Journal of Social Sciences & Humanities
Publisher: Kabul University

Available at https://jssh.edu.af

Effect of Armed Conflict on Socioeconomic Well-Being of Survivors' Households in Benue State

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Received: March 22, 2026
Revised: April 2, 2026
Accepted: May 2, 2026
Published: July 31, 2026

Keywords

- Armed Conflict
- Household Income
- Internally Displaced
- Persons (IDPs)
- Seemingly Unrelated
- Regression (SUR)
- Socioeconomic Well-Being

Abstract: This study investigates the effect of armed conflict on the socioeconomic well-being of survivors' households in Benue State, using a survey design via a cross-sectional approach that involves field and sample surveys. The study adopted purposive and simple random sampling techniques to select survivors' households that represented the population under study. Data were collected by administering a well-structured questionnaire as the primary research instrument, developed along the lines of the research objectives stated for the study. A total of 384 questionnaires were distributed/administered to survivors' households living in IDP camps in Benue State. The data collected for this study were analyzed using descriptive statistics, paired sample t-tests, and seemingly unrelated regression (SUR) analysis. Results suggest that armed conflict reduces the socioeconomic well-being of survivors' households in all three dimensions: household income, education, and health. The SUR model suggests that armed conflict shows a significant negative effect on household income and health. Some policy recommendations, such as government at all levels working towards enhancing security measures that are effective in reducing the frequency and/or number of attacks in the affected communities in particular, and Benue State at large, were suggested.

To Cite this Article: Ijirshar, V. U. & Nyitse, G. K. (2026). Effect of Armed Conflict on Socioeconomic Well-Being of Survivors' Households in Benue State. *Journal of Social Sciences & Humanities 3*(3), 607-627. https://doi.org/10.62810/jssh.v3i3.313

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INTRODUCTION

Armed conflict has increasingly emerged as a major impediment to socioeconomic development across the globe, with profound consequences for human welfare, economic stability, and social cohesion. Over the past two decades, the incidence and intensity of conflicts have risen significantly, particularly in developing regions such as Sub-Saharan Africa, where structural vulnerabilities, institutional weaknesses, and resource constraints intensify tensions (Ujunwa et al., 2019; Palik et al., 2022). In economic terms, armed conflict represents not only a breakdown of peace and security but also a distortion of resource allocation,

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Available online at https://jssh.edu.af/jssh/article/view/313

destruction of productive assets, and erosion of human capital. These disruptions reduce income-generating opportunities, limit access to education and healthcare, and ultimately undermine socioeconomic well-being.

Socioeconomic well-being refers to the overall quality of life of individuals and households, reflecting both economic conditions and social outcomes such as income, education, health, and access to essential services (Justino, 2009). Household income remains a primary indicator of economic welfare because it determines households' ability to meet basic needs and invest in human capital (Voukelatou et al., 2021). Similarly, education represents access to formal learning opportunities that promote human capital development, while health encompasses the physical, mental, and social conditions necessary for productive living. In conflict settings, these dimensions are often severely disrupted through displacement, destruction of infrastructure, loss of livelihoods, and reduced access to public services. Consequently, survivors' households defined as households directly affected by armed conflict through displacement, destruction of property, or loss of family members (Justino, 2011), frequently experience substantial declines in their socioeconomic well-being.

Nigeria exemplifies this challenge, with multiple forms of armed violence, including insurgency, farmer-herder conflicts, communal clashes, and armed banditry, imposing enormous social and economic costs. Within Nigeria, Benue State has become one of the most conflict-prone areas due largely to recurring farmer-herder conflicts driven by competition over land and water resources. As an agrarian state widely regarded as the "food basket of the nation," Benue depends heavily on agriculture for household livelihoods and economic development. However, persistent armed conflicts have resulted in widespread destruction of farmlands, displacement of farming communities, disruption of local markets, and deterioration of educational and healthcare services (Nigerian Security Tracker, 2024; Amnesty International, 2025). These developments have significantly reduced household income while weakening human capital development and overall household welfare.

The relationship between armed conflict and socioeconomic well-being can be understood through complementary theoretical perspectives. Environmental/Resource Scarcity Theory (Homer-Dixon & Homer-Dixon, 2010) explains that competition over scarce natural resources such as land and water, intensified by population growth, environmental degradation, and climate change, creates conditions conducive to violent conflict. This perspective is particularly relevant to Benue State, where competition between farmers and pastoralists over limited agricultural resources has intensified recurring violence. Although the theory effectively explains the structural origins of conflict, it provides limited insight into how conflict affects individuals and households after violence occurs. To complement this structural explanation, Frustration-Aggression Theory (Dollard et al., 2013; Breuer & Elson, 2017; Alam, 2023) argues that aggression results from frustration arising when individuals or groups are unable to achieve desired goals. In conflict-prone communities, blocked access to grazing land, water resources, agricultural production, or other livelihood opportunities generates frustration that may escalate into violence. While the theory explains the

behavioural mechanisms through which conflicts escalate, it pays relatively less attention to broader political and institutional influences.

The Basic Needs Theory, associated with Burton and reinforced by Maslow's hierarchy of needs, shifts attention from the causes of conflict to its consequences for human welfare. The theory argues that essential needs must be satisfied for individuals to achieve well-being. Armed conflict disrupts the fulfillment of these needs by destroying livelihoods, displacing populations, and weakening public services, thereby creating persistent socioeconomic deprivation. Although the theory offers limited explanation for the structural causes of conflict, it provides an appropriate framework for examining how armed conflict affects household income, education, and health. Collectively, these three theoretical perspectives explain the structural origins, behavioral dynamics, and welfare consequences of armed conflict, thereby providing the conceptual foundation for examining the socioeconomic well-being of survivors' households in Benue State.

Existing empirical evidence consistently demonstrates that armed conflict adversely affects livelihoods, human capital, and household welfare. Studies conducted in Benue State show that herders attacks destroy farmlands, productive assets, and trading activities, thereby reducing household income and deepening poverty (Oteyi & Toyin, 2019). Likewise, persistent farmer-herder conflicts significantly reduce agricultural productivity because insecurity discourages farming activities and forces households to abandon their farms (Onwunyi & Anekwe, 2020; Abubakari et al., 2024; Ularju & Yakubu, 2024; Yunusa et al., 2025). While these studies establish the economic consequences of conflict, they largely concentrate on agricultural production and rural livelihoods without simultaneously considering other dimensions of household well-being.

Similarly, several studies have examined the effects of conflict on education and health. Eneji and Agri (2020) associate insecurity with increasing poverty and school dropout rates, while Adeyi et al. (2024) report that armed conflict significantly reduces school enrolment and damages educational infrastructure in Benue State. Bauda and Yusuf (2026) further demonstrate that conflict worsens health outcomes through increased malnutrition and restricted access to healthcare services. Other studies emphasize the vulnerability of displaced children and women to exploitation, poor health conditions, and long-term developmental challenges (Kadir et al., 2019; Uroko, 2022; Gbaa, 2025). These studies generally examine education and health separately rather than as interconnected dimensions of household socioeconomic well-being. Another body of literature focuses on internally displaced persons (IDPs) and household vulnerability. Ukase and Jato (2022) show that many displaced households in Benue State lack adequate shelter, employment opportunities, healthcare, and food, while Iorbo et al. (2024) document widespread losses of homes, livelihoods, educational opportunities, and social infrastructure. Despite offering valuable qualitative evidence, these studies largely employ descriptive approaches that do not quantify the magnitude of armed conflict's effects on household welfare.

Other scholars have examined the broader structural drivers of armed conflict. Suleiman and Salisu (2022) attribute increasing farmer-herder conflicts to climate-induced resource scarcity, while Obasanmi and Enoma (2022), Yunusa et al. (2025), and Kouladoum et al. (2023) identify population growth, land tenure challenges, weak governance, ethnic divisions, and religious tensions as important drivers of conflict. Cross-country analyses similarly show that armed conflict slows economic growth and increases poverty (Haroon & Umair, 2024; Olarinde et al., 2024). However, these studies rely predominantly on macro-level analyses and secondary data, providing limited evidence on how conflict directly affects household welfare within specific conflict-affected communities. The literature also documents various coping strategies adopted by conflict-affected households (Alhassan et al., 2024; Katibi et al., 2024; Gutema, 2024). Nevertheless, these studies focus primarily on coping mechanisms rather than empirically measuring the multidimensional effects of armed conflict on household socioeconomic well-being.

The literature demonstrates that armed conflict negatively affects income, education, health, agricultural productivity, and household livelihoods. However, important gaps remain. Existing studies are fragmented, focusing on isolated dimensions of welfare or specific population groups rather than providing a comprehensive household-level assessment of socioeconomic well-being. Many also rely on qualitative or descriptive methods that limit rigorous estimation of the magnitude of conflict effects. Consequently, empirical evidence integrating household income, education, and health within a unified analytical framework remains limited, particularly for survivors' households in Benue State.

This study addresses these gaps by examining the effect of armed conflict on the socioeconomic well-being of survivors' households in Benue State using a multidimensional framework that jointly analyses household income, education, and health. Unlike previous studies, the study combines paired-sample t-tests and Seemingly Unrelated Regression (SUR) to estimate both changes in household welfare before and after conflict and the determinants of socioeconomic outcomes. Therefore, the study seeks to answer the following research questions:

1. What is the effect of armed conflict on household income among survivors' households in Benue State?
2. What is the effect of armed conflict on access to education among survivors' households in Benue State?
3. What is the effect of armed conflict on the health status of survivors' households in Benue State?

RESEARCH METHOD

This study adopts a cross-sectional survey design within a quasi-experimental framework to examine the effect of armed conflict on the socioeconomic well-being of survivors' households in Benue State. The design is appropriate given the need to collect micro-level, primary data from affected households at a single point in time while enabling comparative

analysis of pre- and post-conflict conditions. The survey approach facilitates the systematic collection of standardized information through structured questionnaires, thereby ensuring consistency, reliability, and comparability of responses. Moreover, the design allows for the empirical assessment of relationships between armed conflict and key welfare indicators, income, education, and health, within a real-world setting where experimental manipulation is not feasible.

Study Area

The study is conducted in Benue State, located in the North-Central region of Nigeria. Geographically, the state lies between latitudes 4°N and 14°N and longitudes 2.75°E and 14.50°E. It shares boundaries with Nasarawa State to the north, Taraba State to the east, Kogi State to the west, Enugu State to the southwest, and Cameroon to the southeast. With a projected population of approximately 6.14 million (NPC, 2020), Benue State is predominantly agrarian and widely regarded as Nigeria's "food basket." However, the state has experienced persistent armed conflicts, particularly farmer–herder clashes, communal conflicts, and armed banditry. These conflicts have resulted in widespread displacement, destruction of livelihoods, and the proliferation of internally displaced persons (IDP) camps across several local government areas (LGAs). The study focuses on conflict-affected LGAs (Guma, Gwer East, Gwer West, Kwande, Katsina-Ala, Logo, and Agatu) where the intensity and frequency of armed conflict are highest. The socioeconomic vulnerability of households in these areas makes them particularly suitable for analyzing the welfare impacts of conflict.

Population of the Study

The target population comprises survivors' households affected by armed conflict and residing in IDP camps within the selected LGAs. Based on data from the International Organization for Migration (IOM), Displacement Tracking Matrix (DTM) (2022), the total population of IDPs in these areas is 443,314 affected individuals. This population is the estimated number of persons affected by armed conflict, such as displacement, loss of assets, or disruption of livelihoods. Focusing on this population enables the study to capture the lived experiences and socioeconomic conditions of conflict survivors.

Sample Size Determination

The sample size was determined using the Krejcie and Morgan (1970) formula for finite populations at a 95% confidence level and 5% margin of error. Krejcie and Morgan's sample formula states that:

$$S = \left(\frac{X^2 \times N \times P \times (1-P)}{d^2 (N-1) + X^2 P (1-P)} \right)$$

Where: S = Required sample size, X^2 = Table value of Chi-square for 1 degree of freedom at the desired confidence level (3.841), N = Population size (148,571), P = Population proportion assumed to be 0.50, d = Degree of accuracy expressed as proportion (0.05). Thus, the study sample size can be determined as follows:

$$S = \left(\frac{1.96^2 \times 443,314 \times 0.5 \times (1-0.5)}{0.05^2 (443,314-1) + 1.96^2 \times 0.5 \times (1-0.5)} \right)$$

$$S = \left(\frac{3.8416 \times 443,314 \times 0.5 \times 0.5}{0.0025(443,313) + 3.8416 \times 0.5 \times 0.5} \right) = \frac{425,758.9576}{1,108.2825 + 0.9604} = \frac{425,758.9576}{1,109.2429}$$

$$S = 383.828 \approx 384$$

Applying this method to the population of 443,314 yielded a minimum sample size of 384 respondents. This sample size is considered adequate for ensuring statistical representativeness and reliability of results. The sample was proportionately distributed across the selected LGAs based on their respective IDP populations.

Sampling Technique: A combination of purposive and simple random sampling techniques was employed. Purposive sampling was used to select LGAs and IDP camps with high exposure to armed conflict, ensuring relevance to the study objectives. Within the selected camps, simple random sampling was applied to select respondents, thereby minimizing selection bias and ensuring that each eligible household had an equal probability of inclusion. This hybrid approach enhances both the validity and representativeness of the sample.

Data Sources and Collection

The study relies on primary data, collected through a structured questionnaire administered to respondents in the selected IDP camps. The questionnaire captures information on respondents' socioeconomic characteristics, exposure to armed conflict, and key welfare indicators. To improve response accuracy and inclusiveness, trained local assistants facilitated data collection, particularly where language barriers or low literacy levels existed. A total of 399 questionnaires were administered, out of which 384 valid responses were retrieved, representing a high response rate.

Research Instrument

The primary data collection instrument is a structured questionnaire designed in line with the study objectives. The instrument comprises three sections: (i) socio-demographic characteristics, (ii) indicators of socioeconomic well-being (income, education, and health), and (iii) exposure to armed conflict. The questionnaire incorporates a mix of closed-ended, Likert-scale, and limited open-ended questions, enabling both quantitative measurement and contextual understanding of respondents' experiences. This design ensures the generation of robust data suitable for econometric analysis.

Method of Data Analysis

Data analysis was conducted using a combination of descriptive and inferential statistical techniques. Descriptive statistics, including frequencies, percentages, and means, were used to summarize respondents' characteristics and key variables. To examine differences in socioeconomic outcomes before and after conflict exposure, paired sample t-tests were employed using SPSS (version 23). To assess the effect of armed conflict on multiple

dimensions of socioeconomic well-being simultaneously, the study adopts the Seemingly Unrelated Regression (SUR) model, estimated using Stata. The SUR approach is particularly suitable because it accounts for cross-equation error correlations among the different dimensions of well-being (income, education, and health), thereby improving estimation efficiency compared to separate OLS regressions (Zellner, 1962).

Model Specification

The study specifies a system of three interrelated equations to capture the multidimensional effects of armed conflict:

Income Equation

$$Y_1 = f(ACA, HLE, AOR, HSIZ)$$

Where: Y_1: Household income, ACA: Armed conflict index (attacks, killings, asset destruction), HLE: Highest level of education, AOR: Age of respondent, HSIZ: Household size

Education Equation: $Y_2 = f(ACA, Y_1, AOR, HSIZ)$

Where: Y_2: Access to education, INC: Household income

Health Equation: $Y_3 = f(ACA, Y_1, AOR, HSIZ)$

Where: Y_3: Access to healthcare.

The key explanatory variable, armed conflict (ACA), is constructed as a composite index capturing the frequency of attacks, number of casualties, and extent of asset destruction. Education and health variables are also measured using composite indices reflecting access and affordability.

FINDINGS

Socioeconomic and Demographic Characteristics of Respondents

Table 1: *Summary of Socioeconomic and Demographic Characteristics of Respondents*

Variable	Category	Frequency	Percentage (%)
Age (Years)	Less than 18	39	8.1
	18–30	139	36.2
	31–60	203	52.9
	Above 60	11	2.9
Sex	Male	151	39.3
	Female	233	60.7
Education	No Formal Education	76	19.8
	Primary	39	10.2
	Secondary	183	47.7
	Tertiary	86	22.4
Occupation	Student	36	9.4
	Business Owner	48	12.5
	Civil Servant	62	16.1
	Unemployed	117	30.5
	Farmer	121	31.5
Marital Status	Single	139	36.2

	Married	166	43.2
	Widowed	48	12.5
	Divorced/Separated	31	8.1
Household Size	1–3	22	5.7
	4–6	124	32.3
	7–9	137	35.7
	10 and above	101	26.3
Local Government	Guma	57	14.8
	Gwer	54	14.1
	Gwer West	55	14.3
	Kwande	53	13.8
	Katsina-Ala	51	13.3
	Logo	57	14.8
	Agatu	57	14.8
Total		384	100

Source: Field Survey, 2026

The socioeconomic and demographic profile of respondents reveals critical insights into the structure and vulnerability of survivors' households affected by armed conflict in Benue State. The age distribution indicates that the majority of respondents fall within the economically active age group, with over half (52.9%) aged between 31 and 60 years, followed by 36.2% within the 18–30 age bracket. This suggests that armed conflict disproportionately affects individuals in their prime productive years, those who are typically responsible for income generation, family sustenance, and social stability. The relatively small proportion of elderly respondents (2.9%) further implies that the burden of conflict is concentrated among active labor force participants, thereby exacerbating the decline in household income and overall productivity. The implication is that the destruction or displacement of this demographic group has far-reaching consequences for economic recovery and human capital development in the affected communities.

Gender distribution shows a higher proportion of females (60.7%) relative to males (39.3%), reflecting a gendered dimension of armed conflict. This imbalance may be attributed to higher male mortality rates during attacks or increased vulnerability of male household heads, who are often primary targets. Consequently, many households are likely female-headed, which has important implications for socioeconomic outcomes, as female-headed households in conflict settings often face greater economic hardship, limited access to resources, and increased caregiving responsibilities. This dynamic further reinforces the vulnerability of affected households and underscores the need for gender-sensitive policy interventions.

Educational attainment among respondents presents a mixed profile, with a substantial proportion (47.7%) having attained secondary education and 22.4% possessing tertiary education. However, nearly 30% of respondents have either no formal education or only primary education, indicating significant educational disparities. While the relatively high proportion of educated individuals suggests potential for human capital development, the disruptive effects of armed conflict, such as school closures, displacement, and reduced affordability, likely undermine these gains. This duality highlights the extent to which conflict

erodes educational opportunities and limits households' capacity to leverage education for improved socioeconomic outcomes.

Occupational distribution further stresses the economic vulnerability of respondents, with the majority engaged in farming (31.5%) and a significant proportion unemployed (30.5%). Given that Benue State is predominantly agrarian, the high concentration of farmers among respondents reflects the direct exposure of agricultural livelihoods to conflict-related disruptions, including destruction of farmlands, loss of livestock, and restricted access to markets. The high unemployment rate also signals a weakened local economy and reduced income-generating opportunities, both of which are critical channels through which armed conflict affects household welfare. The relatively smaller proportions of civil servants, business owners, and students suggest limited diversification of income sources, thereby increasing households' susceptibility to economic shocks.

The marital status distribution reveals that a large proportion of respondents are married (43.2%), followed by singles (36.2%), with notable shares of widowed (12.5%) and divorced/separated individuals (8.1%). The presence of widowed respondents is particularly significant, as it reflects the human cost of conflict and the loss of household heads, which often results in reduced income and increased dependency ratios. In addition, household size distribution indicates that most households are relatively large, with over 60% having seven or more members. Large household sizes, in the context of reduced income and limited resources, intensify economic strain and increase vulnerability to poverty, especially in displacement settings.

Finally, the distribution of respondents across the selected local government areas appears relatively balanced, with each LGA contributing approximately equal proportions of respondents. This balanced representation enhances the generalizability of the findings and ensures that the analysis captures the diverse experiences of conflict-affected households across different parts of Benue State. Overall, the socioeconomic and demographic characteristics presented highlight a population that is predominantly economically active, agriculturally dependent, and significantly vulnerable, thereby providing a strong foundation for understanding the multidimensional impact of armed conflict on household well-being.

Socioeconomic Well-Being of Respondents

Table 2*. Summary of Socioeconomic Well-Being Indicators Before and During Armed Conflict*

Indicator	Category	Before Conflict (%)	During Conflict (%)
Source of Income	Farming	31.5	6.3
	Civil Service	16.1	16.1
	Business	21.9	8.6
	Others	30.5	16.1
	None	0.0	52.9
Income Level (₦)	10,000–50,000	11.2	33.6
	51,000–100,000	10.2	3.4
	101,000–150,000	23.4	51.3
	151,000–200,000	40.1	11.2
	201,000 and Above	15.1	0.5

Health Status	Very healthy	52.3	6.3
	Healthy	25.0	16.1
	Not too healthy	13.5	24.7
	Unhealthy	9.1	52.9
Access to Healthcare	Easy access	52.9	1.6
	Access	27.1	2.9
	Limited access	12.0	26.0
	No access	8.1	69.5
Affordability of Healthcare	Very affordable	55.5	4.2
	Affordable	27.3	5.5
	Rarely affordable	9.9	37.0
	Not affordable	7.3	53.4
Education Access (Children in School)	None	17.4	51.0
	1–3 children	21.4	30.7
	4–6 children	45.6	15.4
	7+ children	15.7	2.9
Affordability of Education	Very affordable	51.8	1.6
	Affordable	28.1	2.9
	Rarely affordable	12.8	29.2
	Not affordable	7.3	66.4
Total		100	100

Source: Field Survey, 2026

The results presented in Table 2 present a comparative overview of the socioeconomic well-being of survivors' households before and during armed conflict in Benue State, revealing profound multidimensional disruptions. A striking observation is the collapse of income-generating opportunities, as all respondents previously had at least one source of income before conflict. In contrast, more than half (52.9%) reported having no source of income during the conflict period. The most affected sector is agriculture, where participation declined sharply from 31.5% to 6.3%, reflecting the vulnerability of farming activities to violent disruptions such as destruction of farmlands, displacement, and insecurity. Similarly, business activities experienced a significant decline, while only civil service employment remained relatively stable, likely due to its formal and structured nature. This shift highlights the severe erosion of livelihoods and the increasing dependency and vulnerability among affected households.

Consistent with the loss of income sources, there is a marked deterioration in household income levels. Before the conflict, a substantial proportion of respondents earned relatively moderate to high incomes, with 40.1% earning between ₦151,000–₦200,000 and 15.1% earning above ₦200,000. However, during the conflict, income distribution shifted dramatically toward lower brackets, with 33.6% earning less than ₦50,000 and only 0.5% maintaining income above ₦200,000. This downward shift indicates a significant decline in purchasing power and economic capacity, thereby constraining households' ability to meet basic needs and maintain their standard of living.

The health dimension of socioeconomic well-being also shows substantial deterioration. Before conflict, over three-quarters (77.3%) of respondents reported being either "very healthy" or "healthy," whereas during conflict, the majority (52.9%) reported being "unhealthy." This reversal reflects the combined effects of poor living conditions, exposure to

violence, inadequate nutrition, and limited healthcare services in displacement settings. Supporting this, access to healthcare services declined drastically, with those reporting "easy access" falling from 52.9% to just 1.6%, while those with no access increased from 8.1% to 69.5%. This sharp decline underscores the collapse of healthcare infrastructure and services, likely due to destruction of facilities, displacement of healthcare personnel, and insecurity in affected areas. In addition to access constraints, affordability of healthcare services worsened significantly, as the proportion of respondents who considered healthcare "very affordable" dropped from 55.5% to 4.2%, while those reporting it as "not affordable" increased to 53.4%. This suggests that declining incomes, coupled with increased healthcare needs, have placed additional financial burdens on households, further compounding their vulnerability.

A similar pattern is observed in the education sector, where armed conflict has severely disrupted access and affordability. Before the conflict, school attendance was relatively high, with a majority of households having multiple children enrolled in school. However, during the conflict, over half (51.0%) reported that none of their school-aged children were attending school. This sharp decline reflects the destruction of educational infrastructure, displacement of families, and increased insecurity. Furthermore, the affordability of education deteriorated significantly, with those reporting education as "not affordable" rising from 7.3% to 66.4%, while "very affordable" dropped drastically to 1.6%. These findings indicate that armed conflict not only disrupts current educational access but also threatens long-term human capital development.

The results demonstrate that armed conflict exerts a systematic and multidimensional negative impact on socioeconomic well-being, affecting income, health, and education simultaneously. The interdependence of these dimensions is evident, as declining income reduces access to healthcare and education, while poor health further limits productivity and earning capacity. This reinforces the argument that the effects of armed conflict are not isolated but rather mutually reinforcing, leading to a cumulative decline in household welfare. The findings therefore provide strong empirical evidence that armed conflict significantly undermines the socioeconomic stability and resilience of survivors' households in Benue State.

Results of Hypotheses Testing

***Table 3**: Summary of Paired Sample t-test Results*

Variable	Mean (Before Conflict)	Mean (During Conflict)	t-value	df	p-value	Decision
Household Income	206,640.63	74,856.77	25.819	383	0.000	Reject H_o
Access to Education	2.6615	1.7005	31.323	383	0.000	Reject H_o
Health (Access to Healthcare)	3.2474	1.3646	42.717	383	0.000	Reject H_o

The results of the paired sample t-tests reveal a consistent and statistically significant decline across all key dimensions of socioeconomic well-being (household income, access to education, and health) following exposure to armed conflict in Benue State. Specifically, household income declined sharply from a mean value of ₦206,640.63 before conflict to

₦74,856.77 during conflict, with a highly significant t-value (25.819, $p < 0.05$). This substantial reduction reflects the severe disruption of livelihood activities, particularly in agrarian communities where income generation is highly dependent on stable environmental and security conditions. This finding aligns with Loaiza Quintero et al. (2018) and Ukase and Jato (2022), who documented that armed conflict significantly depresses income through displacement, destruction of productive assets, and reduced participation in economic activities. Similarly, Iorbo et al. (2024) emphasized that internally displaced persons often lose access to land and employment, thereby exacerbating income poverty.

In the same vein, access to education experienced a statistically significant decline, with the mean dropping from 2.6615 before conflict to 1.7005 during conflict ($t = 31.323$, $p < 0.05$). This indicates that armed conflict severely disrupts educational participation, likely due to school destruction, displacement of households, and heightened insecurity. The magnitude of this decline underscores the vulnerability of human capital development in conflict-prone areas. This result corroborates earlier studies such as Ukase and Jato (2022) and Loaiza Quintero et al. (2018), both of which found that conflict situations significantly reduce school attendance and educational attainment.

Furthermore, the health dimension shows the most pronounced deterioration, with mean access to healthcare dropping from 3.2474 to 1.3646 ($t = 42.717$, $p < 0.05$). This suggests that armed conflict not only disrupts healthcare infrastructure but also severely limits access to essential health services. The result is consistent with findings by Rahamtalla et al. (2025), who noted that armed conflict leads to weakened healthcare systems, increased disease burden, and overall deterioration in population health. Thus, the t-test results provide strong empirical evidence that armed conflict significantly worsens all major indicators of socioeconomic well-being.

Table 4: *Summary of SUR Model Estimates*

Variables	Model 1: Income (Y_1)	Model 2: Education (Y_2)	Model 3: Health (Y_3)
ACA (Armed Conflict)	-1.215*** (0.000)	-0.112 (0.206)	-0.104*** (0.000)
Income (Y_1)	-	0.055 (0.250)	0.131*** (0.004)
Highest Level of Education (HLE)	0.223*** (0.000)	-	-0.037*** (0.000)
Age of Respondent (AOR)	0.371*** (0.000)	-0.505*** (0.000)	-0.043 (0.687)
Household Size (HSIZ)	-0.420*** (0.000)	0.129 (0.662)	-
Constant	6.596***	5.029***	-4.711***

*Note: *** denotes significance at 5% level ($p < 0.05$). Values in parentheses are p-values.*

The results of the SUR model in Table 4 show the structural relationships between armed conflict and the different dimensions of socioeconomic well-being. In Model 1 (Income), armed conflict exhibits a strong negative and statistically significant effect ($\beta = -1.215$, $p < 0.05$). This indicates that increases in conflict intensity substantially reduce household

income. This finding is consistent with theoretical expectations and empirical evidence from previous studies such as Ukase and Jato (2022) and Awuzie et al. (2023), which highlight how conflict disrupts production systems, destroys assets, and displaces labor, thereby reducing income-generating capacity. Additionally, the positive and significant effect of education and age on income suggests that human capital and experience remain important determinants of earning capacity, even within conflict settings. In contrast, the negative effect of household size reflects increased dependency burdens.

In Model 2 (Education), although the coefficient of armed conflict is negative ($\beta = -0.112$), it is statistically insignificant ($p > 0.05$). This suggests that while conflict tends to reduce access to education, the effect is not strong enough to be statistically conclusive within the model. One plausible explanation is that displaced households may seek alternative schooling opportunities in safer areas, thereby partially offsetting the negative effects of conflict. The significant negative effect of age on education further indicates that older household heads may prioritize immediate survival over educational investment. At the same time, the insignificant role of income suggests that non-economic barriers (such as insecurity) may be more critical in determining access to education during conflict.

In Model 3 (Health), armed conflict again demonstrates a negative and statistically significant effect ($\beta = -0.104$, $p < 0.05$), confirming that increased conflict intensity leads to deterioration in health outcomes. This is consistent with prior literature (Rahamtalla et al. 2025; Awuzie et al., 2023), which emphasizes the destructive impact of conflict on healthcare systems, access to medical services, and overall well-being. The positive and significant effect of income on health highlights the role of financial capacity in accessing healthcare services. In contrast, the negative effect of education (though significant) may reflect contextual realities where even educated individuals face constrained access to healthcare due to systemic collapse during conflict. Therefore, the SUR results support the conclusion that armed conflict has a systematic and significantly negative effect on socioeconomic well-being, particularly through income and health channels.

In contrast, its effect on education, though negative, appears more complex and context-dependent. These findings are consistent with the broader empirical literature, which views armed conflict as a major driver of poverty, vulnerability, and underdevelopment. The combined evidence from both the t-test and SUR analyses underscores the need for integrated policy responses that address not only security challenges but also the economic, educational, and health needs of conflict-affected populations.

CONCLUSION

The study concluded that armed conflict has a significant negative effect on the income level of survivors' households in Benue State. The findings indicate a mean difference in household income, access to education, and household health during periods of armed conflict, confirming that armed conflict destabilizes socioeconomic activities and affects access to education and health. However, the effect is positive for both education and health.

Furthermore, the study reinforces the relevance of highest education level, age of respondent, and household size in enhancing household income. Income level and age of respondent are positive but insignificant determinants of access to education. At the same time, household size is a positive and significant influencing factor or determinant of access to education. While income level is a positive and significant determinant of health, age of respondent is a negative and insignificant determinant of the health of survivors' households in Benue State.

In contrast, the highest level of education is a negative but significant determinant of the health of survivors' households. The positive relationship between these determinants and the income indicator tends to influence socioeconomic well-being to a larger extent. Following this, therefore, the study clearly provides robust evidence that armed conflict significantly has a negative effect on the socioeconomic well-being of survivors' households in Benue State.

Policy Recommendations

To address the significant negative effect of armed conflict on the socioeconomic well-being of survivors' households in Benue State, the following policy recommendations are suggested:

- The Benue State Government, Federal Government, and all relevant bodies should collectively employ all necessary strategies to combat and end armed conflict attacks in Benue State and its neighboring areas. This will reduce fluctuations in household income, restore stability, and create opportunities for internally displaced persons (IDPs) to return to their ancestral homes. Government at all levels should therefore strengthen security measures that effectively reduce the frequency and number of attacks in affected communities and across Benue State.
- National, regional, and local governments, particularly within administrative, development, and security sectors, should safeguard local communities, their livelihoods, and their dignity in conflict-prone areas. In addition, the international community should support governments by strengthening their capacity to respond to both existing and potential armed conflict threats to reduce the negative effects of conflict on household income and health.
- State authorities should improve healthcare services in IDP locations and ensure full access to health services in areas where healthcare facilities are absent. Measures should also be introduced to cover healthcare costs, especially for vulnerable groups within the IDP population.
- The government should strengthen conventional security structures by incorporating intelligence support from community members who are familiar with local terrains. This collaboration will help provide adequate security to rural populations, protect the lives and property of survivors' households, and reduce the frequency of attacks, killings, and destruction caused by armed conflict in Benue State.

- Government and relevant agencies should establish and implement financial support schemes for business start-ups to help survivors' households reintegrate into society. Such interventions should include the provision of seedlings, financial assistance, counseling sessions, and social support activities within IDP camps to alleviate financial hardship and improve socioeconomic well-being.
- Basic needs such as electricity, clean and potable water, quality food, and adequate nutritional support should be provided by the government and humanitarian organizations to support survivors' households. This should also include temporary shelters and clothing assistance to help displaced persons cope with the trauma and stress associated with armed conflict.
- Government development and infrastructure sectors at all levels should collaborate with international organizations and humanitarian agencies to rebuild and restore damaged infrastructure, particularly healthcare and educational facilities affected by armed conflict.
- Humanitarian aid organizations should provide adequate food and medical assistance while also prioritizing the restoration of income sources through vocational training, financial grants, and support for sustainable income-generating activities.

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