Topic:

Violent Conflict Exposure in Nigeria and Household Welfare: What Can We Learn from Panel Data?

Authors:

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Aim:

the analysis of the effects of violent conflict exposure on household welfare measures.

INTRODUCTION

Africa's largest economy and most populated in Africa → **Plague with violent conflict**
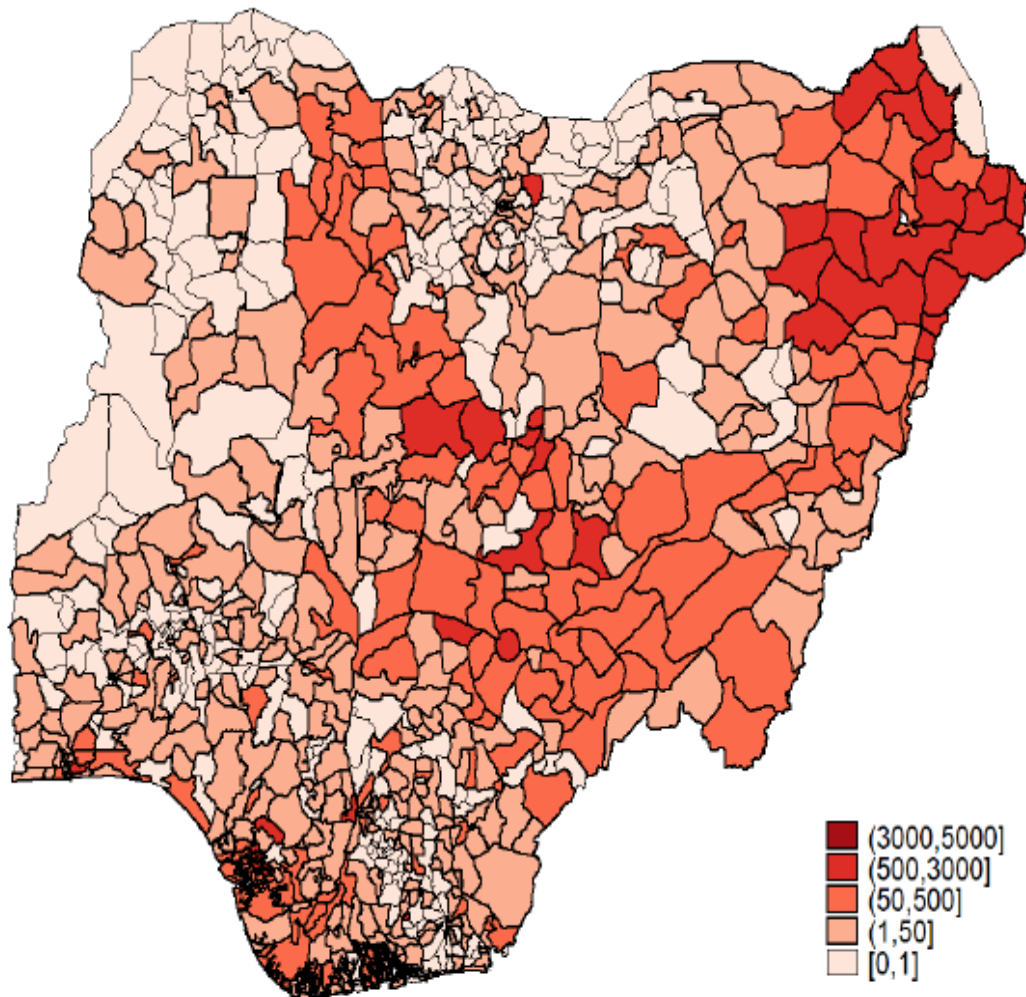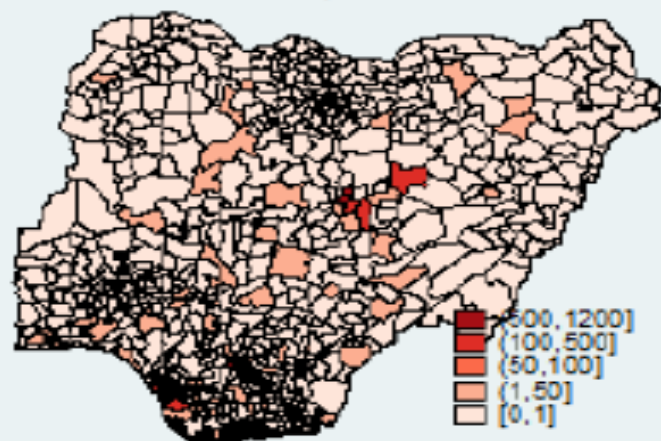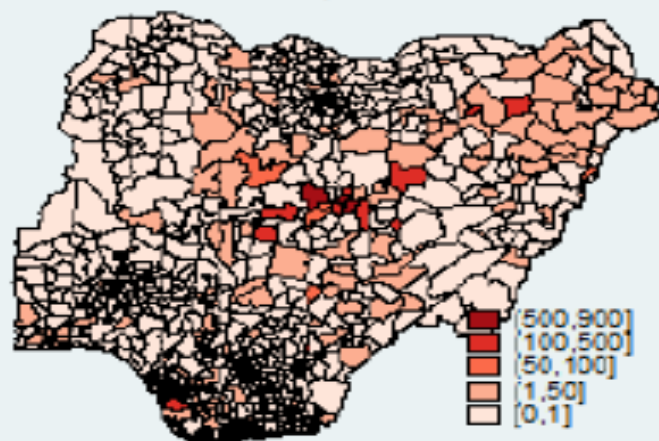
North west

North east

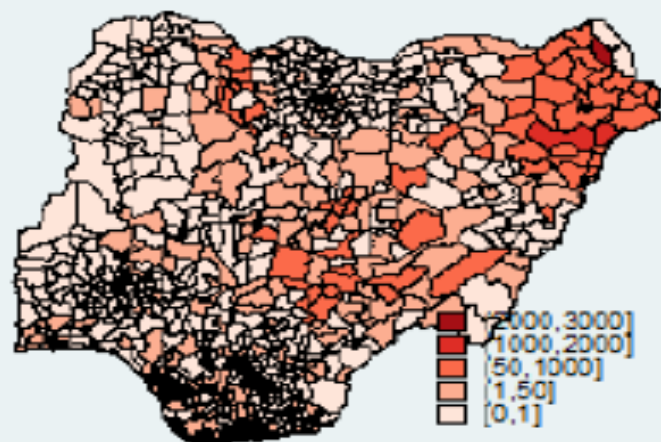Figure 1: Conflict Exposure in Nigeria between 1997-2018

■	(3000,5000]
■	(500,3000]
■	(50,500]
■	(1,50]
□	[0,1]

Recent Conflict Exposure
Fatalities, 2008-2010

(500, 1200]
(100, 500]
(50, 100]
(1, 50]
[0, 1]

Recent Conflict Exposure
Fatalities, 2010-2012

(500, 900]
(100, 500]
(50, 100]
(1, 50]
[0, 1]

Recent Conflict Exposure
Fatalities, 2013-2015

(2000, 3000]
(1000, 2000]
(50, 1000]
(1, 50]
[0, 1]

Recent Conflict Exposure
Fatalities, 2016-2018

(2000, 3000]
(1000, 2000]
(50, 1000]
(1, 50]
[0, 1]

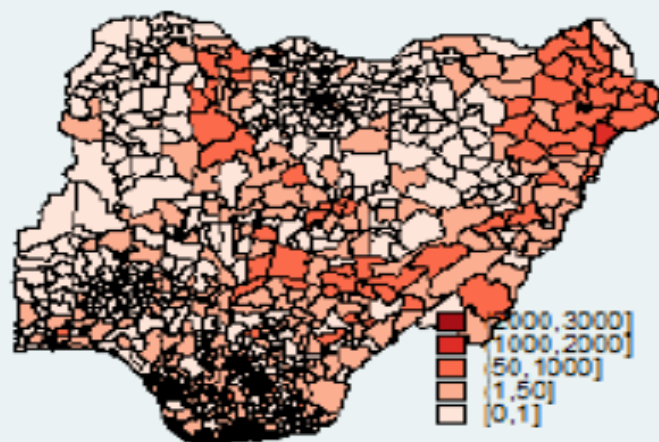Figure 2: Evolution of Conflict Exposure in Nigeria 1997-2018.

Research question

does exposure to conflict affect Household welfare?

DATA SOURCES

Violent Conflict data

- **Armed Conflict Location and Event Data (ACLED)** **(Releigh, Hegre and Carlson(2009))**

Outcome data/control variables
- **GHS Panel (National Bureau of Statistics)**

Other data source
- **Rainfall, population(CBN, NPC)**

$$Y_{ijt} = \beta_0 + \beta_1 W_{jt} + X_{ijt}\beta_2 + C_{jt}\beta_3 + \gamma_t + \delta_i + \epsilon_{ijt}$$

Table 1. Outcome variables: Summary Statistics

	Unbalanced Panel		Balanced Panel	
	2010 - 2018	2010 - 2015	2010 - 2018	2010 - 2015
	(1)	(2)	(3)	(4)
Wage Income (Naira/Y)	850000	920000	710000	910000
	(7139484.5)	(7654291.2)	(3055635.7)	(7742947.5)
Per Capita Income (Naira/Y)	200000	230000	140000	230000
	(4127481.1)	(4760464.1)	(808805)	(4875441.1)
Total HH Income (Naira/Y)	820000	970000	590000	980000
	(17421259.7)	(20094560.9)	(2296431)	(20603242.7)
Poverty Severity	20.4	27.03	2.91	28.01
	(948.2)	(1094.1)	(102.3)	(1121.6)
Poverty Gap	0.66	0.71	0.51	0.72
	(4.468)	(5.15)	(1.625)	(5.243)
Poverty Incidence	0.63	0.58	0.62	0.59
	(0.483)	(0.493)	(0.487)	(0.492)
Observations	17291	12702	4129	12186

Source: Authors 'estimate from Nigeria's GHS Panel

NB: Standard deviation in parenthesis

Table 2. Key explanatory variables: Summary Statistics

	Unbalanced Panel		Balanced Panel	
	2010 - 2018	**2010 - 2015**	**2010 - 2018**	**2010 - 2015**
	(1)	**(2)**	**(3)**	**(4)**
Recent Conflict Deaths	15.4	14.3	10.62	14.27
	(96.4)	(103.9)	(44.32)	(102.3)
Accumulated Conflict Deaths	62.3	46.7	37.44	46.96
	(328.9)	(235.9)	(110.9)	(236.2)
Exposure to Shock	0.37	0.34	0.36	0.34
	(0.483)	(0.472)	(0.479)	(0.473)
Observations	17291	12702	4129	12186

Source: Authors 'estimate from Nigeria's GHS Panel   **NB: Standard deviation in parenthesis**

Table 3. Control variables: Summary Statistics

VARIABLES	Unbalanced Panel		Balanced Panel	
	2010 - 2018	2010 - 2015	2010 - 2018	2010 - 2015
	(1)	(2)	(3)	(4)
Demographic /Rainfall.	X	X	X	X
Infrastructural access	X	X	X	X
Social network membership	X	X	X	X
Violent Conflict /LGA pop/%	X	X	X	X
Observations	17291	12702	4129	12186

RESULTS

Table 4. The effects of Conflict on Income (Unbalanced Panel,2010 - 2018)

(Panel A)	Per capita Income	Household income
Recent conflict per LGApop/%	-3.291***	-2.801***
	(0.924)	(0.873)
Constant	11.435***	11.419***
	(0.622)	(0.612)
(Panel B)		
Acc. Conflict per LGApop/%	-1.464**	-1.143**
	(0.592)	(0.579)
Constant	11.344***	11.348***
	(0.623)	(0.613)
R2	0.153	0.165
N	8232	8232

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Exposure to conflict not significant, hence was excluded

Table 5. The effects of conflict on Income Balanced Panel(2010 − 2015)

(Panel A)	PC	HH Income
Recent conflict deaths/LGApop/%	**-3.216*****	**-2.870*****
	(1.013)	(0.978)
Exposure to shock	-0.110*	-0.106*
	(0.06)	(0.059)
Constant	11.898***	11.910***
	(0.722)	(0.705)
(Panel B)		
Accumulated Conflict deaths/LGApop/%	**-1.166***	-0.842
	-0.677	-0.67
Exposure to shock	-0.114*	-0.111*
	(0.06)	(0.059)
Constant	11.924***	11.946***
	(0.722)	(0.705)
R2	0.157	0.171
N	5285	5285

Table 6. The effects of Conflict on Poverty(Unbalanced Panel,2010 - 2018)

Panel A	Poverty Measures		
	Incidence	**Gap**	**Severity**
Recent Deaths per LGA pop. (/%)	0.704*	0.957***	0.968***
	-0.359	-0.249	-0.233
Constant	0.318	0.155	0.122
	-0.24	-0.165	-0.146
Panel B			
Accum. Deaths per LGA pop.(/%)		0.490***	0.496***
		-0.163	-0.147
Constant	0.341	0.185	0.153
	-0.24	-0.165	-0.146
R	0.166	0.247	0.238
N	8232	8232	8232

Table 7. The effects of Conflict on Poverty(Balanced Panel,2010 - 2015

	Poverty Measures		
Panel A	**Incidence**	**Gap**	**Severity**
Recent Deaths per LGA pop. (/%)		1.026***	1.095***
		-0.265	-0.25
Constant	0.026	0.016	0.056
	-0.283	-0.192	-0.171
Panel B			
Acc. Deaths per LGA pop. (/%)	0.469*	0.538***	0.500***
	-0.25	-0.171	-0.162
Constant	0.038	0.019	0.054
	-0.284	-0.193	-0.171
R	0.156	0.24	0.24
N	5285	5285	5285

SUMMARIES AND CONCLUSION

1. We used the ACLED violent conflict exposure measure and 4 waves of the GHS panel data to address the question of whether recent and accumulated conflict exposure affects households' welfare in Nigeria.

2. We focus on 6 welfare measures: wages, HH-Income, PC-Income, poverty incidence, poverty gap, and poverty severity.

3. Using a fixed-effect strategy and controlling for numerous factors we found recent conflict decreased HHIncome and PC-Income. Also, recent conflict increased households' poverty gap and severity, and weaker evidence of an association between conflict exposure and poverty incidence.

4. We also provide evidence of a long-term or lingering effect of violent conflict exposure on household income, poverty severity, and the poverty gap.

THANK YOU
FOR THE OPPORTUNITY
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