	364	327	89.8
Total	1,400	1,246	89.0

Source: Field Survey, 2026

Table 1 indicated that Edo South had the largest share of questionnaires allocated to it (560) and thus had the most retrieved (497), with a response rate of 88.8%. Edo Central had 476 questionnaires, with an effective response rate of 88.7% after 422 were retrieved. Edo North had a lower population concentration, characterised by an overall spread in rural settings, and thus received 364 questionnaires, with a response rate of 89.8%. Across all three districts, responses were at least 88%, for a total response rate of 89.0%.

Table 2: Socio-Demographic Profile of Respondents (N = 1,246)

Variable	Category	Frequency	Percentage (%)
Sex	Male	683	54.8
	Female	563	45.2
Age Group (Years)	18-30	298	23.9
	31-40	409	32.8
	41-50	316	25.4
	51 and above	223	17.9
Highest Educational Qualification	No formal education	93	7.5
	Primary education	182	14.6
	Secondary education	417	33.5
	Tertiary education	554	44.5
Occupation	Teacher / School Administrator	391	31.4
	Trader / Petty business	246	19.7
	Farmer	183	14.7
	Self-employed	164	13.2
	Civil servant / Education Official	169	13.6
	Unemployed	93	7.5

Source: Field Survey, 2026

Table 2 showed that most participants were male (54.8%), whereas 45.2% were female. The group of participants between the ages of 31-40 years was the largest, with a representation of 32.8%, followed by 41-50 years at 25.4%. With regard to level of education, most participants

were at the tertiary level (44.5%), largely because they were trained teachers and education officials. As for occupation, the majority were teachers or school administrators (31.4%), a choice made to intentionally target them as principal providers of information on enrolment in schools, patterns, and attendance behaviours among children in school.

Table 3: Chi-Square Tests - Socio-Economic Factors and Prevalence of Out-of-School Children (H_{01})

Test	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	382.58	9	.000
Likelihood Ratio	408.37	9	.000
Linear-by-Linear Association	308.20	1	.000
N of Valid Cases	1,246		
Cramer's V	.320		.000
Phi	.555		.000

Source: Researcher's Field Survey, 2026

The Pearson Chi-Square statistic ($\chi^2(9, N = 1,246) = 382.58, p = .000$), was supported by the Likelihood Ratio (408.37) and the Linear-by-Linear Association (308.20), indicating that the null hypothesis H_{01} was rejected and the alternative hypothesis H_{11} was accepted. The Cramer's V of .320 indicates a moderate and substantively important relationship between the socio-economic indicators and out-of-school children in Edo State (Table 1). Combined agreement that household poverty (80.1%) and child labour (75.6%) contributed to out-of-school prevalence confirms that economic constraints are the primary drivers of educational exclusion in Edo State.

Key informant interviews corroborated these findings. A Ministry of Education official noted that many children from low-income homes were simply not in school despite enrolment campaigns, with school-age children roaming about during school hours in some communities. A SUBEB official identified urban improvement but rural stagnation, noting that families in farming

communities pull children out seasonally and many never return, with dropout figures not fully reflecting ground realities. A community leader confirmed that at least thirty children in his community should be in school but were not, with parents unable to afford it and some helping their parents sell in the market.

This finding aligns with Human Capital Theory, wherein poverty raises the opportunity cost of schooling, leading families to substitute child labour for educational investment (Becker, 1964; Mincer, 1974; Nwoke et al., 2024).

Table 4: Chi-Square Tests - Out-of-School Children and SDG 4 Attainment (H_{02})

Test	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	505.36	9	.000
Likelihood Ratio	500.66	9	.000
Linear-by-Linear Association	368.28	1	.000
N of Valid Cases	1,246		
Cramer's V	.368		.000
Phi	.637		.000

Source: Researcher's Field Survey, 2026

Chi-square of (9, $N = 1,246$) = 505.36, $p = .000$; Likelihood Ratio 500.66; Linear by Linear Associations=368.28 confirmed, with statistical validity that the distribution of responses was far from chance. The null hypothesis H_{02} was rejected, and H_{12} was accepted. Phi and Cramer's V indices, .637 and .368, respectively, showed a moderate-to-strong association between the occurrence of out-of- school children and SDG 4 attainment (Table 4).

Respondents overwhelmingly recognised out-of-school prevalence as a serious concern (81.2%), acknowledged non-completion of primary education (77.6%), and considered universal basic education unattainable under current conditions (78.7%). These findings affirmed that

educational exclusion operated across both the non-enrolment and incompleteness dimensions, each undermining SDG 4 through distinct but related mechanisms. Key informants reinforced these quantitative findings. A Ministry of Education official stated that every child who remains out of school is a direct subtraction from progress reporting on SDG 4. A school administrator observed that out-of-school prevalence is not tangential to SDG 4 but its direct antithesis, given that the global monitoring framework relies heavily on enrolment and completion data. A primary school principal reported enrolling sixty new pupils at the beginning of the session but losing about fifteen by midterm, with reasons consistently economic: family moved, parent lost work, or child started hawking.

Table 5: Chi-Square Tests - Out-of-School Children and Poverty Reduction under SDG 1 (H₀₃)

Test	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	611.32	9	.000
Likelihood Ratio	608.09	9	.000
Linear-by-Linear Association	460.34	1	.000
N of Valid Cases	1,246		
Cramer's V	.405		.000
Phi	.701		.000

Source: Researcher's Field Survey, 2026

The strongest test of significance attained was the Pearson Chi-Square of (9, N = 1,246) = 611.32, $p = .000$, and this was also supported by the Likelihood Ratio (608.09) and the Linear-by-Linear Association (460.34), which further led to a rejection of the null hypothesis and adoption of the alternative H₁₃. The strength of the association between childhood education of school-age children and poverty reduction effects related to SDG 1, measured by the Phi coefficient .701 and Cramer's V. 405, supported an association of significant practical significance (Table 5).

Respondents strongly endorsed the view that educational exclusion perpetuates poverty (82.3%) and that education is indispensable for employment and sustainable income generation (83.5%).

Those confirmed the intergenerational poverty dynamic. A SUBEB official described how a child who does not complete basic education enters adulthood without skills to access formal employment, ending up in low-income survival work, with parental poverty transferring directly to the next generation. An NGO programme officer consistently found that the poorest households have the highest number of out-of-school children, with a direct and visible line between household income and school attendance. A community leader observed poverty in concrete terms: children wearing torn uniforms, unable to buy exercise books, and eventually stopping attendance altogether. These narratives align with Human Capital Theory: children excluded from schooling are denied the human capital necessary for labour market access, perpetuating intergenerational poverty (Becker, 1964; Mincer, 1974). Psacharopoulos and Patrinos (2018) found that investment in education yields returns, such as reduced poverty and improved employment opportunities; when there is no investment in education, these returns do not materialise, leading to higher poverty, which SDG 1 aims to prevent. The Nigeria Demographic and Health Surveys revealed this was already the case, as noted by Suleiman et al. (2024), who found that the share of the uneducated was growing and that variations in attainment across regions are directly related to poverty.

Table 6 Chi-Square Tests - Out-of-School Children and Gender Inequality and Social Disparities (H₀₄)

Test	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	476.67	9	.000
Likelihood Ratio	464.27	9	.000
Linear-by-Linear Association	379.27	1	.000
N of Valid Cases	1,246		

Cramer's V	.357	.000
Phi	.619	.000

Source: Researcher's Field Survey, 2026

The Pearson Chi-Square test produced a value of $\chi^2(9, N = 1,246) = 476.67, p = .000$. The Likelihood Ratio of 464.27 and the Linear-by-Linear Association of 379.27 were jointly consistent with this outcome. The null hypothesis H_{04} was therefore rejected, and H_{14} accepted. Phi of .619 and Cramer's V of .357 indicated a moderate-to-strong association, suggesting that respondents' opinions concerning the prevalence of out-of-school children (OOC) are non-randomly linked to gendered school exclusion in the state, as well as to the prevalence of a host of other social problems in the study area (Table 6). Respondents identified a pronounced gender disparity in out-of-school prevalence (76.2%), corroborating ESUBEB (2021) data indicating 22% female versus 8% male exclusion rates. Furthermore, 82.9% concurred that denial of early education entrenches lifelong inequality.

As those interviewed highlighted gendered barriers. A social welfare officer identified early marriage as the most persistent cultural barrier for girls, noting that in some communities a girl who reaches a certain age is considered more valuable as a bride than as a student, a valuation deeply cultural and resistant to policy intervention. A community leader explained that girls are expected to cook, clean and care for younger siblings from a young age, and when domestic responsibilities expand, school becomes secondary; the family does not always withdraw the girl formally, she simply stops attending and nobody challenges the family. A school administrator differentiated female and male dropout pathways: girls leave because of domestic pressure, pregnancy or family decisions outside their control, while boys leave mostly for economic reasons. These findings reveal that gendered exclusion operates through culturally embedded pathways, early marriage, domestic labour, and informal withdrawal that are distinct from the economic drivers of male dropout, requiring targeted rather than generic interventions.

This gendered nature of educational exclusion constitutes an organised, differentiated exclusion from human capital formation; young girls excluded from schools were denied the

personal gains which derive from education but also the benefits which would have accrued through a well-educated woman in terms of household incomes, child health and the development of the next generation's human capital. Unterhalter (2019) has shown that educational gender inequalities in developing countries typically derive from social exclusion that is linked to poverty, cultural norms and inequity in access to resources. Psaki et al. (2022) identified, through a systematic review, that eliminating gender-related barriers to girls' participation in school dramatically increased enrollment and learning gains among children. Among underserved groups in Edo State, children excluded from education experience lower earning potential, weaker civic engagement, and limited social mobility, which in turn perpetuate structural inequity across generations and undermine both SDG 5 and SDG 10.

CONCLUSION

This study demonstrates that the high prevalence of out-of-school children in Edo State constitutes a statistically significant obstacle to achieving SDGs 1, 4, 5, and 10. All four null hypotheses were rejected ($p < .001$) with moderate-to-strong effect sizes, with educational exclusion most strongly associated with constrained poverty reduction (Cramer's $V = .405$) and gender disparity compounding inequality concerns (SDGs 5 and 10). Through the lens of Human Capital Theory, the extent of educational exclusion in the state operates at an aggregate level, reducing the quality of human capital formation for the realisation of the SDGs. Children excluded from formal schooling are denied productivity-augmenting investment, and these exclusions accumulate to produce stalled development across all four SDGs explored in this study.

Addressing the socio-economic determinants of out-of-school prevalence will require household support, such as conditional transfers and school feeding programs, targeted to and conditioned on school enrolment and attendance across all three senatorial zones, with child labour monitoring frameworks incorporated into community education awareness strategies. On the question of SDG 4 achievement, the school access infrastructure needs reform with an equitable focus in the underserved communities in Edo North and parts of Edo Central, and the EdoBEST program should be extended beyond the urban areas, with the digital connectivity lacuna in certain areas of Edo Central addressed prior to deployment of more digital education tools and platforms.

For SDG 1 on poverty reduction, educational access needs to be explicitly featured in state-level plans to reduce poverty; SUBEB targets need to align with SDG 1 goals to break down the silo between anti-poverty interventions and the education mandate. Reducing social and gender disparities (SDG 5 and SDG 10 goals) requires gender-sensitive, inclusive strategies such as systematic community engagement approaches, which need to be implemented to address factors such as child marriage and domestic labour burdens, an increase in female teachers in the local government areas most affected, and budget allocations favouring local government areas with significant concentrations of out-of-school children and particularly with wide gender inequalities.

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