

Policy Brief

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What determines cooperation in farmer clubs?

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Community-driven development (CDD), which incorporates local management and input in program design and implementation, is prominent in the development strategy of many organizations. Successful CDD programs are demand-responsive, accountable, and transparent; empowered poor men and women identify and address local problems in a cost-effective and sustainable manner. Farmer clubs - which can range anywhere between loosely organized informal village groups and legally constituted cooperatives - have come to play a central role in CDD rural development strategies in the developing world and are the cornerstone in the conduit of many projects aiming to engage smallholder farmers. The success of farmer-club based CDD programs however crucially depends on the successful cooperation between members of the club. In this brief we present the result of a study in which we interviewed 87 farmer clubs in rural Malawi to shed light the factors that explain such cooperative behavior.

This is a brief describing a study conducted as part of the evaluation of Clinton Development Initiative's (CDI) Anchor Farm Program in Malawi. Farmer clubs are increasingly popular as a policy tool because they can take advantage of local information and coordination capacities, through community social networks, in implementing development programs. Success of such initiatives, however, crucially depends on the successful cooperation between members of the club. For instance, imagine that a farmer club is asked to manage a demonstration plot, showcasing new crops and agricultural techniques throughout the growing season. The success of such a plot depends on the efforts each member puts in: planting, weeding, irrigating, etc. However, each member might be inclined to limit his/her effort knowing that the fruits of his efforts, in this case the knowledge generated, will be shared among all members. The free-riding problem, common to all situations in which individuals are asked to contribute to a public good can lead to program failure and collapse.

The purpose of this study is to gain an increased understanding of how farmer clubs function and specifically asks about factors that improve cooperation within farmer clubs. We do this by analysing outcomes associated with a public goods contribution experiment, a popular experiment developed by economists to measure cooperation in groups, to obtain a better understanding of how policy-makers can best encourage cooperation among farmers through these decentralized approaches.

SETTING AND SAMPLE

CDI forms farmer clubs and links them to an Anchor Farm for the purpose of increasing market access and diffusing information regarding ISFM and soy technologies.

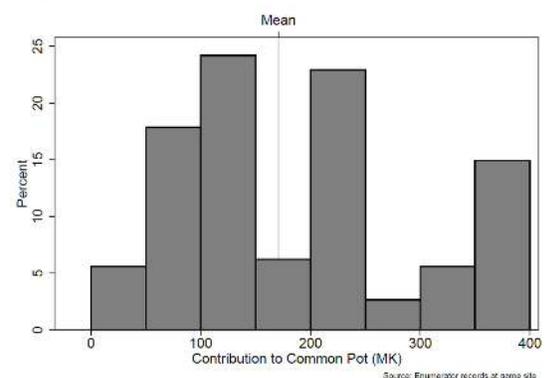
Together with CDI, we invited 125 villages in central Malawi to form farmer clubs. These clubs selected a (i) chairperson to convene the group,

set the agenda, and schedule for group activities, (ii) a lead farmer to serve as the main liaison between the club and CDI for the purpose of information diffusion, (iii) a treasurer to manage club funds, and (iv) a secretary to keep records of club activities. In total, 87 villages formed farmer clubs with over total 1,400 members.¹

PUBLIC GOODS EXPERIMENT

Club members were invited to participate in an experiment. In this experiment, he/she was given 400 Malawian Kwacha (\$1 USD at the time) and asked to divide this amount into two envelopes. The money placed in an envelope labelled "individual" was his/hers to keep while the money placed in an envelope labelled "common" was multiplied by two and shared with the club. The decision as to how much to contribute to each envelope was made in private. Figure 1 shows the distribution of the contributions to the common envelope.

Figure 1: Distribution of Club Contributions



Highlights

We interviewed 87 Farmer Clubs in Central Malawi with the goal of establishing which factors lead to greater cooperation within the clubs

- Clubs that use a democratic (participatory) mode of decision-making display higher levels of cooperation
- Clubs that use a democratic (participatory) mode of decision-making can harness extant levels of social capital towards higher cooperation
- The optimal clubs size is 12 members
- Policy-makers working with farmer clubs will want to pay attention to, and help guide, the internal functioning of these clubs in order to obtain higher levels of cooperation.

¹ In our research we show that chairpersons are indeed more "approachable" than the average club member, lead farmers are more likely to "advise" people in farming practices, and treasurers are more likely to be "trusted" with a valuable object.

What determines cooperation in farmer clubs?

In this experiment, non-cooperative individuals would retain all 400 MK while cooperative individuals would contribute all 400 MK to the common envelope. Figure 1 shows that most individuals are cooperative to a certain degree (only 5% is classified as non-cooperative).

HOW DO CLUBS MAKE DECISIONS?

Data collected during a household survey unveils the decision-making process employed by the clubs. Half of the clubs state that most club decisions are made in a democratic (participatory) manner through discussions with all the members of the club while the other half state that club decisions are made by club leaders. We exploit the variation in these decision-making processes to understand the extent to which the process employed by the club influences cooperation in the public goods game.

RESULTS

In Table 1, we regress (average) club-level contributions (to the common envelope) against club and village level variables to understand factors driving cooperation.

Table 1: Decision-Making Regimes and Cooperation

	(1)	(2)
Participatory	0.13** (0.06)	0.14** (0.06)
Social Connectivity	-0.034 (0.04)	-0.11** (0.05)
Participatory × Social Connectivity		0.14** (0.06)
Constant	0.82** (0.38)	0.92** (0.37)
Club Vars	Yes	Yes
Village Vars	Yes	Yes
Adj. R-squared	0.34	0.40
N	69	69

Robust standard errors. Dependent variable equals the average percent of the game endowment contributed by club. Club-level controls include the number of members, share of females, share whose spouse was present during the game, and the avg. and sd. of the following variables: age, education (yrs), acres of land owned (log), asset index, agricultural income. Village-level variables include share of males residing in the village, distance (km) from paved road, and the percent of the majority ethnic group.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

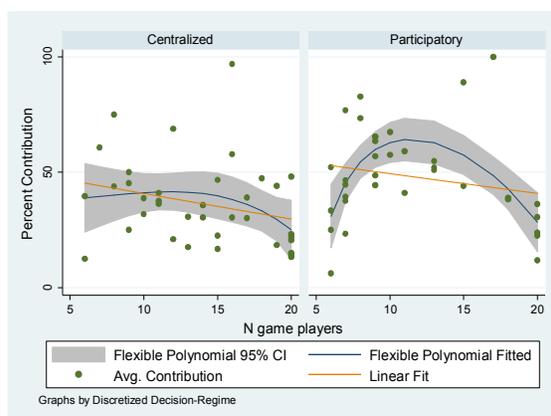
Results show that clubs employing participatory decision-making process contribute 13-14 percentage points more than more centralized clubs (First Row, Column 1).

In addition, we hypothesised that club cooperation depends on the extent of social connectivity, or trust in others, within the club. We construct a measure of social capital and include it as one of the independent variables in the regression. We find no effect of social capital on contributions (Second Row; Column 1). However, when we disaggregate this effect as per decision-

making process (in Column 2), we find that it is only the democratic (participatory) clubs who are able to harness strong social ties towards increased contributions.

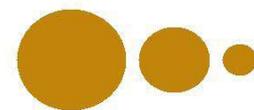
One reason why democratic (participatory) clubs do better than their centralised counterparts is that they do a better job implementing choices which reflect the opinions and preferences of all. One would expect this to be especially the case if the clubs are not too large (as coming to an agreement with too many people might be difficult). In Figure 2, we plot the average club-level contribution (as a percent of the 400 MK). We see that larger clubs contribute less on average. However, there is an inverse U-shaped relationship between club size and democratic (participatory) decision-making process – with an optimal size of between 11 and 12 members (Right panel of Figure 2). Thus, the ideal club size is largely dependent on the process in which the club comes to collective decisions.

Figure 2: Contributions and Club Size



RECOMMENDATIONS

Practitioners working with farmer clubs will want to pay attention to, and help guide, the internal functioning of these clubs in order to obtain higher levels of within-club cooperation. In particular, democratic (participatory) decision-making processes should be encouraged. In addition, if feasible on the cost-side, practitioners might want to limit the group size to less than 15 members.



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