Social Structure and the Localized Delivery of Development Interventions

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There has been a dramatic rise in the local delivery model for interventions in developing countries over the past few decades. This model is leveraged off hiring local individuals, who then serve as key intermediaries through which development interventions are targeted to potential beneficiaries. We study the local delivery model in the context of an agricultural extension intervention in rural Uganda, where positively selected local delivery agents ('lead farmers') are tasked to target needy farmers in their community, providing them improved seeds and training. We study how the targeting behavior of these locally hired agents is impacted by the social structure of the community from which they are recruited and deliver the intervention to. We focus on two aspects of social structure: vertical ties of friendship across the social hierarchy between the delivery agent and regular farmers, and horizontal ties of rivalry, between the actual delivery agent and a counterfactual delivery agent. We implement a two stage randomization design, across and within communities, that identifies a counterfactual delivery agent, allowing us to estimate how vertical and horizontal ties influence targeting behavior within treated communities. Our findings reveal a basic tension at the heart of the local delivery model: delivery agents are induced to exert effort to target more farmers when there is a rivalry between themselves and the counterfactual delivery agent. Such rivalries can be leveraged to increase coverage of farmers in the community. However, when exerting more effort in this scenario, delivery agents are more likely to target non-needy farmers. This goes against the pro-poor intentions of the intervention, and we show leads to a potential output loss of 20-26% of the total gains of the intervention, with subsequent calculated impacts on economic welfare. We examine explanations for why the rivalry between the actual and counterfactual delivery agent matters (especially given that the counterfactual agent has no formal role in the intervention). We discuss the implications of our findings for the broader design of the local delivery model, including recognizing that the social structure of communities can help explain why the same intervention works in some communities and not in others.