Extreme Weather, Shocks, and Socioeconomic Impacts

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Temperature and Precipitation Extremes and Labor Supply in Central Africa, *Vladimir Hlasny*

- Clarification on the empirical approach
  - Specify the functional form of temperature and rainfall.
  - Highlight what variation remains after controlling for fixed effects, covariates, and trends.

- Mechanisms to explore
  - Intra-day vs inter-day adjustments: Do workers shift hours within a day or compensate on subsequent days?
  - Household resilience: Examine characteristics like wealth, access to savings, or education that buffer against shocks.

- Further disaggregation
  - Occupation categories: Disaggregate high-risk sectors (e.g., rain-fed agriculture, fishing, construction) for more nuanced insights.
  - Timing and crop cycles: the timing of extreme weather events relative to the agricultural calendar is likely a critical factor. Shocks occurring during planting, growing, or harvesting phases may have different impacts on labor outcomes. Incorporating data on crop cycles or using lagged weather variables.

Rainfall Shocks and Intra-Annual Food Insecurity in Uganda: Insights from a High-Frequency Phone Survey, *Chris M Boyd*

- Lagged impacts of rainfall shocks
  - Full effects of droughts may take months to appear, as reduced crop yields and income losses ripple through local economies.

- Sensitivity of the results :
  - Explore alternative drought and flood measures.
  - NDVI, soil moisture, or SPEI provide more precise and consistent results across specifications and livelihood zones compared to total seasonal rainfall in sub-Saharan Africa (Gascoigne et al., 2024).
    - Gascoigne, J., Baquie, S., Vinha, K. P., Skoufias, E., Calcutt, E. I. N.; Kshirsagar, V. S., Meenan, C., Hill, R. (2024). The Welfare Cost of Drought in Sub-Saharan Africa. Policy Research working paper WPS 10683; PLANET Washington, D.C.: World Bank Group.

- COVID effects:
  - Month-year fixed effects may not fully capture COVID-19's heterogeneous impacts.
  - Regional variations in lockdowns, mobility restrictions, and market disruptions may have interacted with rainfall shocks, influencing food insecurity outcomes.

Nowcasting Shocks to Human Capital, *Elizabeth Tennant*

- Food security:
  - Food security in rural Malawi is highly dependent on rainfall, temperature, and soil moisture, which directly affect agricultural productivity
  - Remote-sensing data effectively captures these variables, making food security a bit more predictable

- Illness and schooling disruptions:
  - Factors like healthcare access, infrastructure, and household dynamics play a big role but are harder to capture with remote-sensing data alone.
  - Hybrid approaches could improve predictions by integrating geospatial data with granular, community-level indicators (e.g., distance to healthcare facilities, schools, water and hygiene infrastructure).

- Future work:
  - Explore the applicability of this approach across different settings: urban vs rural areas, regions with varying data infrastructure
  - While this paper focuses on human capital, could this approach be better suited to other outcomes where its strengths might be more effectively leveraged?

The Impact of Mobile Money Levies on Household Coping Strategies in Tanzania, *Revocatus Paul*

- Timeline
  - Given the complexity of the empirical strategy—spanning multiple survey years, policy timing, and outcome measurements—it would be helpful to include a clear timeline of events and data collection periods.

- Parallel trend assumption:
  - The timing of the policy during the pandemic raises some concerns about the assumption.
  - Urban and rural households likely experienced different pandemic-related shocks (e.g., stricter lockdowns in urban areas, income loss, and market access disruptions), which could have influenced food security outcomes independently of the levy.

- Behavioral adjustments:
  - While the share of households using mobile money may not have declined, households may have adjusted their behavioral patterns, such as reducing the size or frequency of transactions to save on transaction fees or bunching transactions at critical thresholds to minimize costs.
  - Further analysis could explore:
    - Differences in transaction size between rural and urban households
    - Changes in cost structures or shifts in mobile money use (e.g., sending/receiving money, buying airtime, storing/saving)?