

Armed conflict and gendered participation in agrifood systems: Survey evidence from 29 African countries

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Motivation

- Armed conflicts can have **impacts on individuals' economic activity** (Verwimp et al. 2019)
- Yet, these are **far from uniform**, especially for women (Acemoglu et al. 2002; Menon & van der Meulen Rodgers 2015; Robertson et al. 2020)
- Women's economic activity can ***rise*** during and after conflicts, e.g., because of changes in household composition and needs for women to take on new roles (Justino 2018).
- However, cultural, economic, physical, and time constraints may also create ***negative or null net*** impacts on women's economic activities during and after conflicts (Greiner 2022)
- Which conflict impacts **dominate, under which conditions, and over which time horizons** remains ill-understood, and empirical evidence is scarce and scattered

Research questions

- Are impacts of armed conflict on men and women's economic activities (labor participation, hours worked, income) different?
- If so, to what extent?
- Are impacts different also according to the activity sector, conflict type, and agro-ecology?

Our study

Multi-country African individual-level data on economic activity

- Based on 1.8 million observations from harmonised employment survey data
- Sourced from HIES, LFS, and LSMS datasets
- Covering 29 African countries

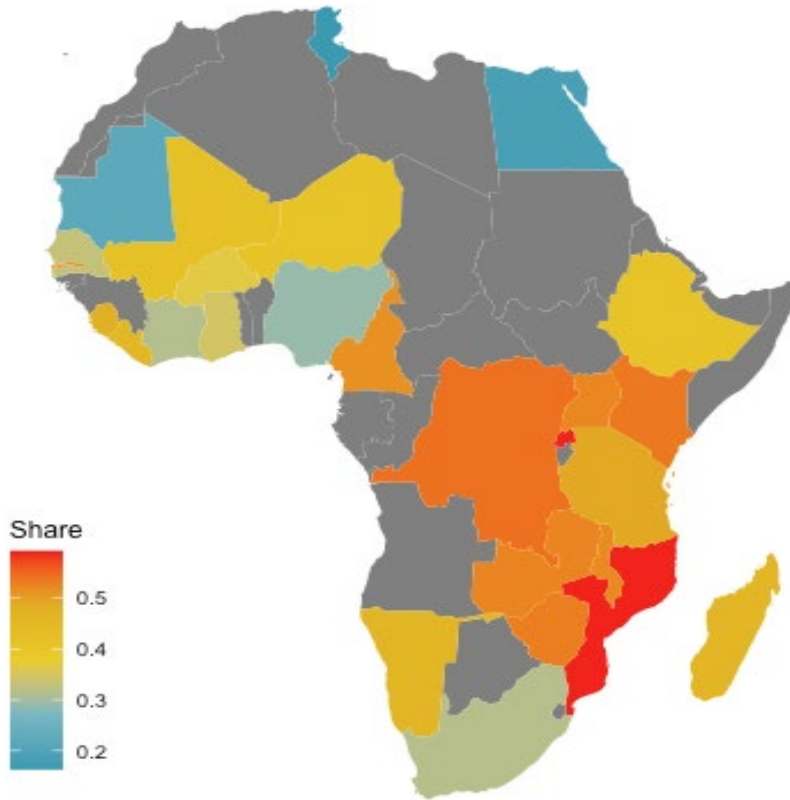
Matched spatiotemporally with local conflict event data

- With different types of armed conflict
- With various time horizons of the conflict events: 1, 2, or 3 years before survey date

Outcomes: employment variables related to participation in agrifood system; income

- employment status
- sector of activity
- hours worked
- income

Spatial variation in female labour market

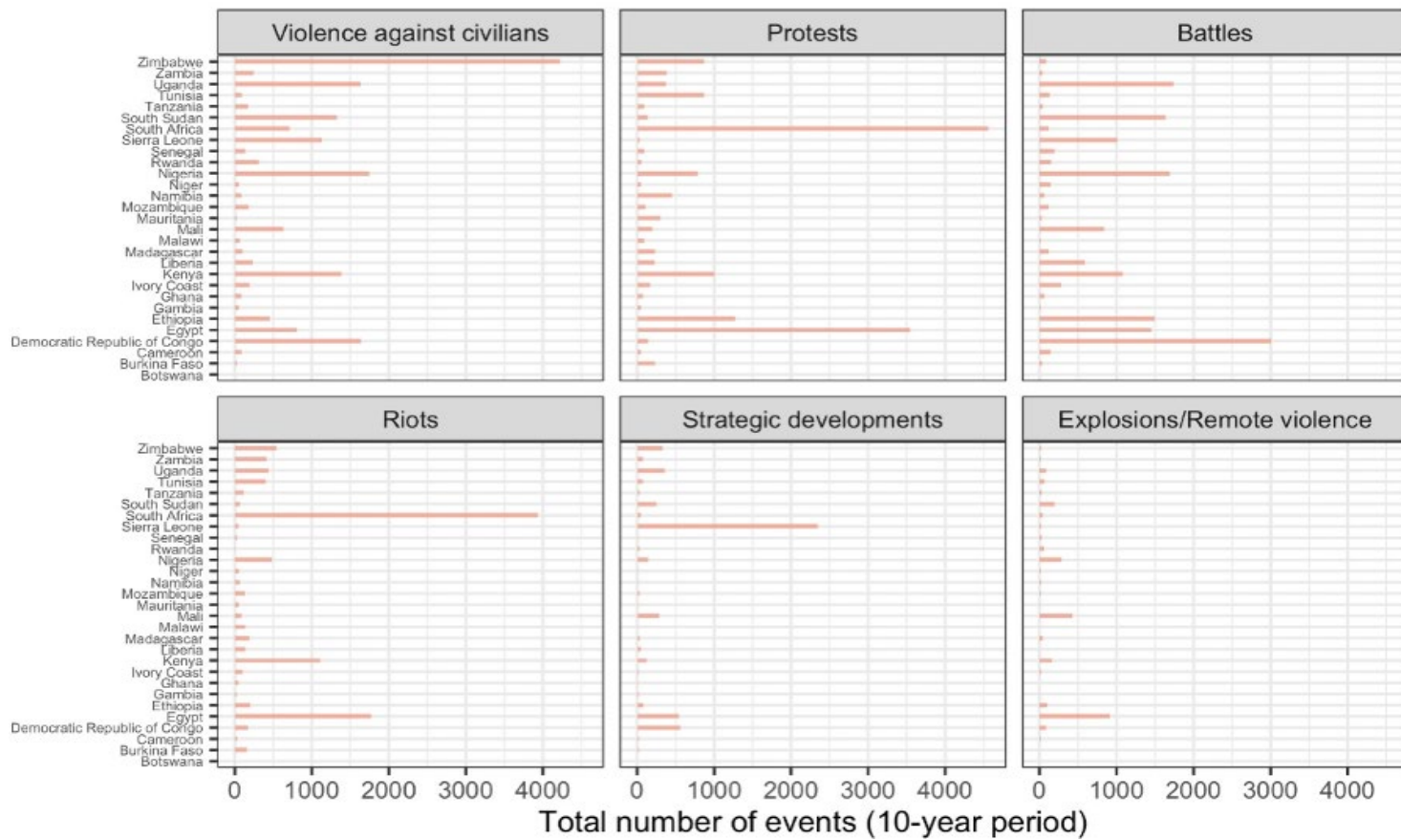


Share of female participation in agriculture
(among economically active women)

Mozambique and Rwanda: > 60 percent

Egypt and Tunisia: < 20 percent

Spatial variation in conflict intensity and type



Econometric specification

- We estimate **linear fixed-effect models** of employment outcomes at the individual level:

$$Y_{ict} = X_{ict} \beta_0 + Conflict_{ct} \beta_1 + Female_i \beta_2 + Conflict_{ct} \times Female_i \beta_3 + n_c + m_t + \varepsilon_{ict}$$

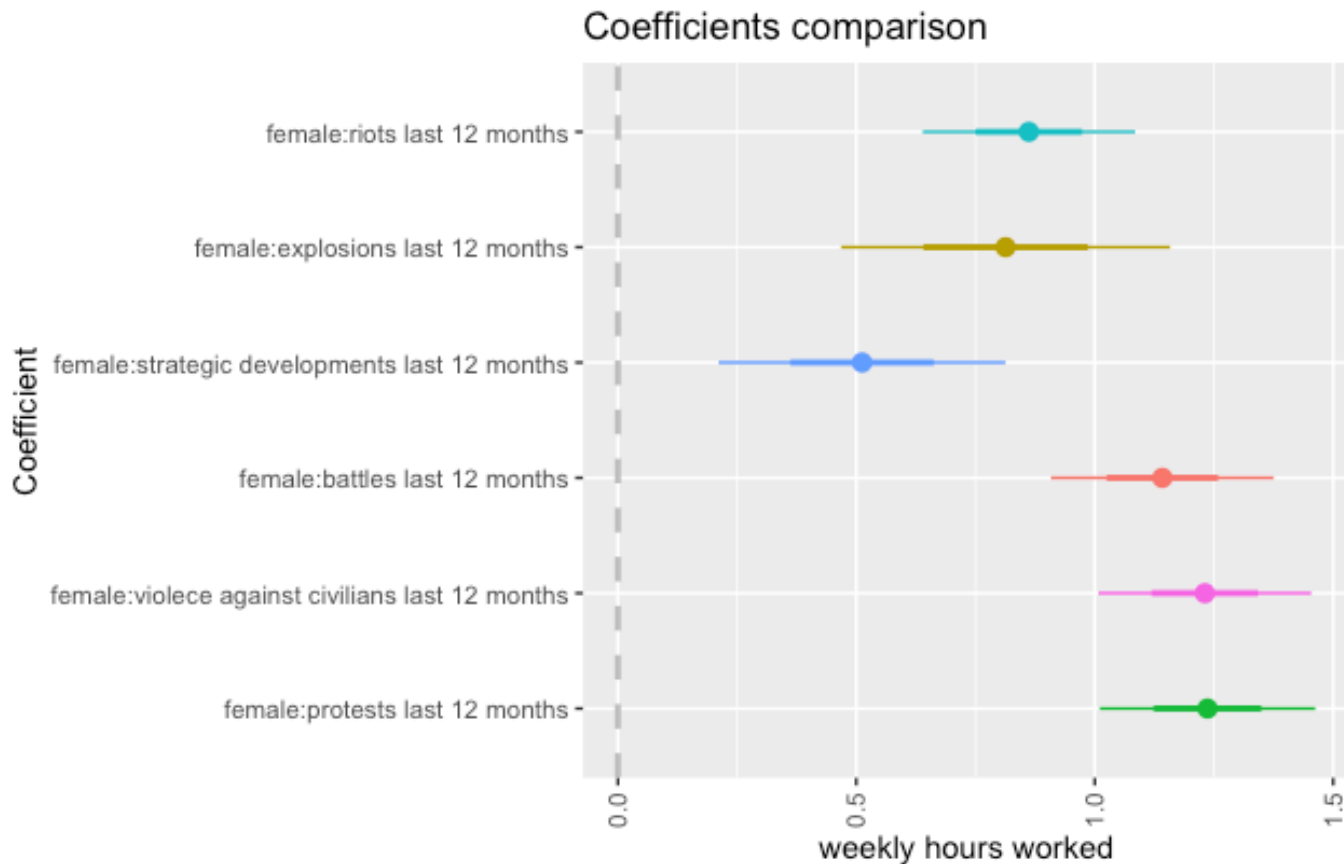
- ✓ Armed conflict is mostly an **aggregate** phenomenon
- ✓ Local conflict intensity is **plausibly exogenous** to individual-level economic choices
- ✓ Specification mitigates concerns of **reverse causality**, but further research is needed

Impacts on labour participation/ intensity and income

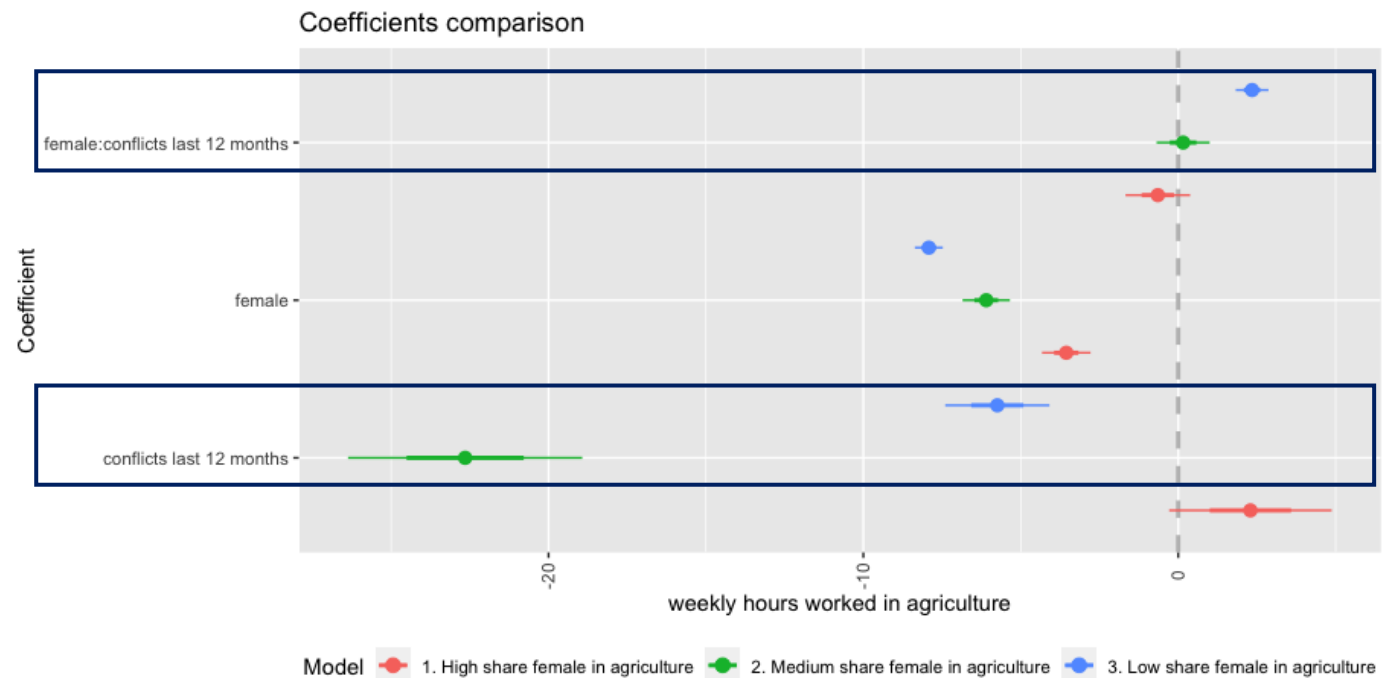
outcome	conflict	female	conflict*female
labor force participation	n.s.	-	-
hours worked total (in labor force)	-	-	+
hours worked in agriculture (in labor force)	-	-	+
hours worked in industry (in labor force)	-	-	+
hours worked in services (in labor force)	-	-	+
in agriculture	+	+	+
earned income in USD per month (in labor force)	n.s.	-	-

- Weak overall effect on participation
- Female farmers mitigate the effect, although only marginally (coefficient very small)
- Strong reduction in hours worked across sectors, esp. for men
- Substantial increase in agricultural work, esp. for women
- Sizeable increase in gender gap in income

Hours worked: low heterogeneity across events type

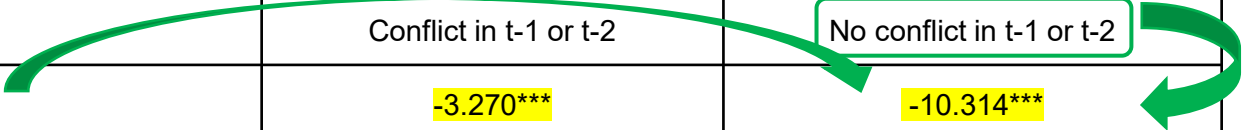


Hours worked: main results driven by areas with low/ medium female participation in agriculture



Hours worked: impacts three years later stronger when NO conflict ensues

	Total hours worked (in labor force)	
	(1)	(2)
	Conflict in t-1 or t-2	No conflict in t-1 or t-2
Conflict t-3 (24-36 months ago)	-3.270*** (1.054)	-10.314*** (1.073)
Female	yes	yes
Conflict t-3 x Female	yes	yes
Individual controls	yes	yes
Year fixed effects	yes	yes
Location fixed effects	yes	yes
# observations	314,178	47,423



Main findings

Overall, local conflict exposure:

- bears **little effect** on the likelihood of participating in the labour force
- **reduces** hours worked
- **increases** engagement in agriculture

by gender:

- **reduces the number of hours worked by men** more than by women
- **increases agricultural activity of women** more than men
- **causes a drop in income** much stronger among **women**

across time and conflict typologies:

- bears **strong impacts three years after** conflict exposure when there's no conflict in-between
- has **much weaker impacts three years later** when conflict continued
- yields qualitatively **similar impacts across conflict event types**, largest for explosions

Conclusions

Our results confirm previous findings on:

- Gender gaps in labour market outcomes in developing countries
- Worsening of economic outcomes in conflict situations

Conflict has particularly detrimental economic implications for women due to:

- Shift towards activities with relatively low monetary returns, primarily agriculture
- Increase in economic gender gaps

More generally:

- Labour markets absorb shocks and adapt to conflict
- Effects of conflict events more towards labour time re-allocation than abandoning economic activities
- Rain-fed agriculture appears to play a key role on conflict impacts in Africa