

Resilience capacity and food security in post-conflict northern Ethiopia: Baseline evidence from Tigray and Afar

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1 Background

- Post-conflict northern Ethiopia: Tigray's 2020–22 war and drought, with pastoral Afar on the same front.
- Regreening Africa II invest in agroforestry to build the resilience capacity expected to buffer food security against shocks.
- Is higher capacity linked to smaller food-security losses when shocks hit — and does it differ by shock type?
- Does the pattern hold across highland crop (Tigray) and pastoral lowland (Afar) systems?

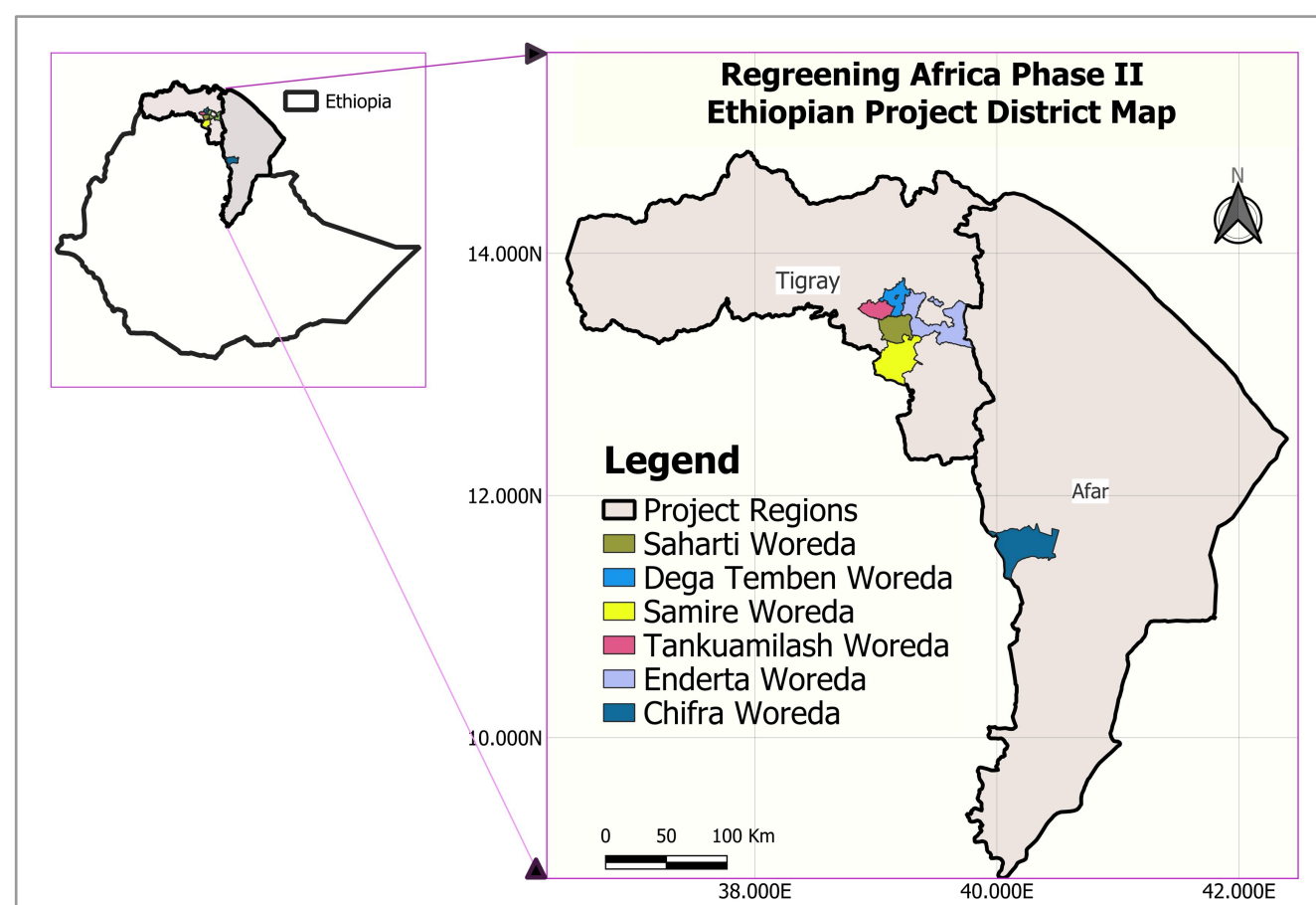


Fig. 1: Regreening Africa II Ethiopia program sites and restoration intervention areas.

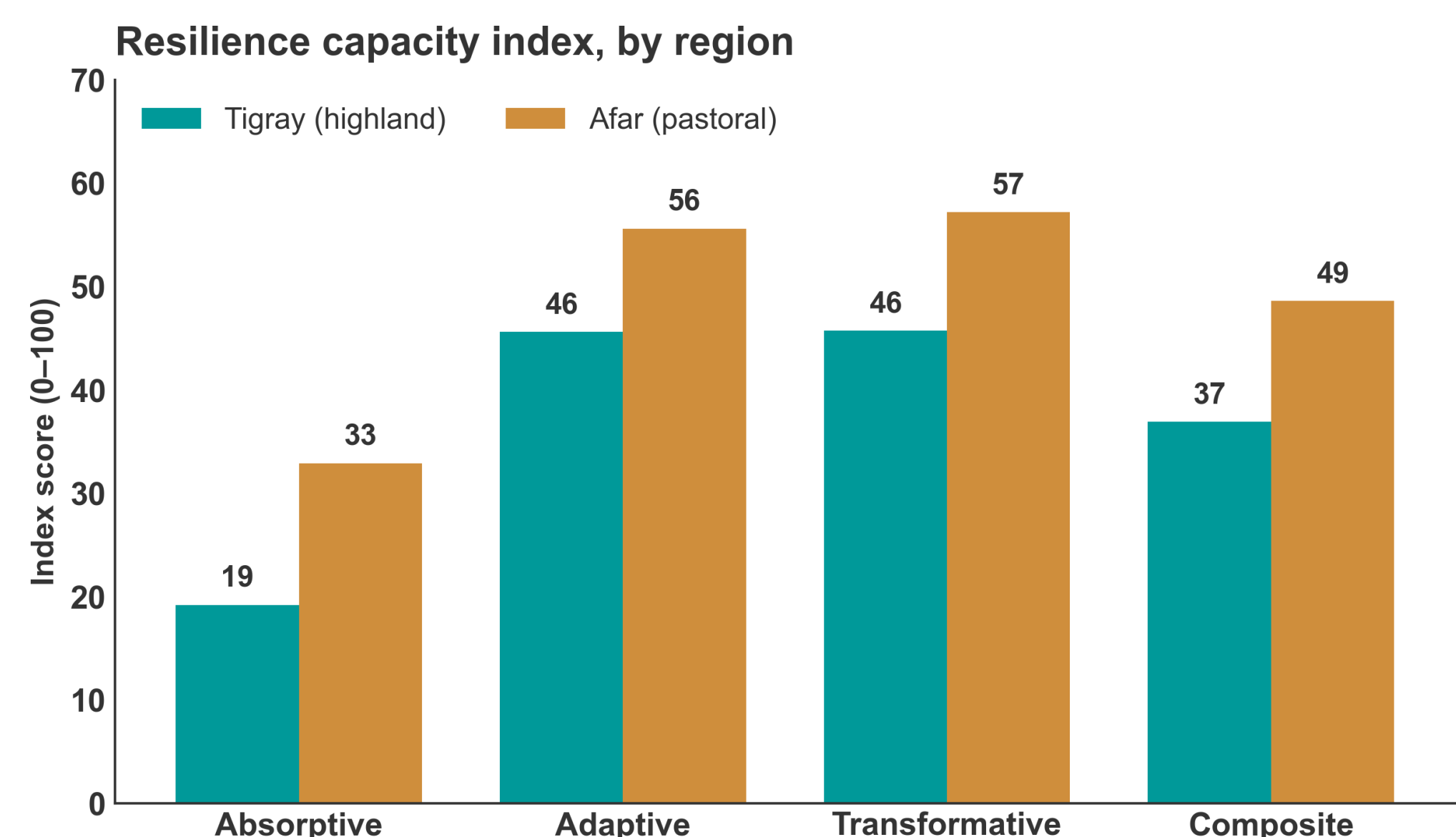


2 Methods and Data

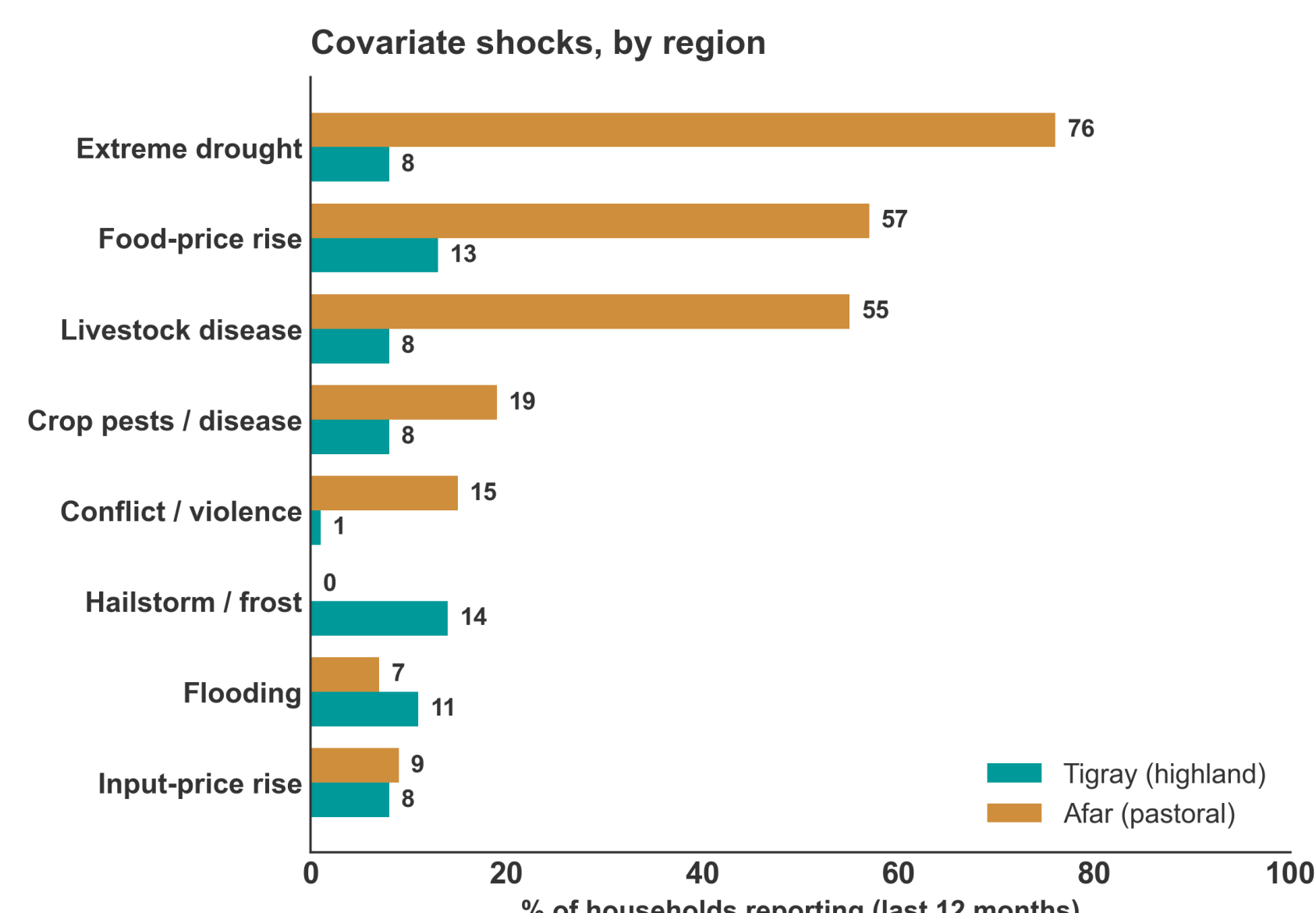
- Data:** Household survey (905 Tigray & 100 Afar → pooled 1,005), conducted Oct–Dec 2025.
- Measures:** Resilience Capacity Index (absorptive, adaptive, transformative) from survey items (Constas et al., 2024); pooled-factor composite primary. The outcome variables are FIES & HDDS; covariate vs. idiosyncratic shocks.
- Models:** OLS with kebele fixed effects and clustered SEs; a shock × capacity interaction is our key variable. Results are associational, not causal.

3 Results

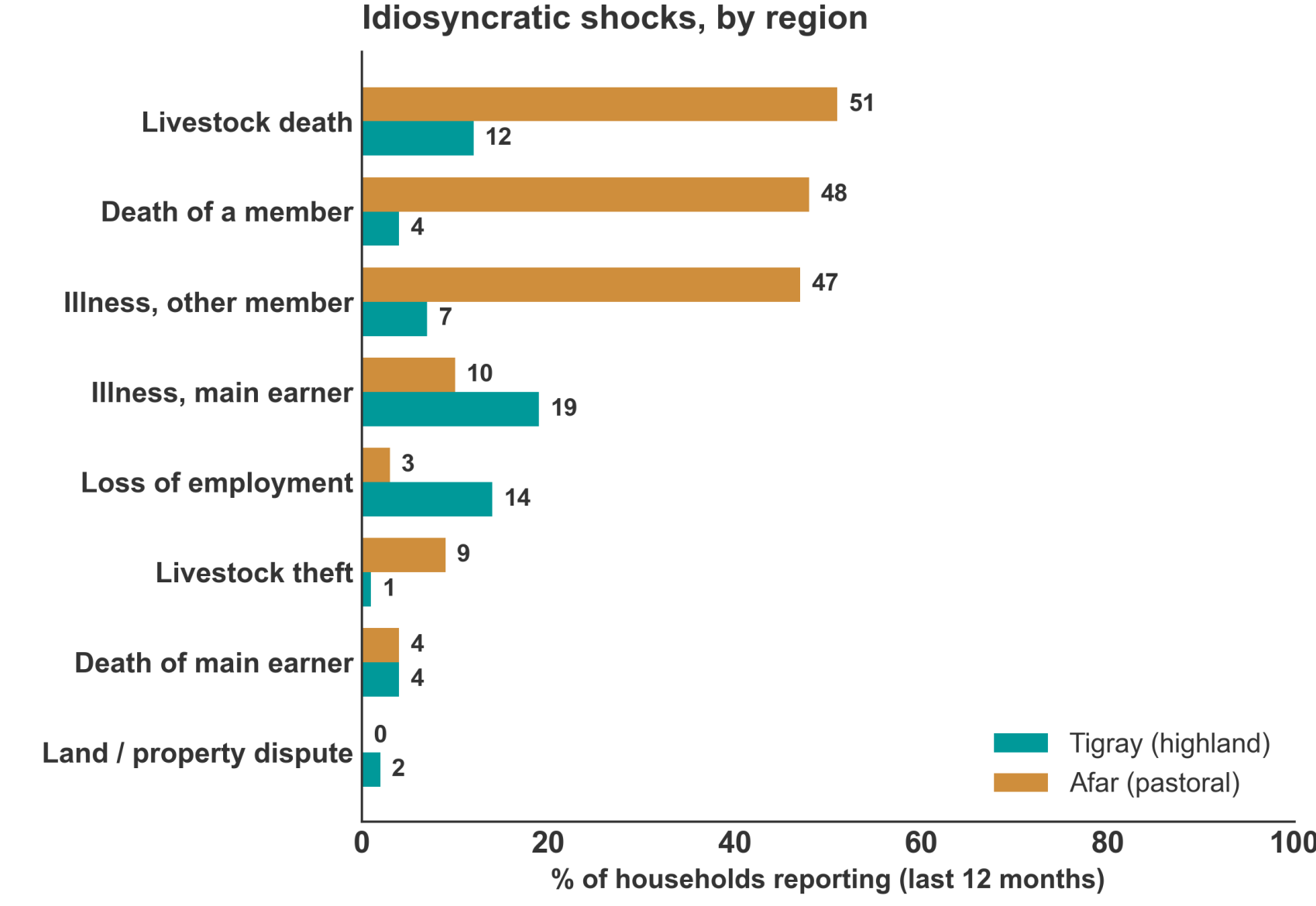
a. Highland vs. pastoral: capacity and food security



Afar scores higher on every capacity pillar, yet reaches the same low food security as Tigray.



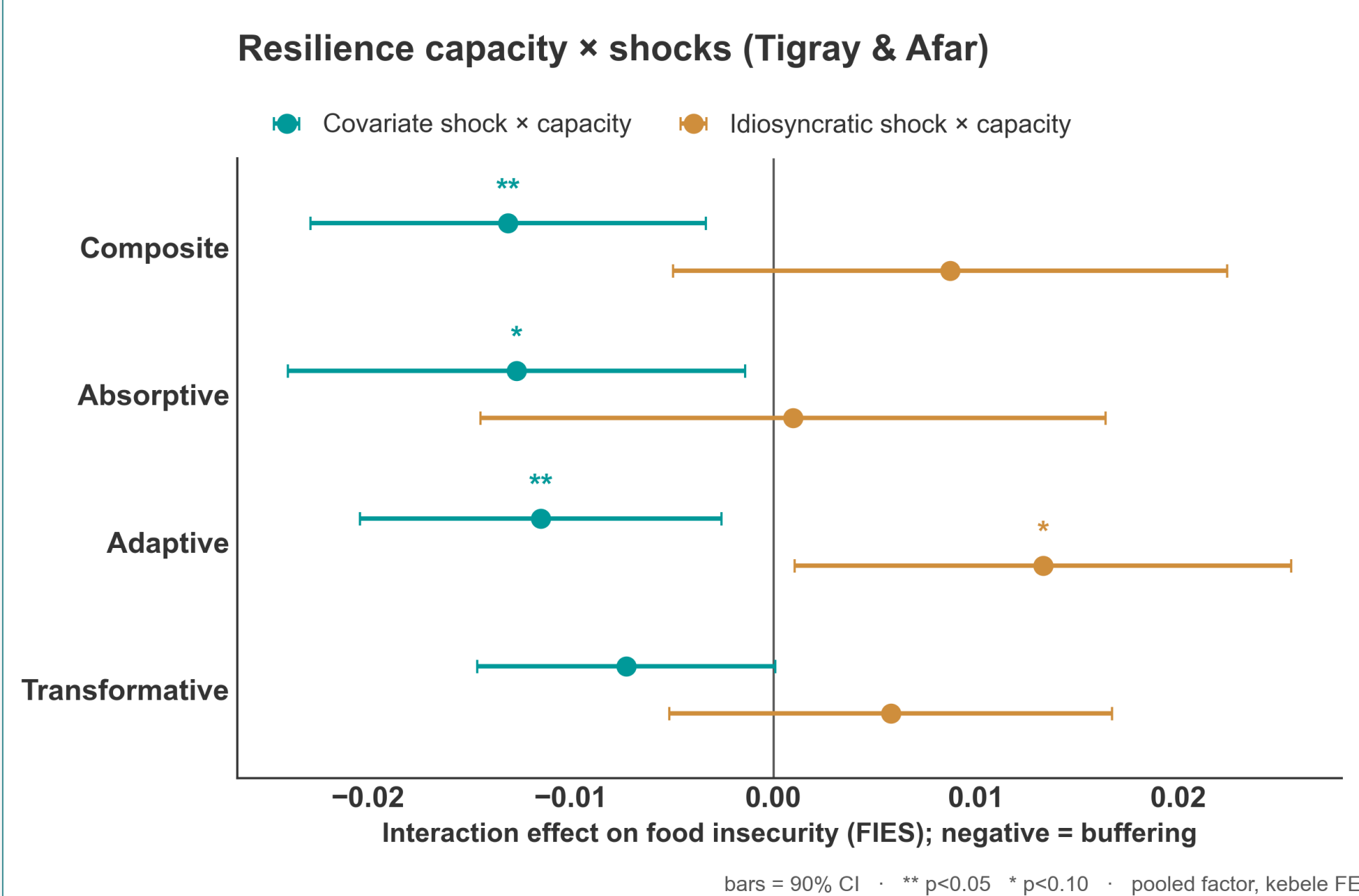
Afar reports ~3× the shocks and ~9× the livestock; covariate shocks (drought, price, disease) hit it far harder.



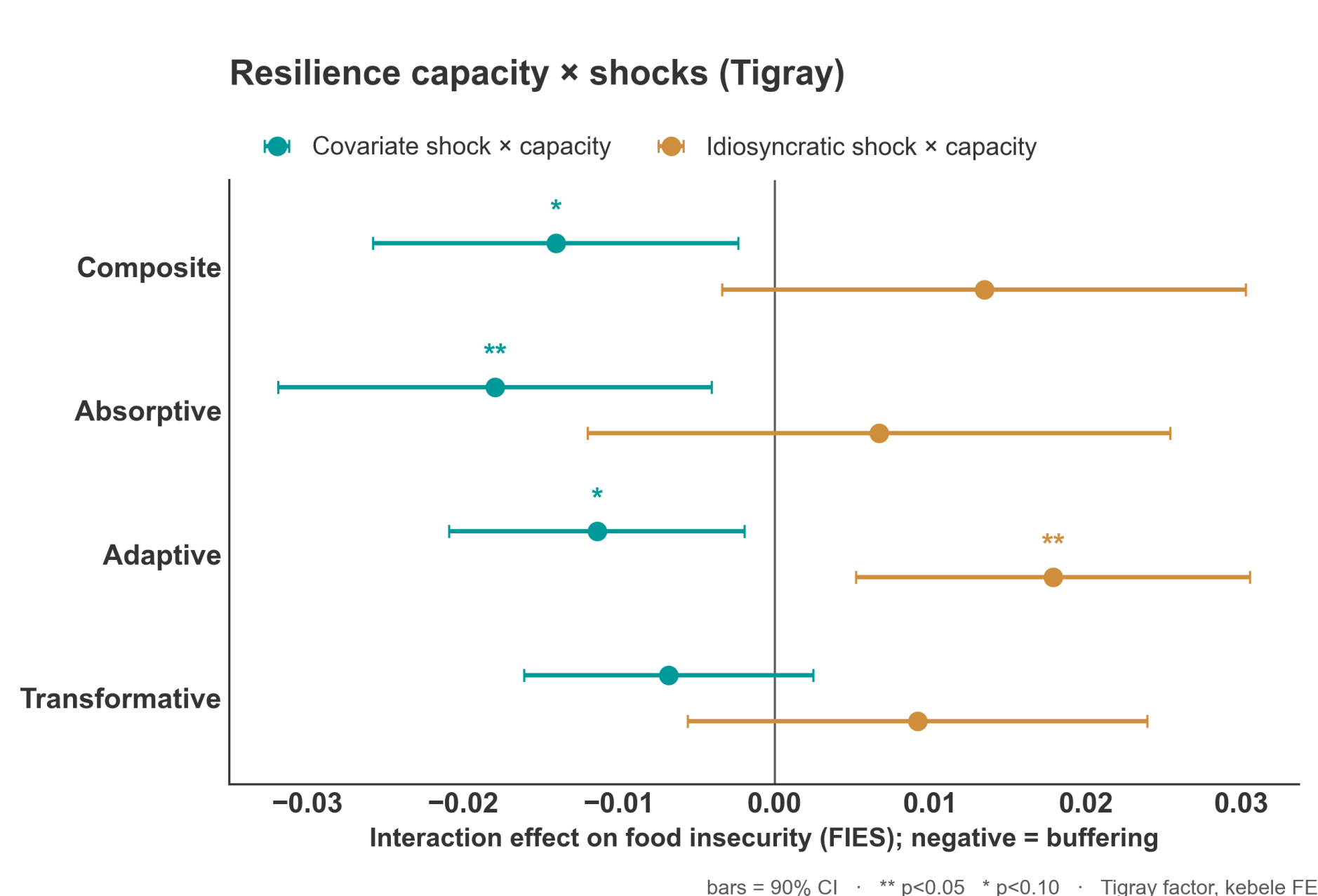
Household-specific shocks (livestock death, illness) are also heavier in Afar.

Baseline snapshot: · Mean FIES is 6 Tigray and 5.5 in Afar. 86% of Tigray households are moderately food-insecure · HDDS averages ~ 4 of 12 food groups · both regions face severe, recurrent shocks

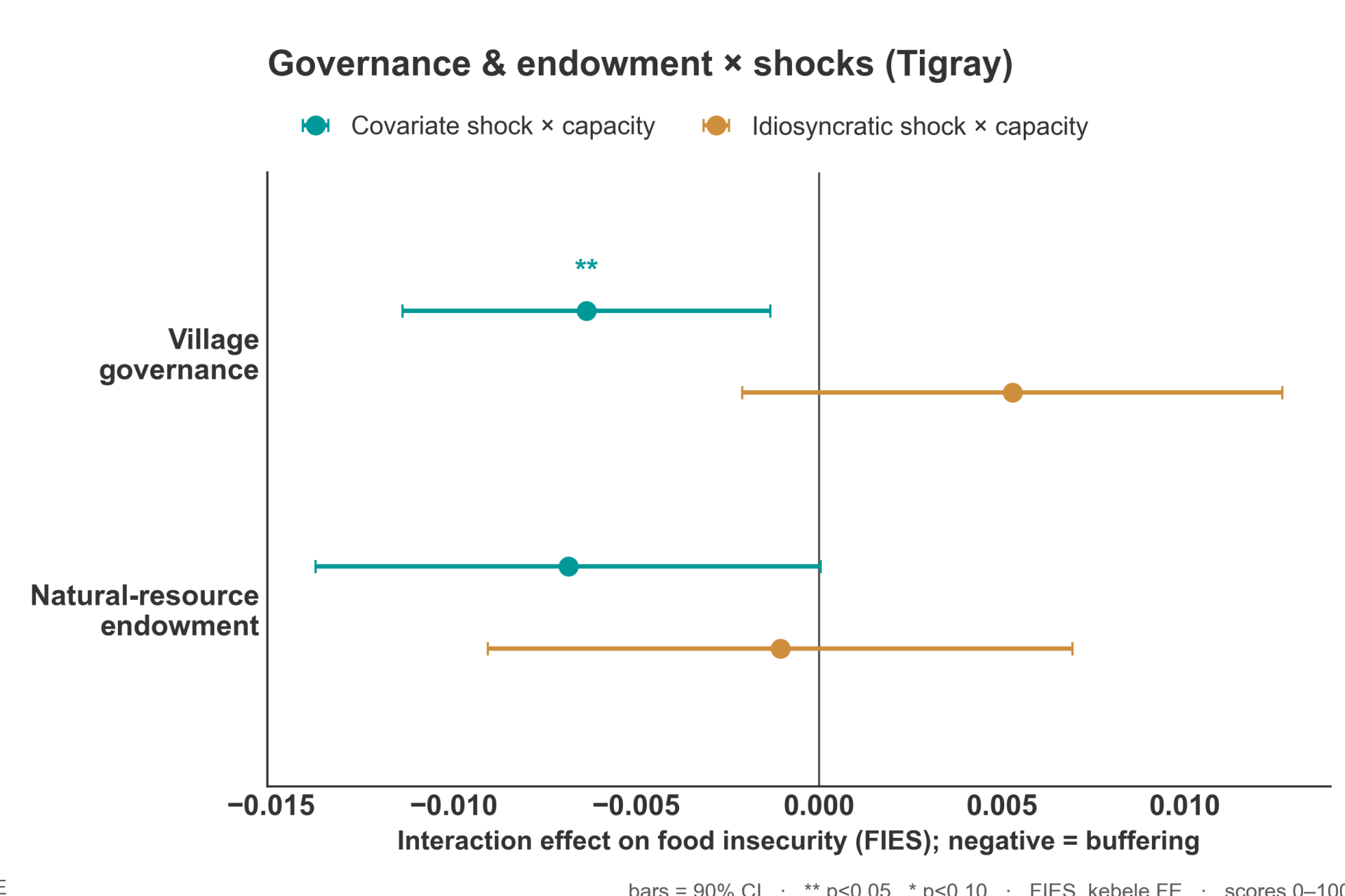
b. Does resilience capacity buffer shocks?



Higher capacity dampens covariate shocks (composite, adaptive), not household-specific ones.



The same buffering holds in the Tigray design sample alone, with Afar excluded.



Governance drives the buffering; natural-resource endowment points the same way but not statistically significant.

FIES = Food Insecurity Experience Scale · HDDS = Household Dietary Diversity Score · RCI = Resilience Capacity Index · FE = fixed effects

4 So what? Conclusions and implications

- Afar's higher capacity did not yield better food security — markets and safety nets matter too.
- Invest in local governance and agency, not only structures or practices
- Governance buffers covariate shocks; at the personal level, a sense of control over one's future matters most.
- Natural-resource safety nets appear to act as insurance substitutes – to be confirmed at midline and endline.