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Government Decentralization Under Changing State Capacity: Experimental Evidence from Paraguay

Standard models of delegation assume that agents are better informed than principals about how to implement a particular task. We estimate the value of the informational advantage held by supervisors (the agents) when ministerial leadership (the principal) introduced a new monitoring technology aimed at improving the performance of agricultural extension agents (AEAs) in rural Paraguay. Our approach employs a novel experimental design in which, before randomization of treatment, we first elicited from supervisors which AEAs they believed should be prioritized for treatment. We semi-parametrically estimate marginal treatment effects (MTEs) and perform counterfactual exercises varying the principal's allocation rule and access to information. We find that supervisors did have valuable information—they prioritized AEAs who would be more responsive to the monitoring treatment. The AEAs' responsiveness is not easily observable to principals or analysts. We show both theoretically and empirically that the value of information and the benefits to decentralizing depend crucially on the sophistication of the principal and on the scale of rollout (i.e. the share of AEAs to receive treatment). When the principal is uninformed, decentralization usually dominates. A partially informed principal with data on basic observable AEA characteristics can outdo supervisors. The principal's advantage is largest if he can conduct a pilot RCT and subsequently expand roll-out based on predicted response to treatment. These results highlight the potential for evolving state capabilities for data analysis to alter government structure.

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