

Does Agriculture Extension Make Farmers Resilient to Climate Shocks? Evidence from Maize Production in Malawi

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Abstract

Climate shocks are increasingly becoming recurrent, and their negative impacts continue to worsen over time. This is posing significant challenges for growth and long-term poverty eradication in developing countries. In Malawi, where the agriculture sector is the worst hit by climate shocks, significant amounts of resources have been spent on humanitarian interventions and recovery. Studies have highlighted the role of agriculture extension as one of the key drivers of climate adaptation. However, to the best of my knowledge, previous studies did not examine whether farmers accessing extension service become resilient to climate shocks. Additionally, the effect of extension by different climate adaptation messages and extension agents has never been understood empirically. Focusing on non-targeted demand driven extension services, I contribute in bridging this knowledge gap in previous studies. My study is set in the context of unprecedented food scarcity prompted by drought and dry spells in the 2014/2015 growing season. My identification strategy borders on exploitation of the randomness this episode, together with variations in access to extension, induced by existing challenges in the extension system in Malawi. Despite lack of a good instrument, the size of selection on observables and stability of OLS estimates to different sets of controls is fairly robust. Overall, I find no evidence of association between agriculture extension and climate shock resilience amongst maize growers in Malawi. However, I find strong positive association between compost making extension messages as well as digital extension sources and climate resilience. The study reveals that digital extension platforms have great potential in accelerating climate adaptation amidst limited capacity for contact and reach approaches. The findings further suggest that building agriculture resilience through extension requires adequate technical capacity and holistic approaches, centered on building productive assets amongst vulnerable farming communities.