

# Outside Funding and the Dynamics of Participation in Community Associations

**Mary Kay Gugerty** University of Washington  
**Michael Kremer** Harvard University

*The poor and disadvantaged are widely seen as having weak organizations and low rates of participation in community associations, impeding their political representation and economic advancement. Many policy initiatives aim to build civic participation among the disadvantaged by funding local community associations. Taking advantage of random assignment in a program supporting women's community associations in Kenya, we find little evidence that outside funding expanded organizational strength, but substantial evidence that funding changed group membership and leadership, weakening the role of the disadvantaged. The program led younger, more educated, and better-off women to enter the groups. New entrants, men, and more educated women assumed leadership positions. The departure of older women, the most socially marginalized demographic group, increased substantially. The results are generalized through a formal model showing how democratic decision making by existing members of community associations can generate long-run outcomes in which the poor and disadvantaged either do not belong to any associations or belong to weak organizations.*

The poor and disadvantaged have lower rates of participation in civic groups and community associations (Almond and Verba 1965; Ayala 2000; Verba, Schlozman, and Brady 1995). When the disadvantaged do participate in civic life, their organizations are often weak: Walzer writes that “It is a general rule of civil society that its strongest members get stronger. The weaker and poorer members are either unable to organize at all. . . or they form groups that reflect their weakness and poverty” (2002, 39). These phenomena are of concern because participation in community associations is widely seen as important for both economic and political development (Banfield 1958), for building civic skills needed for political engagement (Brady, Schlozman, and Verba 1995), and for contributing to trust and norms of reciprocity that foster collective action (Putnam 1993, 2000).

One policy response has been to fund community associations of the poor in a deliberate effort to build

civic and economic participation among the disadvantaged. Examples range from components of the Johnson-era War on Poverty to the recent emphasis in international development assistance on building organizations of the disadvantaged as a means to improve governance and development. There has been a marked increase in activity on this front: the share of World Bank projects with a community-based component increased from 2% in 1989 to 25% in 2003 (World Bank 2005), and the Bank began to stress the importance of building up organizations of the poor to help them negotiate with governments, traders, and NGOs (Wolfensohn 1999).

Some political scientists contend that such assistance could potentially empower the disadvantaged, for example by providing a means for articulating their interests to policymakers (Cohen and Rogers 1995; Warren 2001). Others are concerned that external funding could lead to a shift away from the horizontal, participatory, and egalitarian nature of the groups that many see as essential for

---

Mary Kay Gugerty is assistant professor of political science, Daniel J. Evans School of Public Affairs, University of Washington, Box 353055, Seattle, WA 98117 (gugerty@u.washington.edu). Michael Kremer is Gates Professor of Developing Societies, Harvard University, Littauer M-20, Cambridge, MA 02138 (mkremer@fas.harvard.edu).

The authors thank the Social Capital Initiative of the World Bank and the National Bureau of Economic Research for funding. We also thank the staff of ICS for their participation and support of this project, especially Chip Bury, Robert Namunyu, Moses Osia, and Sylvie Moulin. This article has benefited from research assistance from David Evans, Nava Ashraf, Stephen Barham, and Maria Gomez. We thank Ben Olken and Dan Wood for suggestions on the model. We thank David Evans, Archon Fung, Jennifer Hochschild, Jessica Leino, Malgosia Madajewicz, Edward Miguel, Aseem Prakash, and participants at conferences at the World Bank Research Department, Bureau for Research and Economic Analysis of Development (BREAD), and the Working Group on African Political Economy at UCLA for helpful comments.

*American Journal of Political Science*, Vol. 52, No. 3, July 2008, Pp. 585–602

their larger role in society. In particular, external assistance could lead to a move from democratic participation among members to control by professional staff (Skocpol 2003), to the displacement or compromise of groups' original agendas by those of funders' (Sundstrom 2005), or to the entry of elite leadership which may divert organizations from their original purposes and create vertical patron-client relationships (see Payne 1995; Piven and Cloward 1979; in a development context: Howes 1997; Igoe 2003; Mansuri and Rao 2004; Platteau and Gaspart 2002; Tripp 2000).

A key difficulty in assessing the causal relationships that underlie the weakness of organizations of the poor and the impact of outside funding on these groups is disentangling the multiple theoretical channels and potential directions of causation that could explain correlations in the data. A correlation between socioeconomic disadvantage and low participation in civic life and weaker organizations could arise because poverty and social disadvantage reduce opportunity and willingness to participate in civic life (Almond and Verba 1965; Walzer 2002). A correlation could also arise because civic groups that do manage to organize for exogenous reasons subsequently gain economic and political power, or because a third factor, like education, could drive both civic engagement and socioeconomic advancement (Glaeser, Ponzetto, and Shleifer 2007; Verba, Schlozman, and Brady 1995). Similarly, a correlation between whether groups receive funding and the socioeconomic status of their membership and leadership could arise because funding attracts members of higher socioeconomic status, because people of higher socioeconomic status are better at securing outside funding, or because able leaders attract both funding and a rise in the social status of members.

We address the difficulty of identifying causal impact by exploiting an opportunity created by random phase-in of a program that provided funding designed to strengthen women's community associations in rural Kenya. Since the implementing nongovernmental organization (NGO) had limited resources, the program was phased in gradually and the order of phase-in was determined randomly, thus eliminating systematic differences in potential confounding factors between women's groups that were supported early and those that had not yet been funded.

Our empirical results show that outside funding changed the nature of membership and leadership in these community associations, weakening the role of the disadvantaged. We generalize our results through a formal model that links our empirical findings to the wider empirical phenomena noted above: participation of the disadvantaged in civic organizations tends to be low, and

organizations of the poor tend to be weak. Our model suggests a specific micro mechanism that can generate this macro phenomenon. The simple dynamics of democratic decision making by existing members of community associations can generate long-run outcomes in which the poor and disadvantaged either do not belong to any associations or belong to weak organizations. This result holds even if there are only small differences in the inherent propensity of the disadvantaged to participate in such associations and occurs even without the process of professionalization or elite expropriation of successful groups. One implication of the model is that outside assistance is unlikely to overcome the dynamic processes of entry and exit in these groups, which will favor the more advantaged. This has important implications for development policy, since it suggests that deliberate attempts to strengthen organizations of the disadvantaged may require very specific forms of policy intervention; we discuss some options in the conclusion.

The rest of the article proceeds as follows: The first two sections provide background on women's groups in rural Kenya and the project under examination. The third discusses the project's impact on group strength and community interaction. The fourth section shows how the program affected group membership, leadership, and exit from groups, and the fifth develops a model of group dynamics based on the data and argues that this model can help explain weak organizations and low participation rates among the disadvantaged.

## Women's Groups in Kenya

Women's groups are widespread in much of Africa. A survey by Hammerslough (1994) found that half of all adult women in many districts in Kenya belonged to a women's group (cited in Udvardy 1998). In the area we examine, women's groups have strong precolonial roots and may be the most widespread form of secular community organization that does not rely on support from the government or foreign donors.

Women's groups conduct a range of activities. They engage in income-generating projects, for example jointly farming a plot of land together. They sponsor rotating savings and credit associations, in which members meet on a regular schedule and contribute to a pot which is given in turn to each member. They provide members with assistance in emergencies and sponsor labor exchange among members.

Many of these activities have a social insurance component. For example, rotating savings and credit

associations typically allow members with special needs to receive funds earlier than their allotted turn or allow members with financial difficulties to miss a contribution, with the understanding that this member will receive a lower payout when it is her turn to receive funds (Gugerty 2006). Most groups distribute the proceeds of agricultural production equally among all members, independent of actual labor input, providing implicit social insurance to sick or elderly members who may not be able to work with the same capacity as others. Of the reported total value of crops harvested prior to the program we study, 55% was retained by the group for collective use and 38% was distributed to members, either in cash or in kind (7% was given away). Because group proceeds are so heavily reinvested, membership acts as an investment, with longtime members effectively building up equity in the group and being repaid when they receive a share of a group output in a later period, when they are older and weaker.<sup>1</sup>

Rural women's groups also provide a form of social connection and civic participation for women, a group that is disadvantaged and socially isolated in Kenyan society. Traditionally, much of Kenyan social structure revolves around kinship and clan structure. Because of strict exogamy rules preventing marriages among relatives and the fact that residence is patrilocal, meaning that women move away from their home after marriage, women are left with a limited social network outside of that provided by their husband's family. Thus, women's groups may be particularly important for widows and older women, who are particularly disadvantaged in rural African communities because of reduced support from kin and weaker access to community resources (Abt 1997; Miguel 2005). In the area of rural western Kenya we examine, class structure is fairly fluid and differences in socioeconomic status are more strongly related to differences in education and income due to formal sector employment than to differences in land ownership.

The women's groups have horizontal, democratic structures of the type emphasized by Putnam (1993). The groups we study are small, locally initiated self-help groups. They had an average of 21 members and had been in existence for an average of 6.7 years prior to the start of the funding project. The groups are fairly homogenous, with 70% of members residing in the same village. Almost all the women in the groups have been married and thus have moved away from their kinship networks. Older women are somewhat overrepresented in the sample, rel-

ative to their proportion in the Kenyan adult population.<sup>2</sup> Group leaders are unpaid members rather than paid professionals, and key group decisions are made by consensus or vote. The executive officials—chair, secretary, and treasurer—organize and chair meetings, set meeting agendas, and represent the group at community events. The majority of executive officials have less than a secondary level of education and less than 20% have formal sector income. Women's groups in Kenya typically include a limited number of male members (Srujuna 1996), and in our sample, roughly 20% of group members are male, 73% of whom are husbands of female members. However, men are generally excluded from holding key executive leadership positions. At baseline, 97% of executive officials in our sample were women.

Most rural women's groups were not generally directly engaged in electoral politics during the period of our study, but they arguably played an important role in giving voice to the concerns of poor women at the local level. Political competition in Kenya is rooted in patronage and politicians' role in securing public goods for their home areas (Barkan and Holmquist 1989; Bratton and van de Walle 1997), but prior to the inception of the NGO program, the small, rural women's groups we study were largely autonomous and independent from the formal political structure. Most received no outside funding or government support. While groups are sometimes visited by Community Development Assistants (CDAs) employed by the Ministry of Culture and Social Services who are supposed to provide organizational support, the groups we study did not appear to be co-opted by the political structure prior to the program, consistent with Ahlberg (1988), Thomas (1988), and Kabira and Nzioki (1993). This study took place in the late 1990s, a period in which multiparty politics was just beginning to take root in Kenya, but despite this political change, the women's groups under study did not play a large role in electoral or party politics.

Women's groups nonetheless play an important political role in Kenya at the local level as one of the few institutions to advance the interests of poor rural women. They may also help position women to take on larger roles in politics in the long run by advancing their role in the household and providing them with formal organizational experience. Women's groups in Kenya have been critical in campaigns to reduce deaths from the brewing of illegal liquor and in the prevention of violence against women (Kahler 2000; United Nations 2003). Many

<sup>1</sup>Most groups have systems of fines for members who miss meetings or fail to contribute financially.

<sup>2</sup>Five of the 80 groups in our sample are composed entirely of widows. Three of the widows groups received assistance and two did not.

women's groups raise funds and contribute to community fundraising events (*harambees*) that fund local public goods projects. Anderson and Baland (2002) argue that women's rotating savings and credit associations in Kenya improve women's bargaining position within the household, while Thomas (1988) shows how participation in women's associations increases household access to productive resources in Kenya. Agarwal (2001) argues that even women who do not join groups could potentially benefit from a stronger bargaining position within the household as a result of having the option to join these groups.

Tripp (2001) argues that women's lengthy participation in self-help associations in East Africa was critical to their ability to take advantage of political openings in the 1990s, precisely because the experience of working collectively made it easier for them to seize the opportunities afforded by liberalization. According to Tripp, women's groups created norms of association that were distinct from patterns of participation in state-led organizations. Women had experience in selecting their own leaders and organizing in ways of their own choosing, precisely because they had not been co-opted by the state. Perhaps the most prominent example of such a process is the career of Wangari Maathai, who led the National Council of Women of Kenya and founded the Greenbelt movement, a coalition of women's groups engaged in local tree-planting projects. The Greenbelt movement was able to challenge the environmental policies of the authoritarian Moi regime (Ndegwa 1996), and Maathai went on to become a Member of Parliament and the cabinet under the post-Moi government and to win the Nobel Peace Prize in 2004. In our sample, one group leader, a primary school teacher in her early thirties, was selected by the government to be an assistant chief, the first female to ever hold such a position in her area. Her management of the women's group was cited as a key factor in her appointment.

## The Women's Group Project, Data Collection, and Empirical Methodology

The project we study was designed and conducted by a Dutch nongovernmental organization, International Child Support (ICS), in consultation with Kenyan women's groups and local officials from the Ministry of Agriculture. ICS identified 100 operational women's groups in Busia and Teso, two poor rural districts in western Kenya, through lists provided by the Ministry

of Culture and Social Services and interviews with local Community Development Assistants. Eighty of these groups met project eligibility criteria, which excluded a few wealthier groups in the district capital and required that the groups meet regularly and already be engaged in group-based agricultural activity. Groups were typically located some distance apart, and we found no evidence that groups were in competition for the same potential members.

Once the 80 eligible groups were selected, they were stratified by geographic administrative division to ensure geographic balance between recipients and nonrecipients, they were ordered alphabetically, and every other group was selected to receive training and inputs; we call these the program groups.<sup>3</sup> At the time of recruitment, the remaining 40 groups were notified that they would not be funded immediately but that the NGO would try to fund them in the future; we call these the comparison groups. Although no guarantees were given, comparison groups presumably felt that future funding was likely given the NGO's track record in the area. In fact, the comparison groups were funded two years after the start of the original program, and many groups continued to have a relationship with the NGO. To the extent that members of comparison groups expected to receive assistance in the future, they may have begun to change their behavior during the first year of the project. This would likely bias estimates of program impact toward zero, making it more difficult to identify program effects. As discussed below, we nonetheless find significant differences between program and treatment groups in a relatively small sample.

The project's goals were to strengthen women's community organizations and to improve agricultural practices and output (Webo 1997). ICS paid for two days of training for three group leaders on leadership skills, group management techniques, bookkeeping, and project administration.<sup>4</sup> Each group received a set of agricultural inputs including implements, certified seeds, fertilizer, and pesticides/herbicides sprayers. Three executive officials and one additional member were funded for five days of agricultural instruction and experiential training at the

<sup>3</sup>Kenya is divided into provinces, which are in turn subdivided into districts, divisions, locations, and sub-locations. Districts and divisions often (but not always) correspond to different tribes or sub-tribes. Since limited data were available on groups *ex ante* and the NGO faced time constraints, the decision was made to stratify the randomization based on geographic divisions because it was important to achieve balance within geographic areas, given both the potential differences in environment and the NGO's need to treat different areas similarly.

<sup>4</sup>Training was conducted by a Kenyan specialist in the training of community organizations and used a standard curriculum for the area.

Ministry of Agriculture's farmer training center in the district capital. The project spent \$674 per group or an average of \$34 per member, roughly 10% of Kenya's per capita GDP at the time. Half of the total value of assistance was accounted for by agricultural inputs, 16% by organizational and group management training, and 34% by agricultural training.

Women and long-standing group members were likely to be chosen for the organizational and management training sessions, but there is some evidence that the agricultural training session boosted the role of men and younger women in groups. In practice, executive officials did not fully utilize the agricultural training opportunities in many groups and groups were allowed to send substitutes. More educated members were statistically more likely to be trained, and since younger women and men had more education, the nonexecutive members sent for agricultural training were more likely to be young and male than the typical group member. (Men and younger women were significantly more likely to attend training sessions, but this effect disappears controlling for education.) Trainees tended to increase their status in the group. After 18 months of program participation, 24% of the nonexecutives who were trained in agriculture became executives. Seven nonmember men were trained and subsequently became group members. No nonmember women were trained. We return to this issue in the next section.

Three sets of surveys were administered to the groups. A baseline survey was conducted at the start of the project, before the randomization was done or funding provided; the data from this survey are referred to throughout as pre-intervention data. Fourteen months later a second survey was administered to assess the impact of the assistance. Follow-up surveys were administered six months later. These data comprise the post-intervention data.<sup>5</sup> In general, program groups did not differ systematically from comparison groups prior to the start of the project; these data are available in Gugerty and Kremer (2005).

Randomization to the order of program phase-in allows for a straightforward empirical strategy of regressing outcomes of interest on an indicator variable for program status. Our specification is kept deliberately spare. Since program status was assigned randomly, other potentially confounding variables will be equal in expectation between treatment and comparison groups, and hence estimates will be unbiased whether or not one controls for covariates. We include dummy variables represent-

ing each of the geographic divisions used in the original stratification. As noted above, coefficients are unbiased either way, but including variables used in stratification is standard practice as it may improve the precision of estimates (Imbens, King, and Ridder 2006), and since these variables were clearly identified in advance it does not introduce concerns about specification searching. Adding control variables beyond those used in the randomization and stratification procedure and those explicitly decided on in advance of the evaluation creates a risk of specification searching (U.S. Department of Health and Social Services/Federal Drug Administration 1998), and hence we focus on results using this deliberately spare specification. However, as a robustness check, we reproduced all the estimates using the following pre-intervention control variables (added individually): distance from a paved road, group size, initial proportion of members from the same village, proportion of members with secondary education, and proportion of members with formal sector income. The results are robust to the inclusion of these control variables and available from the authors.<sup>6</sup>

## Group Strength and Community Interaction

This section discusses the impact of funding on agricultural production, other indicators of group strength, and groups' interactions with local social and political institutions.

Recall that the project provided \$674 in assistance per group, approximately half of which consisted of agricultural inputs and seeds sufficient to cultivate an additional 3.5 acres. As shown in Table 1, Panel A, gains in agricultural output are statistically insignificant and point estimates of these gains are very small relative to the value of inputs. Point estimates of the increase in agriculture output in program groups are only about \$18 in the main long rains season and \$4 in the secondary short rains season, 6% of the value of inputs such as seeds and fertilizer that should have paid off within one season. This suggests that if any significant share of the inputs indeed went towards group production, the return was spectacularly negative.

The disappointing impact on groups' agricultural production is likely due to two causes, both of which are manifestations of the program's limited impact in encouraging greater participation in group activities. First,

<sup>5</sup>Both program and comparison groups were given a small set of tools worth about \$3 per member at the time of each survey to compensate them for their time.

<sup>6</sup>Out of the almost 200 estimates we ran, we found seven cases where the significance of our estimated impact changed slightly. In four cases the significance of our results increased; in three cases the significance declined to just under 10%.

TABLE 1 Impact of Outside Funding on Group Output, Strength, and Community Interaction

Panel A: Group Production	Acres Planted	Hours of Labor Per Member	Total Dollar Value of Long Rains Harvest	Acres Planted During Short Rains <sup>a</sup>	Hours of Labor Per Member During the Short Rains	Total Dollar Value of Short Rains Harvest	Probability of Nonexec Using Fertilizer at Planting <sup>b</sup>	Probability of Exec Using Fertilizer at Planting <sup>b</sup>	
	During Long Rains	During the Long Rains	Long Rains Harvest	Short Rains <sup>a</sup>	Short Rains	Short Rains Harvest	Fertilizer at Planting <sup>b</sup>	Fertilizer at Planting <sup>b</sup>	
	OLS	OLS	OLS	OLS	OLS	OLS	Probit	Probit	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Program groups								
	0.49*** (0.16)	8.90** (3.25)	17.8 (11.7)	0.51*** (0.16)	2.23 (2.53)	4.21 (11.1)	0.001 (0.02)	0.12*** (0.04)	
R <sup>2</sup>	0.37	0.09	0.08	0.30	0.07	0.04	–	–	
No. Obs.	80	80	80	77	77	77	566	261	
Comparison Group Mean	0.80	21.1	41.6	0.63	15.9	29.4	0.08	0.04	
Panel B: Group Strength and Collective Benefits	Members' Evaluation: Has Group Leadership Improved? <sup>c</sup>	Members' Evaluation: Meetings More Effective? <sup>c</sup>	Change in Attendance Rates at General Meetings <sup>d</sup>	Number of Days between General Meetings	Number of Emergency Assistance Visits	Total Cash Assistance to Members (US\$)	Average Frequency of Rosca Meeting in Weeks <sup>e</sup>	Average Monthly Rosca Pot Size (US\$)	
	Probit	Probit	OLS	OLS	OLS	OLS	OLS	OLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	Program groups								
		0.23*** (0.05)	0.10 (0.07)	–0.04 (0.06)	3.85 (17.2)	0.14 (0.49)	9.0 (11.6)	–0.19 (0.25)	3.79 (6.34)
R <sup>2</sup>	–	–	0.06	0.03	0.13	0.12	0.09	0.16	
No. Obs.	288	281	77	77	80	80	77	74	
Comparison Group Mean	0.60	0.64	–0.07	53	12.0	23.7	3.2	26.0	
Panel C: Community Interaction	Number of Community Fundraising Contributions	Dollar Amount Contributed to Community Fundraising	Dollar Value Grants Received <sup>f</sup>	Number of Times Group Received in-Kind Donations	Number of Community Visits <sup>g</sup>	Number of Visits by Extension Workers <sup>h</sup>	Number of Visits by Local Government Officials <sup>i</sup>		
	OLS	OLS	OLS	OLS	OLS	OLS	OLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	Program groups								
		–1.85 (1.97)	–0.33 (3.29)	–11.1** (5.46)	–0.10* (0.06)	8.54** (3.52)	2.47* (1.39)	5.49** (2.52)	
R <sup>2</sup>	0.18	0.09	0.28	–	0.15	0.13	0.09		
No. Obs.	80	80	77	77	77	77	77		
Comparison Group Mean	4.2	12.3	11.3	0.13	13.5	3.3	4.6		

Notes: Significant at the 90% (\*) level, 95% (\*\*) level, 99% (\*\*\*) level. OLS estimation has robust standard errors in parentheses. All regressions include indicator variables for the geographic division in which a group is located. The post-intervention period is the 14-month period following the first pre-intervention survey. Probit coefficients reported are STATA “dprobit” estimates that give the change in the probability for an infinitesimal change in each independent, continuous variable and the discrete change in the probability for dummy variables, evaluated at the mean. Robust standard errors clustered at group level for estimations with individual-level data.

<sup>a</sup>Missing data in columns 4–6 is for two comparison groups and one program group.

<sup>b</sup>Data per agricultural plot, rather than per individual.

<sup>c</sup>Probit estimation of individual-level data based on interviews with three randomly selected nonexecutive group members.

<sup>d</sup>Change in attendance from the pre-intervention period. Attendance rates are based on attendance records for six randomly selected members per group. Two program groups did not have post-intervention records and one additional program group had no pre-intervention records. There is no significant difference between program and comparison groups in the level of post-intervention attendance rates.

<sup>e</sup>Prior to funding, 66 groups held rosca. Post-intervention, three program groups did not hold rosca.

<sup>f</sup>Two program groups and one comparison group did not have records on donations or visitors.

<sup>g</sup>This includes visits by government administration officials, Ministry of Agriculture, Health and Social Services field workers, other women's and community groups, religious groups, and NGOs.

<sup>h</sup>Includes extension officers from the Ministries of Health and Agriculture.

<sup>i</sup>Includes chief and sub-chiefs, village elders, district officers, and any senior administrative government officials.

group members did not supply sufficient complementary land and labor to effectively employ the increased capital that was provided. Second, inputs supplied by the project were diverted to the private plots of some group members, particularly leaders. Funded groups planted about half an acre more per agricultural season than comparison groups. This totaled only about 30% of the area that could have been planted with the additional inputs. Average labor input was roughly nine hours greater per member in program groups than comparison groups in the main agricultural season and only an insignificant two hours greater in the subsequent season.

Surveys conducted after the conclusion of the project indicated that 70% of program groups reported distributing project seeds to members for use on their individual farms, but that only 29% gave seeds to every member. Fifty-eight percent of program groups report that project fertilizer was distributed to individual group members.<sup>7</sup> The point estimate for acres planted by individual group members during the secondary short rains season was quite small and not significantly different from zero ( $-0.09$ , with a standard error of  $0.10$ ), indicating that the average group member—as opposed to executives—did not benefit significantly from diversion of inputs. However, program group executives were four times as likely to use fertilizer on their individual plots than comparison group executives. Group members may well have been acting rationally in diverting inputs to individual use, but to the extent that donors wanted to support the groups because they felt that working together as a group was important, it is important to note that the impact of the program on group production was modest.

Aside from its impact on group agricultural production, there was no evidence that the program had a positive impact on other objective measures of group capacity, strength, or solidarity (shown in Table 1, Panel B). There were no significant differences between program and comparison groups in the change in attendance rates at general meetings from pre- to post-intervention, meeting frequency, visits to members' homes to give emergency assistance, financial support of needy members, rotating savings and credit association (rosca) meeting frequency, or monthly contributions.

It is worth noting that despite this disappointing performance on objective measures, program groups are more likely than their comparison groups counterparts to report that group leadership had improved during the program period (Table 1, Panel B).<sup>8</sup> While this reported

improvement in leadership could reflect actual improvements in group functioning, it could also reflect more general positive feelings about the groups after receiving massive external support, or a desire to report positively to donors, since the training addressed leadership quality. As we discuss below, people of higher status assumed leadership positions following the program, and it is possible that members are more likely to view high-status leaders positively, even if their objective performance is worse (see Duflo and Topalova 2004).

There is little evidence that groups funded through the project did more to assist their neighbors or to contribute to the provision of local public goods (Table 1, Panel C). Program groups did not exhibit greater participation or fundraising capacity in *harambee* community fundraising events. ICS had hoped the funding program would stimulate the growth of networks and the diffusion of information on agriculture and nutrition in the community, particularly among women. There is no evidence, however, that groups receiving funding had higher levels of contact with other women's groups: program groups did not receive more visits from other women's groups than did comparison groups (not reported). NGO assistance crowded out assistance from other sources for program groups, although the resources crowded out were trivial relative to those provided by the program, and the results for frequency of assistance are significant only at the 10% level.

The most marked impact of funding on community interaction is the increase in visits from government officials. Program groups received 75% more visits from agriculture and health extension agents than comparison groups (significant at 10%) and nearly twice as many visits from local government officials (chiefs, elders, and district officials). Local government officials, including chiefs, are appointed by the central government, rather than being locally elected or traditional leaders. This suggests that the program prompted a move towards more vertical, patron-client relationships between government officials and groups.

### Entry, Leadership, and Exit from Groups

The program led to an increased number of applications for group membership and higher entry into groups. New members and leaders tended to be of higher socioeconomic status and to pay somewhat more for membership, in cash and in kind. However, the program also led to increased exits, particularly of older women and due to conflict.

<sup>7</sup>The actual numbers may be higher if groups were reluctant to report this to enumerators.

<sup>8</sup>Older members were less likely to report improvements in program groups, but the coefficient is not significant.

TABLE 2 Entry into Groups

	Number of New Entrants OLS (1)	Proportion of New Entrants with Formal Sector Income OLS (2)	Proportion of New Entrants Who Are Male OLS (3)	Proportion of Female Entrants with Secondary Education OLS (4)	Probability That New Member Does Not Come from Majority Village Probit (5)	Proportion of New Entrants Who Are Married OLS (6)
Program groups	1.88** (0.79)	0.11* (0.06)	0.04 (0.09)	0.12* (0.07)	0.27** (0.10)	-0.04** (0.02)
R <sup>2</sup>	0.07	0.08	0.14	0.08	-	0.20
Number of observations	80	56	57	50	236	55
Mean of dependent variable in comparison groups	2.0	0.09	0.25	0.08	0.23	1.0

Significant at the 90% (\*) level, 95% (\*\*) level, 99% (\*\*\*) level.

Notes: OLS estimation with robust standard errors. All regressions include indicator variables for the geographic division in which a group is located. The post-intervention period is the 18 months following the pre-intervention survey. Column 5 reports “dprobit” estimates that give the change in the probability for an infinitesimal change in each independent, continuous variable and the discrete change in the probability for dummy variables, evaluated at the mean. Robust standard errors are clustered at the group level.

Perhaps not surprisingly, applications to program groups increased sharply. The number of applicants to program groups was 40% higher than in comparison groups, significant at the 5% level (Gugerty and Kremer 2005). Program groups had twice as many new entrants as comparison groups as shown in Table 2. The average program group had almost four new entrants over the 18 months between surveys; the average comparison group had two. New entrants in program groups were roughly twice as likely as their counterparts to have formal sector income and to be from outside the village, although this is significant only at the 10% level. Female entrants were about twice as likely to have a secondary education in program groups than in comparison groups, significant at the 10% level.

The increase in entry occurred immediately after the project started but before the agricultural training or provision of inputs, suggesting both that new members joined in time to take advantage of the material inputs available under the program, and that new entry was not solely due to the agricultural training.<sup>9</sup> We

found that in the first six months of the project, new entrants in program groups had significantly higher years of education than in comparison groups; this difference declines over the next eight months of the project. Program groups also had a higher proportion of new entrants with formal sector income in the first five months of the project than did comparison groups, significant at the 10% level. This difference also declines over the next eight months.

There is some evidence that program groups were more likely to witness changes in leadership (presented in Table 3). During the project, at least one new executive official entered the leadership in 53% of program groups, compared to 35% of comparison groups (a difference just short of significance at the 10% level). Program groups were 12 percentage points more likely to have an executive official who was not originally a member at the start of the period. Men were significantly more likely to take on leadership roles in program groups, as were better-educated women (significant at the 10% level). Although the absolute changes seem small (since

<sup>9</sup>During the first six months of the project, when organizational training was conducted but before inputs were distributed, 52 people joined program groups, while 15 joined comparison groups.

During the next four months, when agricultural training and input provision took place, 50 people joined program groups and 17 joined comparison groups. In the final four months, 25 people joined program groups and 25 joined comparison groups.



**TABLE 3 Group Leadership and Payments**

Panel A: Elections and New Group Executives	Probability That Group Has at Least One New Executive Official in Place	Probability That at Least One New Executive Is Also a New Member	Change in Proportion Who Are Male	Change in Proportion with Formal Sector Income	Change in Proportion of Females with Secondary Education	Change in Years of Education
	Probit (1)	Probit (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Program groups	0.18 (0.11)	0.12** (0.06)	0.04** (0.02)	0.04 (0.04)	0.04* (0.02)	0.23 (0.42)
R <sup>2</sup>	–	–	0.09	0.04	0.07	0.06
Number of observations	80	80	80	80	80	80
Mean of dependent variable in comparison group	0.35	0.08	–0.02	0.06	–0.06	0.32

  

Panel B: Payments for Membership and Executive Officership	Number Who Paid to Join OLS (1)	Per Person Dollar Amount of Entrance Fees Collected by Groups	Number of New Members Who Provided Land for Group OLS (3)	Probability of Promoting at Least One Individual to Executive Position Whose Land Was Used for Group Cultivation Probit (4)	Individual Probability of Promotion to Executive Official, Conditional on Providing Land to Group <sup>a</sup> Probit (5)
		OLS (2)	OLS (3)	Probit (4)	Probit (5)
Program group	0.79** (0.35)	2.74 (2.13)	0.10** (0.05)	0.08* (0.04)	0.17** (0.08)
R <sup>2</sup>	0.10	0.04	0.11	–	–
Number of observations	80	80	80	80	75
Mean of dependent variable in comparison group	0.28	1.1	0	0.05	0.05

Significant at the 90% (\*) level, 95% (\*\*) level, 99% (\*\*\*) level.

Notes: Columns 1–2 of Panel A are probit estimation with robust standard errors. Columns 3–6 of Panel A are OLS estimation with robust standard errors. Columns 1–3 of Panel B are OLS estimation with robust standard errors. Columns 4–5 of Panel B are probit estimation with robust standard errors. We report the “dprobit” estimates that give the change in the probability for an infinitesimal change in each independent, continuous variable and the discrete change in the probability for dummy variables, evaluated at the mean. All regressions include indicator variables for the geographic division in which a group is located. The post-intervention period is the 18 months following the pre-intervention survey.

<sup>a</sup>Based on individual-level data. Represents the probability that an individual moved from a nonexecutive to an executive position, given that his or her land was used for cultivation in the second planting cycle.

at baseline only about 3% of executive officials were male, and less than 40% of females had secondary education), these are large changes relative to baseline over a short period.

More people paid to join program groups, and new members were more likely to provide land for group use (Table 3, Panel B). It is worth noting, however, that the

combined value of cash payments and of land provided per new member was just under \$3, less than 10% of the \$34 in benefits per member provided through the program.<sup>10</sup> If one thinks of this as a payment for a share

<sup>10</sup>For additional detail on this calculation, see Gugerty and Kremer 2005.

of the assets of the group, including the assets provided under the program, it is quite small, suggesting either that the assistance was not valued by members or that those joining the assisted groups may have received substantial rents.

There is some evidence that program group members who made in-kind contributions were more likely to secure an official position. In the first post-intervention planting cycle, the probability of a group promoting at least one individual whose land was used for group cultivation to an executive position was 8% higher in program groups, significant at the 10% level. Among people providing land for group cultivation, those in program groups were 17 percentage points more likely to be promoted to an executive position than their counterparts in comparison groups. Hypothetically, new entrants could have contributed to the groups through human capital or through labor. However, if these contributions were substantial it would presumably be reflected in higher agricultural output or in better group functioning, and we saw no evidence of improvements in these areas.

One might expect that the financial benefits of program group membership would deter group exit, especially because members cannot cash out the value of their membership. In fact, overall exit rates from program groups were not statistically different than in comparison groups, as shown in Table 4, but the nature of exit changed. Fewer members left due to difficulty paying fees, consis-

tent with the greater financial benefits of membership, but instead exit due to conflict doubled. Older, female members were disproportionately likely to leave in program groups. Of women older than 50, the proportion of those leaving groups or becoming inactive during the project period was more than twice as great in program groups as in comparison groups. The absolute probability of a woman over 50 leaving or becoming inactive is 14 percentage points higher in program groups, representing a more than 60% increase over the base exit rate of 18%. As noted earlier, older women are socially isolated in rural Kenyan society, due to the combination of exogamy and patrilocal residence. Moreover, since more than half of group agricultural production was retained by the group prior to the project period and since effort is required to organize and register groups, write bylaws, and attend meetings, older members will typically have invested a fair amount in groups. There is no evidence that members leaving groups received any compensation for their years of investment in the group. Field reports provide no evidence that these women joined other groups, and even if they did, this would not compensate them for their lost investment in the original groups. Taken together, these results suggest that strengthening the material status of organizations of the disadvantaged may lead new and more advantaged members to enter these groups, while weakening the role of the disadvantaged in these groups.

Discussions of channels of impact are inherently speculative, since we can observe only one experiment.

**TABLE 4 Exit from Groups**

	Number Leaving Group <sup>a</sup>	Number Leaving Due to Conflict	Number Leaving Due to Difficulty Paying Group Fees	Proportion of Those Leaving That Are Female and Over 50 <sup>b</sup>	Net Change in Group Size
	OLS	OLS	OLS	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
Program groups	1.14 (1.11)	0.64** (0.31)	-1.02*** (0.30)	0.14*** (0.05)	1.34 (0.90)
R <sup>2</sup>	0.05	0.09	0.17	0.10	0.05
Number of observations	80	80	80	80	80
Mean of dependent variable in comparison groups	6.9	0.65	1.4	0.10	0.1

Significant at the 90% (\*) level, 95% (\*\*) level, 99% (\*\*\*) level.

Notes: OLS estimation with robust standard errors. All regressions include indicator variables for the geographic division in which a group is located. The post-intervention period is the 18 months following the pre-intervention survey. Robust standard errors are clustered at the group level.

<sup>a</sup>Includes individuals who left the group, as well as those individuals who entered the official category "dormant," meaning they were inactive and no longer attended any group meetings or participated in any group activity. The specification in column 2 is robust to the inclusion of the pre-intervention proportion of members over the age of 50.

<sup>b</sup>Based on individual-level data. Coefficient represents the additional likelihood of leaving or becoming inactive in a treatment group, given that one is a woman over 50 years of age.

However, it is worth noting that some of the typical channels through which outside funding could lead to changes in organizational control did not appear to operate here. The program did not lead to the hiring of professional administrators and the growth of administrator influence vis-à-vis members. The funders did not have an ideological agenda with which the groups were forced to comply. Indeed, compared to many other efforts to fund civil society, this program was organized in a way that was relatively sensitive to power relationships and the dangers of elite capture. The NGO implementing the program had been undertaking programs in the area for five years and was composed largely of local community members. NGO records show that training and inputs were delivered to groups in accordance with the project design. Key elements of the program were in line with “best practices” documented in the rural development literature, including the provision of funding to preexisting, small, active membership groups that included disadvantaged members, rather than to “briefcase NGOs” set up by elites specifically to apply for funding; consultation with beneficiaries prior to program inception; and the inclusion of training and group-capacity building in project design (Carroll 1992; Esman and Uphoff 1984; Uphoff, Esman, and Krishna 1998).

Rather than professionalization or external pressure, the main channels through which the program affected group composition and leadership seems to have been (1) the increased desire of applicants to join groups with more resources; (2) the tendency of groups receiving resources to charge for membership and to choose relatively more advantaged applicants given the opportunity; and (3) increased conflict and exit of the weakest members in the groups that received these resources. The next section explores the aggregate impact of these tendencies.

## A Model of Group Dynamics

This section presents a dynamic model that traces the dynamic and aggregate consequences of the microbehavior of membership organizations consistent with our empirical results and argues that it can help explain the widespread tendency, suggested by Walzer (2002) and others, for the disadvantaged to either have weak organizations or not participate in membership organizations at all.

*Assumptions.* The previous sections of this article take advantage of the random order of program phase-in to show that people of higher socioeconomic status join women’s groups that receive external funding. Here we assume this reflects a more general tendency for people to

seek to join groups that are able to deliver more benefits to their members. In this model, groups vary in their ability to deliver benefits to members. This could be due to variation in outside funding, but it could be due to other causes as well, such as differences among groups in assets, political connections, or internal norms.

To illustrate the dynamic impacts of membership decisions, we use a relatively simple model that focuses on two periods of people’s lives: prime age and old age. People work and have the opportunity to make contributions to groups in prime age, and, with potentially diminished capacity, in old age. Each period, the old die, the prime age become old, a new population of prime-age citizens can apply to join groups, and the existing, newly old members of each group decide which applicants to admit. Joining a group involves some fixed commitment of time to the group, which could otherwise be spent on individual activities and production. In order to avoid technical complications surrounding integer constraints, we will treat each generation as composed of an infinite number of individuals.

Although in practice groups vary in size, there do seem to be constraints on the maximum size of these groups, perhaps due to the difficulty of managing free rider issues in large groups, and it is worth noting that overall group size did not increase significantly in response to the program. To minimize complexity of the model, we assume that group size is fixed at  $N$  and that groups have  $N/2$  prime-age members and  $N/2$  old members.<sup>11</sup>

People enter prime age with differing ability to contribute to groups, which we call “productivity.” In the context of the women’s groups we study, productivity would incorporate physical strength, agricultural knowledge, the ability to interact with donors and political leaders, and ownership of land, tools, or other assets that might be of use to the group. In an organization of parents sponsoring a children’s soccer league, for example, it might include the ability to coach kids, ownership of a minivan, or organizational skills. We assume a person’s productivity in the group is positively correlated with his or her individual earning ability, which can be taken as a measure of socioeconomic status.<sup>12</sup> In order to model individuals’ desire to

<sup>11</sup>If groups were not constrained to have  $N/2$  prime-age and  $N/2$  old members, then there might be cycles in membership, with some groups having large cohorts in even periods and small cohorts in odd periods. We conjecture that with adjustment costs in group size, however, groups would wind up evenly balanced across cohorts in steady state.

<sup>12</sup>Of course these correlations are less than perfect. Incorporating an imperfect correlation would yield a positive correlation between socioeconomic status and group membership in steady state, rather than a cutoff level of socioeconomic status above which people join groups and below which they do not.

join groups, it is necessary to make some assumptions about the benefits that groups produce for members. As discussed in the second section, in the case of the women's groups we examine, a key benefit seems to be insurance against negative shocks. Mathematically, we model this as follows.

If person  $i$  has an initial productivity  $L_{i,p}$  when prime age, her productivity when old is  $L_{i,o} = L_{i,p} - \delta + \varepsilon_i$ , where  $\delta$  is the average loss in productivity with age (if any) and  $\varepsilon$  reflects random variation in health. Suppose that an individual  $j$  can produce  $L_j$  working on her own and that a group  $G$  with  $N/2$  prime-age members and  $N/2$  old members can produce  $f(L_g, X_g)$ , where  $L_g = \sum_{i=1}^{N/2} L_{i,p} + \sum_{j=1}^{N/2} L_{j,o}$ , and  $X_g$  is a group-specific productivity term that depends on group-specific characteristics such as the efficacy of controlling free riding within the group, favorable and unfavorable relationships with donors or government officials, or the right to use a particularly productive or unproductive plot of land. We will assume in particular that group output is equal to the sum of member productivity and group productivity,  $X_g$ .  $X_g$  represents the net effect of group activities, such as roscas and targeted help to needy group members and productivity losses due to free riding. In particular  $X_g$  may be negative. Assume there is a continuous distribution of  $L$  and  $X$  and that individuals have constant absolute risk aversion with parameter  $a$ , implying that risk aversion does not depend on wealth.<sup>13</sup>

In addition to the assumptions about the production and utility functions, we assume that groups require a fixed time contribution from each member and that while some proportion of group output may be distributed in proportion to members' productivity, there is at least some proportion that is distributed equally. There is both theoretical and empirical justification for this assumption. Since workers are risk averse and subject to random shocks to their labor productivity, members of each generation would want to commit to egalitarian redistribution *ex ante* when they join groups. Moreover, if the distribution of shocks is right skewed, so the mean level of productivity is greater than the median level, then an *ex post* vote among members would lead to such redistribution because the median voter will prefer at least some redistribution (Kremer 1997). Empirically, we find that almost all groups require similar time contributions from all members and divide output equally. If groups divide at least some share of output equally among members, then existing group members will prefer to admit higher-productivity applicants,

because they will wind up obtaining a share of their output.<sup>14</sup>

In the model, the process for recruiting new group members works as follows. At the beginning of each period, prior to the realization of health shocks, new prime-age individuals decide which groups they wish to apply to and the newly old members of each group vote on which prime-age applicants to admit. Stable matches will be those in which (a) there is no case in which both a group and an applicant would prefer for the applicant to be in the group but the applicant is not in the group, and (b) there is no person in a group who would be better off producing individually. Equilibria are assignments of people to groups such that all matches are stable. We assume that applicants cannot borrow to finance payments to the group in exchange for membership.

Modeling decisions to expel members is difficult, since the order in which motions are proposed could potentially affect the outcome of votes on this issue. However, it is worth noting that at least in one simple setting, groups will be particularly likely to expel the elderly, and external aid to the group will make them more likely to do so, consistent with our empirical findings. Suppose expelling a member causes disruption and this effectively reduces output by an amount  $\omega$ . Consider the impact of an external NGO providing aid to the group which consists not only of long-term assets, like tools and perhaps training, that can raise  $X_g$ , but also assets like seeds and fertilizer that can be converted into cash and distributed at the end of the period. Suppose that every group has an agenda setter who can propose a motion to expel members and that this is subject to an up-or-down vote, with no further opportunities to expel members. Since no compensation is paid to departing members, when a member is expelled, other group members effectively expropriate that member's share of group assets, and hence there may be coalitions within the group in favor of expelling other

<sup>13</sup>Formally, utility is taken to be  $-\frac{1}{a}[e^{-ac_1} + e^{-ac_2}]$  where  $c_1$  and  $c_2$  are consumption when prime age and old, respectively.

<sup>14</sup>Hypothetically this preference for admitting members of higher productivity could be neutralized by a system of higher entrance fees for applicants with low productivity, so that existing members would be indifferent whether to accept high- or low-productivity applicants. However, empirically, in the context we examine, observed entrance fees are typically very low. This may well be due in part to borrowing constraints that make it difficult for low-skill workers to pay high enough entrance fees to induce groups to admit them in preference to higher-skill applicants. Indeed, it is standard in overlapping generation models to assume that each new generation starts out without capital. It may be particularly appropriate in this context to assume that the women in each generation of the lowest socioeconomic status would have difficulty saving enough to pay substantial entrance fees to join groups. There is evidence that intrahousehold dynamics make it difficult for women to save in this environment, and in fact some argue that a principal role for women's groups is to shield savings from husbands and other family members (Anderson and Baland 2002).

members if assets are positive and  $\omega$  is not too large. In this case the agenda setter maximizes her own utility by proposing to expel the 49% of existing members with the lowest productivity. Assuming that  $\delta > 0$ , so members typically lose productivity with age, older members will typically be those expelled. This not only allows the remaining members to expropriate the implicit value of their share of group assets, but also to avoid having to share output with lower-productivity members. The larger the group assets, the more incentive to appropriate an increased share by expelling members.

In order to show that the dynamics of group entry are themselves sufficient to generate the phenomena observed by Walzer, even if groups never expel members, in the rest of this section we will focus on a setting in which  $\omega$  is large enough that no group member would prefer to expel existing members and hence groups never do so.<sup>15</sup> It is worth noting that members might themselves choose to limit accumulation of assets each period so as not to create a level of assets great enough to spur expulsions of members during the next period. The provision of large amounts of unexpected external funds could upset this equilibrium.

*Steady States.* We define a steady state as an equilibrium in which the distribution of initial productivity of group members,  $L$ , stays constant over time. To solve for steady state equilibria given some initial distribution of groups with associated levels of member benefits,  $X$ , note first that groups providing sufficiently low benefits for members cannot exist in steady state. If the level of  $X$  in a group is too low, the cost of membership will outweigh the benefits of group membership: in our context such benefits include insuring against shocks as risks to one's labor endowment and providing a savings mechanism as members contribute valuable labor when prime age and in exchange build up equity in the group that allows them to share output with prime-age members when old. There will be a cost if  $X_g$  is negative, so group production is less efficient than private production. Members of groups get higher utility due to averaging individual-specific and generational income shocks, but if  $X$  is sufficiently negative, the expected loss  $X/N$  due to inefficient group production swamps the insurance benefits.<sup>16</sup>

There will be a cutoff value of group-specific productivity,  $X_g$ , which we denote  $X_c$ , such that no group with  $X < X_c$  can exist in steady state. In steady state either the

disadvantaged will not be members of any group or they will be members of weaker groups than more advantaged people. Denote the number of groups per person with  $X$  above  $X_c$  per person as  $q$ . Formally,

*Proposition.* There is a steady state equilibrium in which for any two groups  $i$  and  $j$ , higher group-specific productivity implies higher average member productivity, i.e.,  $X_i > X_j$  implies  $\bar{L}_i > \bar{L}_j$ , where bars denote group averages. If  $q < 1/N$  then there is a cutoff level of  $L$  below which no one is a member of a group, and above which everyone is. Furthermore, if the distributions of  $L$  and  $X$  have positive support along their complete ranges there is no steady state in which  $X_i > X_j$  and  $\bar{L}_i < \bar{L}_j$  for any  $i, j$ .<sup>17</sup>

It is worth noting that we do not show that the steady state above is unique. There may be other equilibria in which some groups are subject to self-fulfilling negative expectations of attracting members of successively lower quality in each generation until eventually no new members want to join at all. We focus here on the most favorable equilibrium, i.e., in which all existing groups with  $X_g > X_c$  survive with  $qN < 1$  and otherwise the  $1/N$  groups with highest  $X$  survive.

<sup>17</sup>Proof: Since the size of each group is  $N$ , if there are fewer than  $1/N$  groups per capita, some individuals will not join groups. Relative to the alternative of not joining any group, in steady state all individuals would prefer to join a group in which a) all other members have their own level of productivity or higher and b)  $X$  is at least  $X_c$ . Moreover, relative to the alternative of not admitting new members, all groups prefer to admit new members with at least as high productivity as the group mean, because this reduces their exposure to risk. To see that there is a steady state in which the most advantaged people are in the strongest groups, note that if at time  $t$  there exists a situation where all groups with high member benefits also have high member productivity, so  $X_i > X_j$  implies  $\bar{L}_i > \bar{L}_j$  and if the same is true at time  $t + 2$ , then at time  $t + 1$  all applicants will prefer to join groups with higher  $X$ . Since all groups prefer to admit applicants with higher  $L$ , the unique equilibrium will be for workers and groups to pair in order of desirability. Induction implies there will be a steady state such that  $X_i > X_j$  implies that  $\bar{L}_i > \bar{L}_j$  in every period. To see that if  $X$  and  $L$  have positive support along their complete ranges there cannot be a steady state in which  $X_i > X_j$  and  $\bar{L}_i < \bar{L}_j$ , note that if the rank order of groups in  $X$  were different than the rank order in  $L$ , then members of a group with the  $j$ th highest level of  $X$  and the  $i$ th highest level of  $L$ , where  $j < i$  could recruit members of slightly higher  $L$  than themselves, since in this case the new members who joined the group would have discretely higher  $X$  and only slightly lower level  $L$  than their co-members. Thus this cannot be an equilibrium. There is no steady state in which a prime-age person of productivity  $L'$  does not join a group and a person of productivity  $L < L'$  does join. The person with  $L' > L$  would like to join the group and the existing members prefer that applicant to the lower-productivity applicant. ■

<sup>15</sup>If one moved beyond a Markov Perfect Equilibrium concept, decisions of groups to expel some members could potentially affect expectations about expulsions in the future, opening up a wide range of outcomes under the folk theorem.

<sup>16</sup>The working paper version (2006) of this article provides a more general and formal version of this argument.

The proposition implies that starting from a steady state, an increase in  $X_g$  of a group with disadvantaged members, whether due to an outside aid program or the efforts of its own members, will have only a temporary impact on the correlation between social status and group membership in society or on the relative strength of groups of the advantaged and disadvantaged.<sup>18</sup> Even if infusions of capital and training programs permanently raise a group's  $X$ , this will only affect the correlation between individual productivity and group quality temporarily. In the long run this will simply lead higher-status people to join the group. To get a sense of the dynamics, note that starting in steady state, if a group  $i$  has a positive shock to  $X$ , it will be able to attract higher-productivity new members in the next period. The presence of these higher-productivity members will enable it to attract members of still higher productivity in the following period. Asymptotically, the human capital level of its members will approach the level that will be commensurate with its new  $X$ .

*Discussion.* Under the model, those of higher socioeconomic status will have stronger groups in the sense that they belong to groups that are able to provide greater benefits to members, i.e., with higher  $X$ . Those of lower socioeconomic status will either not be members of any group or will be members of weaker groups. This is consistent with the findings of Almond and Verba (1965) and the claims of Walzer (2002) and subsequent writers. This result obtains even under the assumption that output is additive in  $L$  and  $X$ , so that there is no overall social efficiency gain from sorting of high-productivity people into groups with high  $X$  and  $L$ . In the model, high-productivity workers are asked to join groups with other high-productivity members and with high levels of  $X$  purely because this is the way that previous generations of group members can extract the most benefit. More generally, there may be complementarity between  $X$  and  $L$  and hence efficiency gains to be had from this type of matching. For example, educated people, such as the schoolteacher who became an assistant chief, may see private career benefits from membership in assisted groups. Complementarity between individual productivity and group strength creates even stronger incentives for the matching of high-skill workers together in groups with the highest  $X$ , but is not necessary for our results to obtain.<sup>19</sup>

<sup>18</sup>Outside of steady state a group could have  $X < X_c$ . In this case, outside assistance could potentially raise the group's  $X$  above  $X_c$ , making a group viable in steady state that would not have been viable otherwise.

<sup>19</sup>Gugerty and Kremer (2006) provide a discussion of how the model could generalize if groups exit with some probability and that with

The model implies that when the number of groups is limited and individuals are constrained in their ability to borrow to pay entrance fees, even a slight difference in the ability of individuals to contribute to group output may lead to a very big difference in participation in organizations among people of high and low socioeconomic status in steady state. Note an important difference in this article from views that stress the importance of education for participation in associations. In our model, differences in the strength of organizations between rich and poor or educated and uneducated will not just be proportional to the differences in the ability of individuals to contribute to these organizations, but may wind up being much greater, because the rich and educated will be in a better position to secure membership in the strongest organizations by virtue of their ability to contribute more to group output. Thus, rather than seeing differences in participation between people of different levels of education solely as a matter of a personal propensity, albeit perhaps one that can be changed by education, the model suggests that these differences may in part be a social phenomenon.

One question is whether this process could be limited if organizations adopted constitutions limiting membership or leadership to members of disadvantaged groups. It is worth noting that (1) only groups with a strong ideological commitment to serve the disadvantaged will make such commitments in the first place; (2) constitutional provisions that restrict organizations' ability to choose members and leaders may create costly inflexibility; and (3) it is hard to make such provisions stick, because in the future members may, at the margin, prefer admitting members of higher socioeconomic status. Even the Chinese Communist Party recently decided to admit capitalists. Note also that the changes outlined here may take place over quite a long period.

## Conclusion

At least since the work of Almond and Verba (1965), it has been known that the disadvantaged are less likely to participate in civic associations, potentially impeding their

some probability people are able to spontaneously form a group. This would produce a steady-state distribution of groups. In the limiting case as the exit and entry probability approach zero, the distribution will converge to the distribution shown here. More generally, the distribution would look similar, but with a bit of churning as new groups enter and approach their steady state. In the limiting case when groups enter and exit infinitely rapidly, the propensity of people to be in groups in steady state will be simply their propensity to form groups and the effects described in the model will not arise.

political influence and economic development. Policy-makers have often responded by funding organizations of the disadvantaged. Yet it has been extremely difficult to assess rigorously either the causal impact of these programs or the causal relationships underlying the correlation between socioeconomic status and participation in civic associations. Many causal stories are plausible and a host of factors can confound attempts to empirically disentangle causal links.

This article takes advantage of random assignment of a funding program to assess causal impact and finds that outside funding has very limited effects on the strength, internal activity, and external outreach of the groups, but finds substantial evidence that funding changed group membership and leadership. We find that members of funded groups reported more satisfaction with group leadership, but there is little evidence that objective measures of internal group activity improved or that groups increased their external activities, although government officials did visit the groups more, perhaps trying to incorporate them into the patron-client relationships that characterize much of Kenyan politics. Outside funding did change the nature of group membership and leadership, however. It encouraged the entry of younger, more educated women and women employed in the formal sector, as well as people from outside the village. New entrants, men, and educated women assumed key leadership positions. The program led to a two-thirds increase in the exit rate of older women, the most disadvantaged demographic group, and a doubling of the rate at which members left groups due to conflict.

The empirical results suggest that, at least in some circumstances, external assistance designed to strengthen local community associations of the disadvantaged may change the very characteristics of the groups that made them attractive to funders and may actually weaken the role of the disadvantaged in these groups. While others have noted that leadership may change in response to external funding, our evidence suggests that more advantaged people sought to enter not only the leadership of these groups, but also the membership. It is also worth noting that in the particular setting we examine, some of the potential theoretical channels linking external funding to changes in groups' organization did not operate. Groups did not become professionalized, and the changes in group structure came about despite the intentions of the donors, not in order to appeal to the donor. The primary channels for change appear to be the result of the politics of group operation: increases in applications for membership, decisions by groups to admit members of higher-status, and increased exit of older members due to conflict.

In spite of these potentially negative effects, we cannot exclude the possibility that this transformation in group membership and leadership had some desirable effects. The entrance of higher-status individuals into groups could help groups to articulate and promote their interests to the outside world. Outside aid may support this process if relatively elite women with preexisting social or political connections have more opportunity to enter the political process, as seems likely under current Kenyan conditions. In our earlier examples, both Wangari Maathai and the women's group leader who became an assistant chief entered their respective groups as highly educated, high-status women. This suggests a potential trade-off between the goals of preserving participation for disadvantaged women in these organizations and creating vehicles to allow greater participation in electoral politics and formal government structures that are likely to favor more elite women.

Our dynamic model of organizations based on the empirical findings illustrates a process through which the cumulative membership decisions of group members over time result in the disadvantaged either having weak organizations or low participation in associations. We show that even in the absence of professionalization or conformance with donor preferences, outside assistance can change group membership and leadership simply by making membership attractive to a broader range of people. Our model is based on women's groups, but similar processes are likely to operate in other contexts, where outside funding of local organizations is intended to support the poor, such as the community-driven development approach of the World Bank. A church or an educational institution serving the poor that receives a generous gift is likely to attract higher-status members or students over time. Thus, for example, many prestigious English private schools, such as St. Paul's, started out as institutions for the poor. To the extent that original donors intended funds to go to the disadvantaged and that governments want to promote these intentions, there may be a legal or regulatory role for the state in ensuring that successful organizations are not taken over by those of higher socioeconomic status.

Our model suggests the conditions under which funded groups will attract higher-status members and leaders and thus also provides some hints about ways in which policymakers or donors could soften the trade-off suggested by our results. One approach would be to concentrate assistance on the very weakest groups and to spread it around more generally, rather than concentrating a relatively large amount of assistance on a few groups, as in the program we examined. Our model suggests this could be effective for two reasons. First, if organizations

of the disadvantaged are not able to survive over the long run, assistance might keep them in existence. For groups for which productivity is below the cutoff level that keeps them in existence, outside assistance that raises productivity will make the groups viable and thus will increase the extent to which the disadvantaged belong to groups. Second, since large transfers may increase group incentives to exclude weak members and expel them from groups, limiting the size of transfers or spreading them across more groups might help avoid this outcome.

Another option might be to design assistance in ways that will not appeal to elites or will disproportionately benefit members of lower socioeconomic status. The formal model assumes that organizations deliver benefits to all members in a similar way, or at least in ways that do not depend on social status.<sup>20</sup> The NGO program we study provided groups with benefits that were likely as valuable to those of higher socioeconomic status as to the disadvantaged. To the extent that benefits from external assistance flow primarily to the disadvantaged, external assistance may be less likely to bring in advantaged members. One reason why women's groups in Kenya have long survived and thrived as organizations of the disadvantaged is that the disadvantaged may value their insurance functions more highly than the better off.

Finally, the model implies that in very polarized societies, organizations that start out with disadvantaged members may never become organizations of the advantaged, even if the organization itself is successful or receives outside assistance, because of the reluctance of high social status members to join groups with low-status members.<sup>21</sup> Together, these implications regarding discontinuities in social status and disproportionate benefits for the disadvantaged may help explain why so many of the successful organizations of the disadvantaged have a religious or cultural dimension. Religious and cultural associations that provide large benefits to those from a particular community but smaller benefits to those outside the community will be less likely to attract outsiders, even if they accumulate assets, and this will be particularly true if there is a sharp discontinuity in social status associated with their identity. Thus there may be more of a tendency

for the advantaged to enter women's groups in rural western Kenya in response to external funding or increases in group productivity, for example, than there would be for more advantaged groups to enter Dalit organizations in India.

If external assistance is designed to boost participation of the disadvantaged, our empirical results and model raise concerns about the impact of development assistance strategies that focus on providing assistance to such groups. Yet it would be rash to conclude that programs to assist community associations are always a mistake. In our view, our results suggest the need for an evidence-based approach to external assistance. This approach provides an alternative to calls for increased foreign aid that too often pay inadequate attention to the potential for unintended consequences and to a generalized pessimistic view that aid never works. In this alternative, aid programs would be phased in gradually, their results would be measured, failed programs would be abandoned, and successful programs would be scaled up. Such an approach would help ensure resources are better used and over time, would make it possible to build up a better picture of when external intervention is likely to succeed.

This study also suggests that a development assistance strategy that focuses largely on strengthening nonstate civil society organizations may ultimately be unsuccessful in improving the participation of the disadvantaged in political and economic life. Such strategies often stress local participation and community-led processes, but our results suggest that the politics of leadership and membership in local organizations will naturally tend to favor the advantaged. An important complementary strategy is to make the state work better for the poor. For example, the state could have a role to play in enforcing the original pro-poor charters of local organizations. Or the state could enact reservation policies that ensure political representation of disadvantaged groups. Combining the approaches to outside funding suggested by our empirical results and model with policies and strategies to develop channels of interest representation and access to the state may have a more profound impact on the equity of participation in civic life.

<sup>20</sup>Technically, this is due to the constant absolute risk aversion (CARA) assumption.

<sup>21</sup>Formally, this is due to the full support condition in the model proposition. If there is a continuous distribution of productivity of members, then in a group with high group productivity but low-productivity members, people of slightly higher productivity will join each generation until eventually the steady state is reached. If there is not full support in the distribution, e.g., there are gaps in the distribution of individual productivity, then a high-productivity group that starts out with low-productivity members will remain with such members, because no one of high productivity wants to join a group in which the other members have low productivity.

## References

- Abt, Nana Araba. 1997. *Ageing in Africa*. Geneva: World Health Organization.
- Agarwal, Bina. 2001. "Bargaining' and Gender Relations: Within and Beyond the Household." In *Gender and Development: Theoretical, Empirical and Practical Approaches*, ed. Lourdes Beneria and Savitri Bisnath. Delhi: Institute of Economic Growth, 445–95.



- Ahlberg, Beth Maina. 1988. "Women's Collective Participation in Development: A Socio-Cultural and Historical Analysis of Mobilization of Women for Collective Action with Special Emphasis on Health and Reproduction." Ph.D. dissertation. Uppsala University.
- Almond, Gabriel, and Sidney Verba. 1965. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Boston: Little and Brown.
- Anderson, Siwan, and Jean-Marie Baland. 2002. "The Economics of Roscas and Intra-household Resource Allocation." *Quarterly Journal of Economics* 117(3): 963–95.
- Ayala, Louis. 2002. "Trained for Democracy: The Differing Effects of Voluntary and Involuntary Organizations on Political Participation." *Political Research Quarterly* 53(1): 99–115.
- Banfield, Edward. 1958. "The Moral Basis of a Backward Society." Glencoe, IL: Free Press and Chicago: University of Chicago.
- Barkan, Joel, and Frank Holmquist. 1989. "Peasant-State Relations and the Social Base of Self-Help in Kenya." *World Politics* 41(3): 259–380.
- Brady, Henry, Sidney Verba, and Kay Lehman Schlozman. 1995. "Beyond SES: A Resource Model of Political Participation." *American Political Science Review* 89(2): 274–91.
- Bratton, Michael, and Nicholas van de Walle. 1997. *Democratic Experiments in Africa: Regime Transitions in Comparative Perspective*. Cambridge: Cambridge University Press.
- Carroll, Thomas F. 1992. *Intermediary NGOs: The Supporting Links in Grassroots Development*. West Hartford, CT: Kumarian Press.
- Cohen, Joshua, and Joel Rogers, eds. 1995. *Associations and Democracy*. London: Verso.
- Duflo, Esther, and Petia Topalova. 2004. "Unappreciated Service: Performance Perceptions and Women Leaders in India." Mimeo. MIT.
- Esman, Milton, and Norman Uphoff. 1984. *Local Organizations: Intermediaries in Rural Development*. Ithaca, NY: Cornell University Press.
- Glaeser, Edward, Giacomo Ponzetto, and Andrei Shleifer. 2007. "Why Does Democracy Need Education?" *Journal of Economic Growth* 12(2): 77–99.
- Gugerty, Mary Kay. 2006. "Information and the Use of Sanctions in Rotating Savings and Credit Associations." Unpublished manuscript. University of Washington.
- Gugerty, Mary Kay, and Michael Kremer. 2005. "The Rockefeller Effect." Unpublished manuscript. University of Washington and Harvard University.
- Gugerty, Mary Kay, and Michael Kremer. 2006. "Outside Funding and the Dynamics of Participation in Community Associations." Mimeo. University of Washington and Harvard University.
- Hammerslough, C. R. 1994. "Women's Groups and Contraceptive Use in Rural Kenya." In *The Onset of Fertility Transition in Sub-Saharan Africa*, ed. T. Loefer and V. Hertrich. Liege: Derouaux Ordina Editions, 267–87.
- Howes, Mick. 1997. "NGOs and the Institutional Development of Membership Organizations: A Kenyan Case." *The Journal of Development Studies* 33(6): 820–48.
- Igoe, Jim. 2003. "Scaling Up Civil Society: Donor Money, NGOs and the Pastoralist Land Rights Movement in Tanzania." *Development and Change* 34(5): 863–85.
- Imbens, Guido, G. King, and G. Ridder. 2006. "On the Benefits of Stratification in Randomized Experiments." Mimeo. Harvard University.
- Kabira, Wanjiku Mukabi, and Elizabeth Akinyi Nzioki. 1993. *Celebrating Women's Resistance: A Case Study of Women's Groups Movement in Kenya*. Nairobi: African Women's Perspective.
- Kahler, Peter. 2000. "Kenya Women Step Up War Against Illegal Brews." Financial Times Information/Pan-African News Agency, November 22.
- Kremer, Michael. 1997. "Why Are Worker Cooperatives So Rare?" NBER Working Paper 6118.
- Mansuri, Ghazala, and Vijayendra Rao. 2004. "Community-Based and -Driven Development: A Critical Review." *The World Bank Research Observer* 19(1): 1–39.
- Miguel, Edward. 2005. "Poverty and Witch Killing." *Review of Economic Studies* 72(4): 1153–72.
- Ndegwa, Stephen N. 1996. *The Two Faces of Civil Society: NGOs and Politics in Africa*. West Hartford, CT: Kumarian Press.
- Payne, Charles M. 1995. *I've Got the Light of Freedom: The Organizing Tradition and the Mississippi Freedom Struggle*. Berkeley: University of California Press.
- Piven, Frances Fox, and Richard A. Cloward. 1979. *Poor People's Movements: Why They Succeed, How They Fail*. New York: Vintage Books.
- Platteau, Jean Phillippe, and Frederic Gaspard. 2002. "The Risk of Resource Misappropriation in Community-Driven Development." *World Development* 31(10): 1687–1703.
- Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Putnam, Robert, with Robert Leonardi and Raffaella Nanetti. 1993. *Making Democracy Work*. Princeton, NJ: Princeton University Press.
- Skocpol, Theda. 2003. *Diminished Democracy: From Membership to Management in American Civic Life*. Norman: University of Oklahoma Press.
- Srujana, K. 1996. *Status of Women in Kenya: A Sociological Study*. Delhi: Kalinga Publications.
- Sundstrom, Lisa McIntosh. 2005. "Foreign Assistance, International Norms and NGO Development: Lessons from the Russian Campaign." *International Organization* 59 (Spring): 419–49.
- Thomas, Barbara. 1988. "Household Strategies for Adaptation and Change: Participation in Kenyan Rural Women's Associations." *Africa* 58(4): 401–22.
- Tripp, Aili Mari. 2000. *Women and Politics in Uganda*. Madison: University of Wisconsin Press.
- Tripp, Aili Mari. 2001. "Women's Movement and Challenges to Neopatrimonial Rule: Preliminary Observations from Africa." *Development and Change* 21: 33–54.
- Udvardy, M. L. 1998. "Theorizing Past and Present Women's Organizations in Kenya." *World Development* 26(9): 1749–61.
- United Nations Integrated Regional Information Networks. 2003. "Rights Groups Condemn Rape by Police." Nairobi, UN Office for the Coordination of Humanitarian Affairs. Published online on February 6, 2003. Accessed at <http://www.irinnews.org/report.aspx?reportid=41462>.

- Uphoff, Norman, Milton Esman, and Anirudh Krishna. 1998. *Reasons for Success: Learning from Instructive Experiences in Rural Development*. West Hartford, CT: Kumarian Press.
- U.S. Department of Health and Human Social Services, and Federal Drug Administration. 1998. *Guidance of Industry: E9 Statistical Principles for Clinical Trials*. Rockville, MD: Center for Drug Evaluation and Research. Accessed at [http://www.fda.gov/Cder/guidance/ICH\\_E9-fnl.PDF](http://www.fda.gov/Cder/guidance/ICH_E9-fnl.PDF).
- Verba, Sidney, Kay L. Schlozman, and Howard E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press.
- Walzer, Michael. 2002. "Equality and Civil Society." In *Alternative Conceptions of Civil Society*, ed. Simone Chambers and Will Kylicka. Princeton, NJ: Princeton University Press, 34–49.
- Warren, Mark E. 2001. *Democracy and Association*. Princeton, NJ: Princeton University Press.
- Webo, Christopher Wanjala. 1997. "International Child Support Fund Agriculture and Food Security Proposal." Mimeo. International Child Support Fund, Busia, Kenya.
- Wolfenson, James D. 1999. "Coalitions for Change." Address to the Board of Governors of the World Bank and IMF. September 28. Washington, DC: World Bank.
- World Bank. 2005. "The Effectiveness of World Bank Support for Community-Based and -Driven Development: An OED Evaluation." Washington, DC: World Bank.