

Natural Disasters, Asymmetric Exposure, and War: Why Empirical Evidence on Climate Conflict Is Mixed

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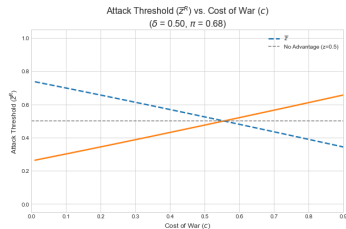
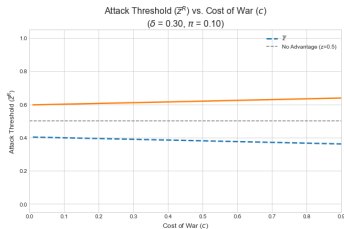
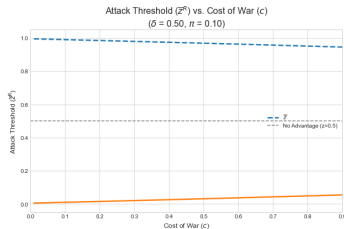
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Recap

- Existing empirical evidence → mixed effect of disasters on the risk of conflict → the effect of disasters is **heterogeneous**
- This paper proposes two ways to a conflict
 - **Opportunistic War**: When the disaster hits one group harder, the advantaged group attacks *after* the disaster ⇒ **Positive disaster-conflict correlation**
 - **Preemptive War**: When a group is consistently more vulnerable, in anticipation of the future weakness it attacks *before* a disaster ⇒ **Negative disaster-conflict correlation**
- Core Takeaway 1: In both cases, the **asymmetry of resilience** to disasters drives conflict
- Core Takeaway 2: Overlooking the preemptive case leads researchers to potentially underestimate the true conflict-inducing effect of climate change

Suggestions: Theory

- I really like the model!
- Comparative statics analysis to strengthen policy predictions
 - E.g., cost of war, patience, lower prob. of disaster decrease prob. of a conflict



- Two types of eq: R (when symmetric) and E (when asymmetric). Should be possible to empirically verify that R (interaction under symmetry) is *more peaceful*
- Given point re climate change effect on war outbreak, can check impact of π on war
- When both R and E possible, which one should we expect? Does the weaker player prefers R or E from the ex-ante perspective?

Major Comments: Empirics 1

- gov_{dt} as a proxy for μ does a lot of heavy lifting
 - $gov_{dt} = 1$ if one of the belligerents is a state
 - $PSDI_{dt}$ measures water abundance at the battlefield
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- *Alternative explanation 1*: areas with abundant water are scarce \rightarrow the state is more likely to control this areas \rightarrow if a conflict takes place in an abundant water **area** it is more likely to involve a state
- *Suggestions*: (1) use water abund. for the whole entity as a confounder; (2) use historical exposure to disasters or Δ of economic recovery post-disaster in actors as proxy for μ

Major Comments: Empirics 1

- *Alternative explanation 2:* Assume a rebel group suffers a drought (low PDSI) → they attack a government-controlled fertile area with abundant water (very high PDSI) to seize food and supplies (that would also explain positive corr with distance to the capital)
- The battle is recorded with a high PDSI score → the current model suggests this as a conflict during “good times” (preemptive war story)
- In reality, the conflict was directly caused by the “bad times” (resource competition story)
- *Suggestions:* (1) use PDSI at the capital/center of a state-less entity as a proxy for vulnerability to a disaster (2) use location of a battle (inside/not inside a state)

Major Comments: Empirics 2

- Salehyan and Hendrix (2014): water scarcity → less resources to carry war → less conflict when scarcity (negative correlation between disaster and conflict)
- This paper: asymmetry of resilience to disaster + expected water scarcity = future vulnerability → conflict when **no** scarcity (negative corr between disaster and conflict)
- **Both** can produce a negative correlation between a disaster event and conflict. Sawada's preemptive model is critically dependent on the assumption of asymmetric resilience
- Is this assumption justified in the S&H context? S&H argue that no – they focus on intrastate conflict means belligerents operate within the same national ecosystem
- *Suggestion*: argument re unit of observation was not clear (to engage in conflict, belligerents must be close enough to fight) → measure of speed of recovery?

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- A state is larger than a rebel group
- → State has higher exposure to a disaster
- Can still be consistent with preemptive war story! *Suggestions:* use conflict-initiator confounder, interact with PDSI

More Minor Comments: Empirics

- The paper's relies on predictability of disasters → PDSI measures a soil moisture → it does not contain information about the predictability of the anomaly (*Suggestions*: use coefficient of correlation or seasonality)
- In the theory part actors fight preemptive war to suppress future conflict → do we have data confirming these conflicts become less prevalent after preemptive wars (fought during high PDSI times?)