



Exploring the Effects of Armed Conflict on Children's Primary School Attendance and Dropout in Nigeria

美並, 立人

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論文内容の要旨

氏 名 美並 立人

専 攻 地域協力政策専攻

論文題目 Exploring the Effects of Armed Conflict on Children's Primary School
Attendance and Dropout in Nigeria
(ナイジェリアにおける武力紛争が子どもの初等教育への出席と
退学に及ぼす影響)

Intense violence and insecurity severely disrupt children's school attendance and learning continuity. In particular, armed conflicts pose significant global educational challenges by directly impacting children, families, teachers, and schools. These effects are especially pronounced in developing countries with fragile education systems. Past evidence indicates that approximately 28 million children in conflict zones are deprived of education due to sexual violence, attacks on schools, and other forms of abuse. This growing concern has driven increased scholarly attention toward understanding the impact of armed conflict on children's access to education and their learning continuity. They also imply that armed conflicts hinder primary education enrollment, leading to long-term consequences such as reduced cognitive abilities and adverse effects on labor market outcomes, including employment and income.

Nigeria faces considerable obstacles to achieving universal primary education due to the pervasive effects of armed conflict. The Northeastern region in the country has been particularly affected by violent insurgencies, including those led by the militant group Boko Haram since 2009. These insurgencies have consistently targeted schools and civilians, drawing global attention to incidents like the 2014 abduction of 276 female students in Chibok. Ongoing human rights abuses, including the kidnapping, forced conscription, and killing of children, further exacerbate the situation. Despite the Nigerian government's 2003 implementation of free primary education, enrollment rates remain low. Notably, Nigeria accounts for one-fifth of the world's out-of-school children, with the Northeastern exhibiting substantially lower enrollment rates than other regions. Moreover, the conflict has displaced countless families, posing immense difficulties for displaced children living in camps or host communities, where enrollment remains low and dropout rates are high. In response, the Nigerian government has prioritized securing educational opportunities for conflict-affected children through initiatives like the Safe Schools Initiative and national policies for internally displaced persons.

Existing research on armed conflict and children's schooling highlights three key research gaps. First, prior studies have not sufficiently examined how the specific nature of conflict event type affects children's schooling outcome, including attendance and dropout. Understanding the distinct impacts of specific conflict events (e.g., school attacks and child abductions) is crucial for identifying which types of incidents have the most detrimental effects on children's schooling outcomes (school attendance and dropout). Second, the impact of conflict-induced household displacement on children's primary education remains underexplored. While numerous studies have examined the effects of economic migration on children's schooling outcomes, there is limited research

on how sudden, externally driven displacement caused by conflict affects children's schooling. This gap is particularly evident for children in vulnerable settings, such as displacement camps and host communities. Third, the spillover effects of armed conflict on education in neighboring regions and communities require further investigation. Conflict often extends beyond the directly affected areas, influencing school enrollment and dropout rates in nearby regions and communities through media and the Internet. However, empirical studies examining this phenomenon at the individual and household levels are lacking.

Based on the above background, we set three main research questions. (1) How do different types of conflict events affect children's primary school attendance and dropout in Nigeria? (2) To what extent does armed-conflict-induced internal displacement affect children's primary school attendance and dropout in Northeast Nigeria? (3) How are the spillover effects of armed conflicts on children's primary school attendance and dropout in Nigeria? In line with our research questions, we have three main objectives. First, we aim to determine the effects of specific conflict events (e.g., child abductions, attacks on teachers and schools, and clashes between armed groups and government forces) on children's primary school attendance and dropout. Second, we examine the impact of conflict-induced internal displacement on children's school attendance and dropout in Northeast Nigeria, with a particular focus on children living in internally displaced persons (IDPs) camps and host communities. Third, we investigate whether the effects of armed conflict on school attendance and dropout extend to communities beyond the immediate conflict zones.

This study makes significant contributions to the existing body of knowledge by offering detailed, localized insights into the effects of armed conflict on children's schooling, specifically primary school attendance and dropout rates. First, by isolating the impact of individual conflict event types on children's education, this research surpasses the limitations of prior studies, which often relied on aggregated data, such as total conflict counts, fatalities, or incidents at administrative levels (districts or provinces), as proxies for armed conflict. We overcome this limitation by employing machine learning algorithms and village-level geographic information system (GIS) data.

Second, by focusing on primary school attendance and dropout among internally displaced children in conflict settings, this study contributes to the literature on the impact of household mobility on children's schooling. Existing research has given limited attention to displaced populations as a central focus, especially within conflict zones. This study addresses this gap by specifically examining children displaced within their own

country due to armed conflict, estimating the effects of this conflict-induced internal displacement (CID) on their education, particularly school attendance and dropout rates.

Third, this study contributes to the existing research on the relationship between armed conflict and education attendance and dropout by estimating its spillover effects on children living outside the immediate conflict zone. Previous studies have documented adverse spillover effects on various outcomes such as welfare, economic activity, and education. While previous studies have documented adverse spillover effects on various outcomes, including welfare, economic activity, and education, little is known about how armed conflict affects individual schooling outcomes. Existing research often relies on macro-level analyses at the country or regional level, which fail to capture the nuanced impact of conflict on individual children and households. Such broad analyses may overlook the diverse backgrounds and vulnerabilities of individuals, as armed conflict can affect children differently based on factors such as socioeconomic background and gender. Therefore, this study uses the child as the unit of analysis to estimate the spillover effects on individual schooling outcomes.

We base its analysis related to the first research question on the following hypotheses: (1-1) The occurrence of children's kidnapping in the village negatively affects children's attendance in primary school. (1-2) The shock of armed conflict against teachers and schools raises the likelihood of children dropping out of primary education. The other hypotheses related to the second research question are as follows: (2-1) CID negatively affects children's attendance at primary education in Northeast Nigeria. (2-2) CID increases the likelihood of children dropping out of primary education in Northeast Nigeria. For research question 3, our hypotheses are as follows: (3-1) The armed conflict has a spillover effect on children's attendance in other areas beyond the village in Nigeria. (3-2) The armed conflict has a spillover effect on children's school dropout in other areas beyond the village in Nigeria.

This study employs multiple datasets and an empirical strategy to quantify the effects of conflict events on children's primary schooling outcomes. We use the Nigeria General Panel Household Survey (NGPHS) from 2009 to 2019 and the Peace Research Institute Oslo (PRIO) Conflict Recurrence Database to analyze nationwide impacts. Geographic Information System (GIS) tools integrate village-level geographic data with conflict event data, measuring conflict exposure within a 5-kilometer radius of each village. Additionally, machine learning-based natural language processing (NLP) is applied to classify different types of conflict events using large text data from the PRIO dataset. We employ two-way fixed effects (TWFE) models with De Chaisemartin and

d'Haultfoeuille (2020) estimator to estimate the effects of conflict events on children's primary school attendance and dropout.

We further analyze the effects of conflict-induced internal displacement on children's schooling outcomes using the cross-sectional dataset, namely the *Profile of Internally Displaced Persons in North-East Nigeria 2018*. To address the endogeneity of household decisions regarding internal displacement and isolate exogenous variation, we employ an instrumental variable (IV) approach. IV is the penetration of Boko Haram in the village where the individual lived before the displacement.

For the spillover effect estimation, we also employ multiple datasets. We use the NGHS dataset for the attributed data, which is consistent with Hypothesis 1. For conflict data, we utilize the Armed Conflict Location and Event Data (ACLED) to gather information on the number of fatalities caused by armed conflict events, as well as their time and location. Based on these datasets, we apply several empirical strategies. First, we calculate the fatalities within a 5 km radius of each village and extend the radius incrementally up to 50 km. Second, we apply a spatial difference-in-differences (DID) approach, following Utsumi (2022). Finally, for robustness checks, we employ the doubly robust DID and Butt's DID estimator (Butts, 2022) to account for selection bias and stable unit treatment value assumption (STUVA) assumption.

Our estimation confirms that armed conflict negatively affects school attendance and increases dropout probability. Unlike previous studies, we find that the effect of armed conflict varies depending on the specific type of conflict event. Specifically, our results show that kidnappings, direct attacks on children, and explosions within 5 kilometers of a village reduce the probability of school attendance, while attacks on schools and teachers significantly increase dropout probabilities. These findings remained consistent across several robustness checks using different conditions and conflict proxies.

The estimation related to the conflict-induced internal displacement (CID) effect reveals that while CID does not have a statistically significant negative impact on children's school attendance, it does significantly increase the probability of primary school dropout. Furthermore, our heterogeneous analysis underscores the critical need to focus on vulnerable groups, particularly females and those from economically disadvantaged households. Subsample analysis by household wealth reveals stark disparities: children from poor household experience significantly greater educational disruption due to displacement, whereas those from non-poor households appear relatively unaffected. Additionally, the analysis highlights a key distinction based on

residence type. Children living in host communities experience a pronounced negative impact on school attendance due to CID, while those residing in IDP camps do not exhibit significant effects.

Our estimation of the spillover effect indicates that fatalities from armed conflict have a significant impact on children's primary school attendance and dropout rates. In Nigeria, information about conflict likely disseminates through various channels, including rumors, television, news media, and social media platforms. This widespread dissemination influences school attendance even in areas beyond the immediate conflict zones, such as neighboring communities, districts, and provinces. To further investigate this, we incorporate an interaction term between conflict exposure and high internet-intensity areas into the analysis. The results suggest that the spillover effects of armed conflict are amplified in regions with greater internet access.

Armed conflict disrupts children's schooling through various channels. In Nigeria, particularly in the Northeast region, the armed group Boko Haram has been active since 2009. This research provides critical insights into the differentiated impacts of conflict on education, emphasizing how specific conflict event types affect schooling outcomes, the role of displacement in disrupting educational continuity, and the broader spillover effects of conflict on neighboring communities.

From a Nigerian policy perspective, these findings underscore the urgent need for targeted interventions in conflict-affected regions. Addressing the impact of displacement requires a dual approach. On the demand side, policies should prioritize the safety and well-being of displaced families and children. This includes expanding access to mobile schools in IDP camps and host communities, enhancing school security, and providing psychosocial support to mitigate trauma. On the supply side, Nigeria must invest in resilient educational infrastructure, such as fortified schools, alternative learning platforms, and incentives to retain teachers in conflict-prone areas with robust security systems and environments. The event-specific nature of these effects also necessitates policies that integrate security measures into educational planning at the local level. For example, targeted efforts to prevent kidnappings and attacks on schools could include partnerships between the Ministry of Education, local communities, and security forces to create safe learning environments. Community engagement programs are essential to rebuild trust in the education system, particularly in areas where parental fear and social dislocation discourage school attendance and continuity.