Women's Participation in Local Networks in India: Are Diverse Networks Better?

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Abstract

Using a unique data set from women's participation in local income-generating networks in India, this paper looks at the member profile of such networks to see if women's household outcomes improve from participating in groups with men and/or members of different castes. Preliminary findings show that women who participate in networks with men (either single-caste or mixed-caste) achieve greater control over household savings and income, greater confidence over a range of household decisions, and more influential and informal contacts in the community outside of their income-generating group. Greater variation in wealth within the network also has a positive impact on these outcomes.

1   Introduction

1.1   Overview and hypothesis

Recently, a strong interest has emerged in the developing-country literature regarding women's participation in local organizations, and how such participation influences household and community decisions by increasing women's knowledge and support networks when educational and economic opportunities are not available.[1]   The benefits of such participation, including sharing of knowledge, may also be dependent on the characteristics and knowledge of other members in the group. In this paper, I seek to address whether, in the context of rural India, women participating in

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[1]Studies on the effects of women's participation in credit schemes include Hashemi, Schuler and Riley (1996), Pitt and Khandker (1998), and Weinberger and Jutting (2001); Chattopadhyay and Duflo (2003) also look at women's participation in local government.

community groups involving men and/or different castes are in turn more influential over a range of household economic decisions – including their role and confidence in making a variety of household responsibilities, being able to keep personal savings and a larger share of their own income for personal expenditure, as well as developing an increased personal network of community members who can help and support her with the household economy. Using a unique data set collected from women's participation in community income-generating networks organized by the World Bank Madhya Pradesh District Poverty Initiatives Program (DPIP) in India, preliminary results in this version of the paper indicate that women participating in mixed-gender, mixed caste networks have indeed experienced greater benefit in a variety of measures of household economic influence, as compared to women's-only and/or single-caste networks and non-project (control) villages.

One of the biggest obstacles to rural economic growth in developing countries is its isolation from urban centers and markets. As a result, knowledge and skills sharing are limited, particularly for women where social and cultural barriers often restrict their schooling and economic opportunities. Compared to poverty programs which focus only on individual or household development, community networks have a greater scope for spreading knowledge and mobilizing resources among members in rural societies that are geographically isolated. This holds especially true for women, since participation in such local organizations can increase their influence in community and household decisions by widening knowledge and support networks when educational and economic opportunities are not available.

That such programs have a positive impact on participants is generally known, and this fact is confirmed in the paper. However, I try to advance the meaning of "participation" to show that women in more "diverse" networks (ethnicially and/or by gender) achieve better household outcomes and greater influence in their own household economic decisions than do women in more homogeneous groups. This last claim is the main hypothesis that will be tested empirically in this paper.

Why would group diversity be beneficial? In practice, and in the recent peer effects and public goods literature, heterogeneity in groups is viewed as an obstacle to Pareto efficient allocation of resources. It is generally harder to tailor policy and redistribute resources among individualswho are more diverse in their preferences than, taking an extreme example, a single-race or single-gender group.

The peer effects literature on group diversity, mainly focused in the schooling context, has found peer groups (as defined by a school or class) that are homogeneous in ability and behavior to experience better educational outcomes. Lazear (2001) shows theoretically that where there are "disruptive" students who produce a negative externality, "educational output" as a public good is maximized by segregating students on the basis of how well-behaved they are.[2]   Fertig (2003)

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[2]Lazear (2001) also finds that educational output per student is higher in larger classes with better-behaved students than smaller classes with less well-behaved students. However, more than size it is the finding that

also finds, using test scores from the 2000 Program on International Student Achievement (PISA), that greater variation in student test scores within a school has a strong detrimental impact on the same achievement of individuals, controlling for other factors and an individual's choice to be in that school.

In the public goods literature, the general finding is also that diversity, measured by the number of ethnic groups in a particular locality, delays the time needed to reach an agreement over allocation of public goods. Using data on U.S. cities, Alesina et. al. (1999) show that shares of spending on such public goods as education, roads, and sanitation are negatively impacted by the level of "ethnic fragmentation" or conflict in these areas, even while controlling for other socioeconomic and demographic variables. Alesina and Spolare (1997) discuss the impact of the increased "size" of countries, whereby larger countries do enjoy economies of scale, but greater heterogeneity of the populace makes it much more difficult to design public policy. Easterly and Levine (1997) and La Porta Lopez de Silanes et. al. (1999) show how national outcomes other than public goods provision, such as democracy, political instability, economic openness and and other measures of government quality, are negatively affected by ethnic fragmentation in a society.[3] Finally, Dasgupta and Kanbur (2003) show how ethnic conflict can be mitigated by the provision of a common public good to both communities, as long as both are segregated by their own individual characteristics.[4]

However, while the the literature advocating homogeneity in groups does so from a preference perspective, there is a potential gain to group output when members come from different backgrounds and have specialized skills (Clark and Kanbur (2004)). Thus, from a comparative advantage and production point of view, where all members have different specializations but jointly handle the output, including members in a group from different backgrounds would be an advantage. An added attraction of such groups would be if members of lower ability could actually learn from more skilled members, thereby raising the overall skills set of the group (Lazear (2001)).

Few studies to date have looked at the *member profile* of the networks women participate in and how it may affect women's influence over household decisions. One exception is Pitt and Khandker (1998), who show that across three group-based credit programs in Bangladesh, program credit has a larger effect on household labor supply, schooling, and other household outcomes for women's groups than those for men. A demographic study by Madhavan et. al. (2003) also looks at women's social networks in Mali and how the penetration of their social network by family members negatively impacts fertility decisions such as contraception. One reason, perhaps, for the relatively small developing-country research on the effects of interacting with members of different

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homogeneous groups of students do better which is relevant to the argument presented in this paper.

[3] Since I look at small group networks in this paper, however, my hypothesis is not necessarily a contradiction of country-level studies on ethnic fractionalization. This is because diversity is likely to have a much different impact when interacted with size of the group.

[4] Varshney (2002) also supports the notion that the formation of "associational", as opposed to day-to-day, interactions between communities can help reduce ethnic strife.

caste and gender is that existing groups often tend to be either all-male or all-female and include members of a similar socioeconomic background (a primary example are Self-Help Groups (SHGs) in India, which are small credit associations). Interaction between men and women (as well as different castes) are often not encouraged as such "mixed" groups are more complicated to manage. Recent literature on peer effects also shows how peer groups tend to form along gender lines: Arcidiacono and Nicholson (2002) present an analysis using data from medical school students to show how peer groups tend to be segregated by gender; and looking again at schools, classes with only female students have been found to raise the amount of time spent on instruction and less on other activities such as discipline (Betts and Shkolnik (1999)).

In this paper, I present results from a household survey that I conducted between November 2003 and February 2004 in the state of Madhya Pradesh in India. Ever-married women across twelve villages (ten program and two non-program) in three program blocks were surveyed in the northwestern district of Shajapur, to see how participation in DPIP had affected their influence in household decisionmaking.[5] One advantage of having collected primary data is that I was able to design the survey to capture relatively measurement-free changes in respondents' household outcomes, as well as collect detailed data on the characteristics of their neighborhood as well as the other members of the network who were participating. Since women's participation in mixed-gender and mixed-caste groups (as well as combinations of the two) exist under DPIP, it provides a basis on which to test the main hypothesis of this paper. Also, in the socioeconomic and cultural context of this region, responsibilities and skills were found to be highly stratified across gender and caste, and therefore the "comparative advantage" argument can also be assessed.[6]

1.2   Obstacles

There are two main obstacles in this paper: how to econometrically identify the effect of program participation, and also how to define "influence" over household economic decisions.

For the first, the impact of participation in a particular group might work through different channels (Manski (1993, 2000)). The impact may be *contextual*: exogenous characteristics of other group members (such as landed status, caste and gender) may directly impact a member's individual outcomes; however, such effects may also be *endogenous* (the individual's behavior is a function of other group members' behavior) or *correlated* (members of the same group tend to behave alike and therefore experience similar outcomes). In addition, program targeting itself may

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[5]A block is the next-largest administrative unit after the district; it is a collection of townships and villages.

[6]In the sample collected, occupations were often determined by caste (higher castes, for example, were more likely to be involved in agriculture, and lower castes in unskilled labor). The roles and experience of men and women were also highly defined: although men certainly had more general knowledge of outside market activities and greater interaction with local and outside businessmen, women were found to be more knowledgable about the amount of household food and non-food expenditure, prices of foods and other household commodities, and basic household necessities such as fetching water, etc.

be non-random (in this study, as will be described further in the paper, targeting at the block level can be considered random, but targeting of villages within selected blocks was certainly not).

As I describe in the empirical strategy in Section 3, by surveying control villages that were exogenously targeted by the program, surveying non-participants in program villages, as well as using instruments to control for endogeneity in participation, I am able to identify the effect of participating in more diverse groups. Furthermore, although this is a cross-section survey, I also asked a series of retrospective questions over household outcomes and covariates to see how household behavior had changed before and after DPIP was introduced. I am also planning to apply data combination methods to match households with a DPIP baseline survey conducted at the onset of the program in 2001; this survey was conducted in the same area and includes some of the same villages (although very few of the same households).

As for developing adequate measures of women's economic influence in the household, this is certainly a very subjective and difficult task. Quisumbing and Maluccio (1999) divide determinants of women's household bargaining power into four main categories: 1) control over resources, including assets; 2) taking advantage of, or acquiring, such things as legal rights, skills, information, and education; 3) development of interpersonal networks outside the household, and 4) basic attitudinal attributes such as self-esteem and self-confidence. Since I am interested in the change in women's *behavior* in the household before and after DPIP was introduced, I focus on a group of outcomes that span these four categories but, barring one, do not relate to her experiences before she joined the household.

I first look at women's participation over a range of fifteen household responsibilities, including major household purchases, children's schooling, savings and loans, market activities, and health-care for different members of the household. For each of these tasks, I asked both whether the woman made the final decision in the household, whether she just participated, or was not involved at all. I also elicited her level of confidence, on a scale of 1 to 5, as to how well she could carry out the responsibility on her own if the final decisionmaker was not present and left it entirely up to her.[7] I also asked, for the same range of tasks, who in her natural family (parents, siblings, etc.) participated in or made the final decision; this is to help characterize her background before she was married and moved to her husband's home.

Second, I look at personal outcomes that also impact her influence over economic decisionmaking in the household, but are not directly related to actual decisionmaking. These include changes in personal savings relative to total household savings and total expenditure per capita, as well as how her personal support network outside the household in dealing with such decisions has changed (across different communities and her own/neighboring villages).

Finally, I asked respondents to detail the amount and nature of transfers between herself and

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[7]Women in this sample were almost never the final decisionmaker; they are traditionally secluded and hence this question was included to describe further what her actual capabilities were.

her husband, other household members, her natural family, as well as members from hers and neighboring villages over the past year, as well as whether overall transfers for each group had changed over the past two years (which was the earliest entry point of DPIP into any targeted village).

In this version of the paper, I present outcomes for participants in DPIP compared to control village respondent outcomes (for the time being, excluding comparisons with non-participants). Data for six out of the twelve villages (4 program villages, 2 control) is used to characterize the results, which are derived using OLS, instrumental variables, and probit regressions. As mentioned above, preliminary results show that, controlling for a range of household and individual covariates and instrumenting for participation, women participating in mixed-gender, mixed-caste groups achieve better outcomes both at the household and community level.

This paper is organized as follows. Section 2 provides an overview of DPIP, including its strategy for targeting individuals and villages. Section 3 describes the empirical strategy. Section 4 presents the data collection methodology and describes respondents' outcomes across different villages. Section 5 discusses the results.

2   Context

2.1   Madhya Pradesh District Poverty Initiatives Program: DPIP

DPIP was started by the World Bank in early 2001 to alleviate poverty in about 2,000 of the poorest villages, spanning 14 districts, in the state of Madhya Pradesh (MP). MP is a predominantly rural state. About 44 million people (73 percent of the population) live in rural areas, and a significant portion (23.3 percent) of this population is tribal. Poor governance plagues MP's rural institutions, and the state's rural population continues to rank among the lowest in India in terms of social indicators. In 1999-2000, the rural poverty rate in MP was 37.1 percent, far above the figure for rural India overall (27.1 percent) and fourth highest among the 16 states.

Poverty-stricken households in rural Madhya Pradesh therefore experience significant uncertainty in day-to-day life. Lack of infrastructure, limited access to social services such as health and education, as well as underdeveloped markets and lack of formal sources of credit destabilize the flow of earnings into the household and make consumption smoothing extremely difficult. This problem is worsened by 1) lack of organization among the poor, and 2) the lack of responsiveness of local government institutions to the needs of the poor (World Bank [2000]). While local government bodies at the district and even village level have been given clear authority to collect taxes, very little revenues are being generated because of weak administrative capacity and the reluctance of taxpayers to pay for local public services. The resulting shortfall in local public services and infrastructure is further aggravated by lack of collective action at the village level.

Women, in particular, have suffered greatly in these conditions. The 14 DPIP-targeted districts

are characterized by extremely low female-to-male gender ratios (between 848 and 946 women for every 1,000 men). Low levels of female literacy also persist in these districts, particularly among Scheduled Caste (SC) and Scheduled Tribe (ST) women (1.5 - 18.4% for SC women, and 3.4 - 27.8% for ST women). These districts are also are characterized by high female infant mortality rates (between 159 and 234 per 1,000 deaths, as compared to the state average of 96 per 1,000 deaths).

The motivation for DPIP was threefold: 1) to create income security opportunities for the poor, 2) encourage participation from such disadvantaged groups as women and lower castes, and 3) improve the accountability of District and Gram Panchayats (district and village governments), as well as create other local service and support organizations within the community (World Bank 2000). The main approach of the program is through the development of "community interest groups" (CIGs), which are networks of about 5 or 6 members from different households to participate in an income generating activity, such as raising livestock, growing new crops, forming a small business, etc. These CIGs can be women-only, men-only, mixed gender, single caste, or mixed-caste. Women who participate are almost always ever-married. One additional feature of these groups is that they access the funds for their activity from a joint bank account, and thus saving was also encouraged by the program.

2.2   Targeting

At the onset of the program, for each of the 14 targeted districts, DPIP selected certain village blocks (next-largest administrative units within the district) that were considered to be among the poorest in the district. This did not necessarily mean that all non-targeted blocks were less poor; efficient targeting was also a function of resource constraints.[8] Within each targeted block, villages were then selected on the basis of their proportion of Scheduled Caste/Scheduled Tribe (SC/ST) households, households migrating seasonally for labor, households without permanent dwellings or living in temporary shelter, and all women and/or women-headed households.[9]   Finally, in each selected village a village-level wealth ranking for all *families* was conducted, on the above factors as well as land ownership, livestock, and other asset holdings (whether the household owned a bicycle, radio, TV, or any large agricultural tools). "Families" in this case are subsets of "households"; in the case of a joint-family household, for example, DPIP considered all nuclear families separately. The lowest 70 percent of families in the wealth ranking were then declared to be the beneficiaries for the program. In some cases, the entire village was targeted if all or a sufficiently large number of families were deemed to be very poor.

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[8]More information on targeted blocks is available on the DPIP website, http://dpipmp.mp.nic.in/ .

[9]In general, Scheduled Castes and Scheduled Tribes are considered to be the most economically disadvantaged castes in India, followed by Other Backward Castes (OBCs). At the top are General castes, which include Brahmins and Rajputs.

Targeted families were then asked to form CIGs of about 5-6 members, leaving to them the choice to participate and with whom to form the CIG; the only constraint was that more than one family member could not be part of the same CIG. For each CIG, DPIP allocated 20,000 rupees (about US$400) per member in a joint bank account from which they could withdraw for the income generating activity (with permission from overseeing DPIP officials).[10] Total costs for the activity were also borne by DPIP, although the CIG was responsible for making a contribution to a community fund equaling about 10 percent of the total budgeted cost.[11]

2.3   Existence of other groups

The only other government community program operating in these villages were Self-Help Groups (SHGs), which are small credit associations involve groups of women of about five to ten where they contribute a fixed amount of money (normally about 30 rupees, each month into a common pool, to be retrieved from in times of need. Many women participating in DPIP were also members for SHG; almost all of these groups were single-caste and there were no male members in the sample.

3   Estimation Strategy

In this paper I estimate the impact of program participation in different networks on a set of outcomes related to women's influence over household economy.   There are a set of villages, $j \in \{1, ..., m\}$. For all villages $j \in \{1, ..., m\}$, there exists a set of households in that village $i = (1, ..., n_j)$; a share of which are participants, another share targeted non-participants, and the final share constituting respondents from non-targeted (comparison) villages. A share p out of the m villages are targeted; the remainder $(m - p)$ are comparison villages. Targeted non-participants are included to measure spillover effects in targeted villages, and both non-participants and control village respondents are used to account for changes in household decisionmaking that may simply occur over time.

Participants in the targeted villages self-select into a specific network $k, k \in \{$*all women-same caste, mixed gender-same caste, all women-mixed caste, mixed gender-mixed caste*$\}$.   Although "participation" can be a multifaceted concept, I initally employ a binary variable $D_{ij,k}$ taking the value 1 if individual i participates in network k, and 0 otherwise.[12]

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[10] DPIP officials were in principle not to be connected with local government officials in any way; in the district in which this survey took place, this was certainly true. However, there were reports of local government officials becoming involved in DPIP projects in other northern districts in the state, as well as claims of corruption in the distribution of funds.

[11] This community fund was to be drawn from for village-level activities after the five-year period for which DPIP was to be active was complete. This contribution to the community fund could be made in cash, or if a CIG member did not have the money upfront, he or she could do labor under DPIP and give the contribution from labor earnings.

[12] In the outcome equation, I also include I am also planning to include 1) the respondent's role in the network (whether general member, accounts-keeper, calling meetings, etc.), as well as 2) the amount of money the respondent

Since not all targeted families decide to participate, endogeneity of participation is an issue and two reduced-form equations (one for program participation in network $D_{ij,k}$, and the other for household outcomes y_{ij}) are needed. For participation in a network k,

$$D_{ij,k} = \beta_D X_{ij} + \pi Z_{ij} + \delta_j^n + \upsilon_{ij} \tag{1}$$

Where X_{ij} is a vector of individual and household demographic characteristics (i.e. adult male and female literacy, income, total expenditure per capita, etc.), Z_{ij} is a vector of individual, household and/or village characteristics that are uncorrelated with household behavior conditional on their participating in the program, δ_j^n is a village fixed effect, and υ_{ij} is a random error reflecting, in part, unmeasured determinants of D_{ij} that vary over households such that $E(\upsilon_{ij} | X_{ij}, Z_{ij}, \delta_j^n) = 0.$[13]

The reduced-form equation (2) for individual i's household behavior Y_{ij} (such as control over personal savings, income, etc.) is:

$$Y_{ij} = \beta_y X_{ij} + \alpha D_{ij,k} + \gamma D_{ij,k} N_{ij} + \delta_j^y + \varepsilon_{ij} , \tag{2}$$

where N_{ij} is a vector of additional network characteristics (how long the CIG has been active, the respondent's role in the network, etc.), δ_j^y is a vector of unobserved variables determining y_{ij} that are fixed within the village, and ε_{ij} is a random error reflecting, in part, unmeasured determinants of Y_{ij} that vary over households such that $E(\varepsilon_{ij} | X_{ij}, N_{ij}, \delta_j^y) = 0$.

The main obstacle to estimation arises from possible correlation of δ_j^y with δ_j^n and of ε_{ij} with υ_{ij}. Ignoring such correlation can lead to bias in the estimates for equation (2) since the choice to enter the program, $D_{ij,k}$, may be endogenous. Whether or not a household participates in the program is the outcome of two possible reasons: 1) whether the village is targeted, and, 2) conditional on the village being targeted, whether the household actually does participate. The latter depends on whether the household falls under the targeted population by the wealth ranking, and also if the household decides on its own to participate.

3.1   Addressing endogeneity in estimation

There are two possible sources of endogeneity: 1) endogeneity in program targeting, and 2) endogeneity in program participation. The first induces a bias in measuring the average treatment effect (conditional on being targeted) of targeted observations compared to non-targeted observations –

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has withdrawn from the joint account each CIG holds, as an additional explanatory variable reflecting participation in the network.

[13] As will be mentioned below, in some cases there were multiple women participating in the program from the same household. However, in none of the cases did women from the same household (not family) participate in different CIGs.

if the non-targeted observations are defined by some non-exogenous rule (i.e. the village or family is wealthier, etc.). In this paper, the issue of targeted versus non-targeted observations lies at the village level.

The second source of endogeneity creates bias if the choice to participate is correlated with unobserved characteristics of the targeted individual that are correlated with household behavior. This problem relates to comparisons between targeted non-participants and participants, as well as between participants in different networks. Since unmeasured household and individual attributes may affect both what type of network a woman participates in as well as her influence over decisions in the household, exogenous instruments for both the decision to participate as well as which network k to join are needed to partial out this correlation. Also, when trying to compare outcomes between participants and targeted non-participants, treatment is determined by self-selection so a proper control group using matching estimators would need to be defined.

I try to resolve these problems with the survey design, which collects data from one of the 14 targeted districts in MP – participants and targeted non-participants in ten program villages, as well as respondents from two non-program villages that come from one of the non-targeted blocks.

3.1.1 Endogeneity of program targeting at village level: finding a control group

Since the program's emphasis is on poverty alleviation, only villages that program officials construed to be at high risk to income shocks, illness, and low rainfall were actually targeted. This presents a potential difficulty in estimation if non-project (comparison) villages are used that could have been targeted by the program, but were ultimately not. If such villages were not selected because they are wealthier or have greater income security, for example, comparing program and control villages in this framework could lead to a downward bias in the program effect estimates on household behavior. Consider the classic problem of measuring treatment effects when treatment is not random (taken from Imbens and Angrist [1994]): let the treatment, T_i, be equal to 1 if the village is treated, and 0 if not. Let $Y_i(1)$ be the outcome under treatment, and $Y_i(0)$ if there is no treatment. We observe Y_i and T_i, where

$$Y_i = T_i \cdot Y_i(1) + (1 - T_i) \cdot Y_i(0) \tag{3}$$

Strictly speaking, the treatment effect for unit i is $Y_i(1) - Y_i(0)$, and the average treatment effect is $\tau = E[Y_i(1) - Y_i(0)]$. However, we only observe the treatment outcome on the treated:

$$\tau_{treated} = E[Y_i(1) - Y_i(0)|\, T_i = 1] \tag{4}$$

If T_i is nonrandom, then simply comparing the average outcome of the treated to the average

outcome of the untreated will estimate

$$E[Y_i(1)|T_i=1] - E[Y_i(0)|T_i=1] \tag{5}$$
$$\neq E[Y_i(1) - Y_i(0)|T_i=1]$$

Thus, the bias is:

$$E[Y_i(0)|T_i=1] - E[Y_i(0)|T_i=0] \tag{6}$$

We could correct for the bias if $E[Y_i(0)|T_i=1]$ was observable, but we cannot measure the household behavior of a targeted village in the absence of targeting when it actually *was* a program village. If villages were randomly targeted, $E[Y_i(0)|T_i=1] = E[Y_i(0)|T_i=0]$ and there would be no bias.

Therefore, in my survey design I made use of DPIP's exogenous rule at the onset of the program to only target three of the eight blocks in the district where the survey took place. Poverty was one criterion, but resource constraints prevented all the poorest blocks from being targeted. Although resource constraints could also be construed as one component of non-random targeting, the district in which the survey was conducted had the specific feature of the poorest four blocks being located in the northern part of the district, whereas the remaining blocks (which were larger, had a greater literate population, and more wealthy) were in the southern region. Furthermore, the fourth non-targeted block in the north was very similar to the three targeted blocks in terms of size, caste composition, sex ratio, literacy, cultivation, and many other factors which are detailed in the following section. As the source of control villages, I therefore chose villages in this northern block, which essentially had been exogenously not targeted by DPIP.[14] This exogenous rule defining the comparison villages allows the outcomes between participants and respondents from control villages could be compared directly, and rules out the potential correlation between δ_j^n with δ_j^y in equations (1) and (2), respectively. In addition, the control villages also share very similar characteristics to the program villages I surveyed, including food security, participation in other poverty programs, caste inequalities, and preferences for income generation. I discuss the characteristics of the sample villages and blocks in more detail in the following section.

3.1.2 Endogeneity of participation within the village: finding instruments

In this paper, the potentially endogenous choice for targeted individuals within a program village is whether or not they participate in a more heterogeneous network. Participation itself is not considered an endogenous variable since it is tied with the decision to join a particular network; hence we are essentially looking at only one choice that each individual makes. One standard

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[14]This was also verified by surveyors who conducted the baseline survey for the program in 2001, and had selected the same control villages.

approach to resolving the problem of endogeneity in an explanatory variable is find an instrument to partial out the correlation of that variable with the error; in the equation (1) set out above, Z_{ij} are the identifying instruments. However, when comparing participants versus non-participants, a proper control group also needs to be defined. I first discuss possible instruments, and then go on to show how, in the presence of non-random selection into the program, treatment effects can be determined for participants versus non-participants by properly defining control subjects for each participant.

When comparing participants versus non-participants, in the absence of any randomizing variable to determine participation, a good instrument would represent the cost to participation, while being uncorrelated with household behavior. Since the program involves income generation, and actual financial costs of the activity are borne by DPIP (other than the CIG contribution, which is nominal), the main cost to participating is time. Unfortunately, comparable data on time allocation of respondents is difficult to measure and verify (in many rural households, for example, day-to-day activities vary according to the season or time of year). Time allocation is also likely to be correlated with influence over household decisions. Other possible sources of instruments are sudden exogenous shocks to the household that have occurred over the past two years, such as short-term illness or disability, which might impact the household's need for extra income. One problem with these variables, however, is that they are likely to be correlated with household decisionmaking, particularly since respondents in this sample are female and therefore are possibly more likely to change their household behavior patterns in response to such shocks than men.

Looking outside of household-specific variables, therefore, as an instrument for participation I use whether the respondent was met personally by one of the program officials at the onset of the program. Targeted participants and nonparticipants could have first learned about the program from a number of people: family members, friends and/or acquaintances within the village, or the program officials themselves. DPIP officials normally introduced village members to the program through community gatherings, but at times women were also approached personally in their households or other public places in the village. These visits were more or less random, since program officials did not have any prior information about the household characteristics of women who they visited and these visits were therefore likely to be uncorrelated with the unobservable household characteristics of these women (the only exception was that women in the local *panchayat*/village council, who were also more likely to be more influential in their own household, were almost always visited, but there were very few female village council members overall and only one appeared in the sample for this paper). The correlation coefficient between the respondent's participation and whether she was visited by a program official was quite high (0.33); about 82% of participants had also been visited personally by a program official, compared to 49% of nonparticipants.

After participation, the other two variables that need to be instrumented for relate to which network a participant decides to join. Since the two broad categories of "heterogeneity" in this

paper relate to gender and caste/community, I found two variables which instrument separately for whether the respondent decides to join a mixed caste group and whether she is part of a mixed-gender CIG. For the latter, I use whether the CIG was formed in the last six months of the year (after the April/May harvest, and therefore a time when most men would be busy in this region). This variable is unlikely to be correlated with the respondent's status in the household, and also turns out to be negatively correlated with whether the group has male members (although the correlation coefficient, -0.10, is smaller than the previous instrument). As for whether the respondent is in a mixed-community CIG, I chose as an instrument the share of households of the same community in the participant's geographic "neighborhood" (I took ten households as the defining neighborhood).[15] Indeed, in the data this neighborhood instrument has already been found to be strongly positively correlated with whether they actually joined a mixed-community network (correlation coefficient was 0.28): since participants form their own CIGs, they are more prone to form groups with individuals they know or are comfortable with. And as most households in the sample have not migrated or moved from their location, the ten-household neighborhood instrument is also likely to be uncorrelated with the household decisionmaking outcomes for respondents, and is sufficiently small so as not to impact outcomes measuring changes in their network of contacts since the program began. Finally, it was found through qualitative analysis that most women's household behavior was strongly governed by their own caste or community, and since villages were also small (about 200-300 households), it was never that such groupings of 10 or so households were at all isolated.

3.2 Defining control groups for participants: propensity score matching

3.2.1 Overview

Since non-participants in this survey were also targeted by DPIP, their decision not to participate was deliberate. Some indicated that they were either not allowed to join or had no faith in the program; however, the majority claimed that their main reason for not joining was that they had been unsuccessful in forming a CIG up until now. Hence, in comparing participants with targeted non-participants, there is no exogenous rule by which a control group could be defined. Although there were non-targeted members in the village who were more or less exogenously ruled out from participating by the village-level wealth ranking, targeted non-participants were chosen instead to be able to define a better control group since their observed covariates (including caste background and economic circumstances) were more similar.[16] This also allowed for a similar sampling design

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[15]Information on who lived in the vicinity of each household in the villages was obtained from DPIP, who had conducted a village-level enumeration for each targeted village at the onset of the program. Enumeration data for the control villages was also obtained from the baseline survey conducted in 2001.

[16]Most non-targeted households were upper-caste, for example, and were economically better off in terms of asset holdings and income. Potential differences in unobserved characteristics are also reduced (although certainly not

across all villages, since as mentioned before there were some villages in which the entire population was targeted.

To define a control group among individuals who self-select into the program, I use propensity score matching to reduce the bias in estimation of treatment effects. Following Rosenbaum and Rubin [1983], the propensity score is the conditional probability of receiving a treatment $T_i \in \{0, 1\}$ given pre-treatment characteristics X_i:

$$p(X_i) = P[T_i = 1 | X_i] = E[T_i | X_i] \tag{7}$$

The propensity score $p(X_i)$ summarizes the observed exogenous characteristics of individual i, and if treatment assignment is *strongly ignorable,* for each participant a non-participant with the same propensity score can be matched as a control unit. Treatment assignment is "strongly ignorable" (i.e. can be considered random) if household behavior Y_i is independent of T_i given X_i, and therefore also random among observations that have the same $p(X_i)$ (Rosenbaum and Rubin [1983]):

$$Y_i(1), Y_i(0) \perp T_i | X_i \Longrightarrow Y_i(1), Y_i(0) \perp T_i | p(X_i) \tag{8}$$

The propensity score therefore provides a basis for matching participants and control units with the same value of $p(X_i)$. Assuming that treatment assignment is strongly ignorable given X_i, at each value of the propensity score $p(X_i)$, the difference between the treatment and control means is an unbiased estimate of the treatment effect at that value:

$$\begin{aligned} \tau_{treated} &= E[Y_i(1) - Y_i(0) | T_i = 1] \\ &= E\{E[Y_i(1) - Y_i(0) | T_i = 1, p(X_i)]\} \\ &= E\{E[Y_i(1) | T_i = 1, p(X_i)] - E[Y_i(0) | T_i = 0, p(X_i)] | T_i = 1\} \end{aligned} \tag{9}$$

One advantage of using the propensity score to match participants with control/non-participant observations is that it is far easier to use, since X can be quite large and thus matching on all covariates unwieldy. The propensity score will also identify units that have no corresponding match, and these estimates outside the common support of the propensity score will be dropped to reduce bias in estimating the treatment effect.

However, while the propensity score is good for matching on observable characteristics between participants and non-participants, if there are significant differences in unobservable characteristics, then the conditional independence assumption set forth in equation (8) is violated and there is still bias in measuring the average treatment effect (Heckman et. al. [1998]). For example, there may be differences in household history and/or social dynamics that persist among participants and

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eliminated) by choosing a reference group that is targeted by the program (see Heckman et. al. [1998]).

non-participants in the sample and across different villages.

In Tables C2 and C3 in the results, I present estimation using propensity scores and instrumental variables (namely, the respondent's being visited by a program official as the instrument) to isolate the treatment effect on participants within a targeted village. The methodology I employ, described in Section 3.2.3, uses a procedure from Heckman et. al. (1997).

3.2.2 Addressing unobservable characteristics across individuals

One solution is the instrumental variables procedure described above to partial out unobserved correlation between individual i's household behavior and her participation in the program. This was used for household outcomes that were not elicited over time (the respondent's current role in a range of household decisions, as well as how confident she was that she could perform the same range of decisions in the absence of the main decisionmaker).

Another, looking at household outcomes for which changes were elicited before and after the program began, is to use the difference-in-difference estimate. If we assume that unobserved differences between matched pairs are time invariant, and then take the difference between each individual's outcomes and observed characteristics before and after the introduction of the program in the village to remove the time-invariant sources of bias. Dropping the village subscript j, and taking Y_{0it} to be individual i's household behavior before the introduction of the program, and Y_{1it} to be the outcome after the program has been introduced,

$$Y_{i0} = \beta X_{i0} + \eta_i + \nu_{i0} \tag{10}$$
$$Y_{i1} = \beta X_{i1} + \alpha D_{i,k} + \gamma N_i + \eta_i + \nu_{i1}$$

where X_{it}, $t = \{0,1\}$, are individual i's observed covariates before and after the program has been launched, $D_{i,k}$ and N_i are participation in a network k and other network characteristics, respectively; η_i is a time-invariant vector of unobservable characteristics (including village characteristics) specific to individual i and which could be correlated with participation, and ε_{it} is a random error such that $E(\nu_{it}|X_{it}, D_{i,k}, N_i, \eta_i) = 0$. Taking the difference between the two equations in (10) gives:

$$Y_{i1} - Y_{i0} = \beta(X_{i1} - X_{i0}) + \alpha D_{i,k} + \gamma N_i + (\nu_{i1} - \nu_{i0}) \tag{11}$$

If there are certain variables in X which are unchanged over time but still affect changes in Y (such as adult literacy), equation (11) can be re-estimated as:

$$Y_{i1} - Y_{i0} = \beta_1 X_{i1} + \beta_0 X_{i0} + \alpha D_{i,k} + \gamma N_i + (\nu_{i1} - \nu_{i0}) \tag{12}$$

Taking another difference between the treated and control pairs gives the following estimate of the causal impact of participation in the program:

$$E[Y_i(1) - Y_i(0)|T_i = 1] = E[Y_{i1}(1) - Y_{i0}(1)|T_i = 1] - E[Y_{i1}(0) - Y_{i0}(0)|T_i = 0] \qquad (13)$$
$$= E[\Delta Y|T = 1] - E[\Delta Y|T = 0]$$

As mentioned in the Introduction, although I do not have direct observations on all Y and X relevant to this survey before and after the program, a set of retrospective questions were asked of respondents over most household outcomes and covariates as to what they were currently experiencing and what they had experienced two years ago (when DPIP first started making its entry into villages). Table 15 details which variables have been elicited over time, and which reflect only the individual's current experience.

This is of course not ideal, as obtaining a true panel would eliminate measurement error associated with respondents' ability to recollect information, but in the absence of panel data it provides one way of deriving estimates of change. Also, the time period over which changes are elicited is fairly short, and the changes in these variables (such as literacy, change in occupation, land, and livestock, as well as changes in the respondent's own control over resources as well as her social network in the community) are much easier to measure than variables which are traditionally prone to measurement error, such as income, monetary transfers, and expenditure.[17]

Another option is to use observations repeated from use the baseline study conducted by DPIP in 2001, which collects data on a subset of the villages looked at in this survey (both control villages are also the same). However, looking at the baseline, very few observations were actually repeated in the current survey. One main reason is that the respondent profile for program villages in the baseline was different (a random sample of *all* households participating in DPIP, whereas in this survey only a random sample of households where women were participating was taken). As a result, although most household covariates were repeated, many outcomes centered on women's household roles and interaction with members of the community were not asked in the baseline. Also, non-participants were not interviewed in the DPIP survey. I therefore do not employ this strategy in estimation.

3.2.3   Implementing the propensity score

One can use the propensity score to match participants and non-participants on observable covariates X, and then use instrumental variables as well as a panel to account for unobserved differences between participants and non-participants. I will calculate a propensity score on the basis of the

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[17]For such variables as income, transfers, and expenditure, changes were elicited but only as to whether they had increased, decreased, or remained the same as compared to two years ago.

following equation:[18]

$$p(X_i) = f(X_{Ci}, Z_i, X_{Pi}, V_i) \tag{14}$$

where X_{Ci} is a vector of current household characteristics, excluding participation-related variables; Z_i is a vector of instruments for participation described above (short-term illness, neighborhood diversity); V_i is a village dummy to control for regional effects; and finally X_{Pi} is a vector of household characteristics prior to the start of the program (including interaction in the community measured by number of influential people known inside and outside the village, from which communities inside and outside the village the respondent could seek or give advice regarding household economic problems, and what community groups the respondent was already a part of).

Estimating equation (13) using a logistic regression, we can obtain the predicted probability (i.e. propensity score) $\hat{p}(X_i)$ the respondent will participate conditional on the exogenous variables $(X_{Ci}, Z_i, X_{Pi}, V_i)$. In order to reduce bias in the estimated impact of the program, extreme values of $\hat{p}(X_i)$ at the top and bottom of the non-participant distribution will be trimmed (Heckman et. al. [1998]). A matching procedure will then be implemented to find proper control groups (nearest-neighbor or kernel matching are two possible options), and then treatment effects will be measured using instrumental variables and difference in difference estimation.

4 Survey

4.1 Villages and survey design

4.1.1 Overview

Between November 2003 and February 2004, a household survey was administered to a random sample of 274 women were surveyed across 250 rural households in the state of Madhya Pradesh (MP) in India, spanning participant and non-participant households in ten program villages, as well as respondents from two control villages. For participant households, all women who were members of a CIG were interviewed; for non-participant and control households, all women 18 years of age and older in the household were surveyed.

The villages sampled were located in Shajapur district, in the Malwa region of northwestern MP (Figure 1). Shajapur district is one of the most active under DPIP, forming the largest amount of CIGs among all other targeted districts (Table 1). Women in this region are also generally more economically active than women in other regions in the state, due in part to the fact that the Malwa region is primarily agricultural and women have therefore been traditionally involved in agricultural work. Many nomadic tribes are also located in this area, and women from such tribes are accustomed to migrating out of the region for months at a time to work in other states.

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[18] See Wooldridge (2002), pp. 621-627, for more discussion.

Ten program villages were selected randomly from all participating villages in Shajapur where women from at least 15 different households were participating. Within each of the ten villages, 15 participating households and 5 non-participating households were randomly selected via a circular systematic random sampling strategy.[19] Two non-targeted control villages selected were the same comparison villages used in the DPIP baseline study conducted at the onset of the program two years earlier. In each of the control villages, women from 20 households were interviewed.

Summary statistics for network participation, as well as caste breakdown, are presented in Table 2. Although final estimation relied on the entire sample, summary statistics are presented for six out of the twelve villages (4 participant and 2 control). Except for one, more than half of the population of program villages were currently participating (and in one village, the entire population was targeted and participating). Most households were either Scheduled Caste (SC) or Other Backward Caste (OBC), except for another village where 40% of households were General Caste. Among the three program villages which had households of different castes, the largest share of women participants tended to be SC, whereas male participants were more or less equally distributed across SC and OBC households.

4.1.2 Selection of control villages

As mentioned above, DPIP decided to select only three blocks out of the eight in Shajapur for program targeting. All three of these blocks – Agar, Barod, and Susner – were clustered in the northern part of the district (Figure 2). The fourth block in this area, Nalkheda, was the source of control villages for both the DPIP baseline survey in 2001 as well as the survey in this paper. Effectively, as mentioned in the previous section, DPIP made an exogenous decision not to target Nalkheda, which is otherwise very similar to the targeted blocks.

Tables 3 and 4 describe pre-treatment characteristics (from the 1991 Census of India) of all the blocks in Shajapur, with respect to population, land, and access to facilities. Looking at Table 3, Nalkheda and the three targeted blocks were very similar in terms of size, cultivable area, sex ratios, and literacy, and as a group the four were markedly different from the remaining non-targeted blocks (Nalkheda, Agar, Susner and Barod were all smaller in size, had higher female-male sex ratios, and much lower average male and female literacy – 41.3% and 9.4%, respectively, compared to 58.8% and 14.8%, respectively, in the second group of non-targeted blocks). Looking at access to facilities Table 4, the distinction between the two groups is not as distinct, although

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[19]Households were randomly sampled from a full listing of households in the village. Circular random sampling involves selecting a random starting number, and from that observation households in intervals of $k = N/n$, where N is the total population and n is the sample size, are selected. This ensures that the entire population is evenly covered. In some villages, the actual number of households interviewed was either smaller or larger, depending on how difficult it was to find the randomly selected households. In the last village interviewed (Suagaon), almost all women participating, as well as a greater share of non-participants, were interviewed for this reason to reach the target of 240 households.

in all categories Nalkheda was still quite similar to the targeted blocks.

Tables 5, 6, and 7 describe land, population, facilities, and employment figures for the different villages (again taken from the 1991 Census). Looking at Table 5, the control villages were similar in terms of proportion of Scheduled Castes, male and female literacy, as well as rainfall; and in particular, differences between the two control villages themselves roughly spanned the variation between the sample villages. All villages had a primary school, drinking water within the village, electricity for agriculture (and, for most villages, electricity for commercial industry) and were within 5-10 kilometers of the nearest post and telegraph (Table 6). In addition, the control villages were similar to at least some of the program villages in terms of percentage of village members involved in cultivation, agricultural labor, and trade/commerce (Table 7). There were two main differences in employment characteristics, however: a much larger share of individuals in the control village of Digon were involved in "other work" (i.e. construction and manufacturing) and "trade and commerce", although the distribution of work in other areas such as agriculture was similar; and virtually none of the female population in the control villages was involved in marginal work, compared to the average of 14.5% among the program villages in the sample (two of these program villages also did, however, have no women involved in marginal work).

Finally, Figure 3 presents a breakdown of outcomes collected over the DPIP baseline survey for the program villages (aggregated by their respective blocks) and the two control villages. All are very similar in terms of vulnerability in agriculture (Figs. 3.1-3.4), facing drought (Fig. 3.5), as well as demand and participation in other anti-poverty and credit schemes (Figs. 3.6 - 3.7; although in control villages there were on average about 10% more female beneficiaries of government poverty schemes). Almost all villages in the baseline survey had an equal distribution of caste inequalities in various aspects of day-to-day life, although reports of caste inequalities were slightly higher in the control villages (Fig. 3.8). Finally, looking at Figs. 3.9-3.10, priorities for income generation as well as household and community improvement were very similar: all villages valued agricultural development the most, as well as better sources of drinking water for the community and greater employment opportunities for the household.

4.2   Household interviews

Six enumerators, who had also worked on the DPIP baseline study in Shajapur and other districts in MP, helped administer the questionnaire to the respondents. A separate questionnaire was given to participants, non-participants, and control village respondents (the only differences being that additional questions regarding participation and non-participation were asked of the first two groups).

Interviews, which were approximately two hours long, were conducted in the respondent's home, and since many questions involved sensitive issues such as the respondent's influence over other members in the household, her level of income and savings, as well as birth control, as much effort

as possible was made to ensure that she was interviewed alone.[20]

The questionnaire had five parts. The first part collected demographic information, and the second collected data on participation in other community groups in the village (all three questionnaires), as well as DPIP (participant and non-participant questionnaires). The third part collected data on how her personal network of people with whom she could discuss her household economic affairs had changed in the last two years (these were across different castes as well as villages); as well as how many more local and outside businessmen, and local government officials, she had gotten to interact with over the same time period. The fourth part collected data on the distribution of income and savings between the husband and wife, as well as household decisionmaking over a range of responsibilities; and the fifth elicited her expectations, conditional on the main decisionmaker in the household not being present and leaving the responsibility to her, as to how effectively she could perform the task over the same range of household responsibilities.

4.2.1 Summary statistics across different CIG types: covariates

Tables 8-14 present summary statistics for respondents' individual and household covariates across the different CIGs they were participating in. The emphasis in these tables was to draw out differences not only between participants and nonparticipants/control village respondents, but also between women participating in more heterogeneous groups (different caste and/or mixed gender) and women participating in all-female, single-caste CIGs. In Tables 9 and 10, t-tests for equality of means between women participating in different networks are carried out using women participating in all-female, single-caste CIGs as the benchmark; similarly, tests for significant differences between participants, non-participants and control respondents are undertaken using participants as the reference.

Tables 8 and 9 present basic characteristics related to age, caste, occupation, marriage, and illnesses in the family; Table 10 gives additional household characteristics, such as adult and child literacy, land, job changes, and household savings, where for each outcome respondents were asked to describe the current situation as well as, retrospectively, what that outcome was like two years ago (i.e. before the program began).

Across both sets of comparison groups (women participating in networks (B), (C), and (D) compared with (A); and women who were nonparticipants or control respondents compared with participants), literacy, years of marriage, and caste breakdown were overall quite similar. One difference was in the control village sample, where only 8% of respondents were widows, compared to 19% for participants.

Most differences arose from occupation, income, land, and illnesses in the household. Compared to women in all-female, same-caste groups, women participating in same-caste, mixed-gender groups

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[20]Notes were made in the survey questionnaire as to who else was present (specific family members/neighbors) during the interview. In very few cases did a family member or acquaintance insist on staying.

(group (B)) tended to be older and from households that cultivated their own land (Table 8). Looking at Table 9, they also experienced significantly fewer short term illnesses in the household over the past year, and garnered a higher share of income relative to total household income (58%, compared to 35% for women in all-female, same caste groups). Finally, looking at Table 10, they were also from households that had more land (about twice as much compared to women from the reference group), and 50% of women in these groups had experienced a change in their main occupation over the past two years, compared to women in all-female, same-caste groups.[21]

As for differences between participants, nonparticipants, and control respondents, all were similar with respect to caste and occupation (although relative to participants a much smaller percentage of nonparticipants and control respondents had experienced a change in their main and/or subsidiary occupation in the last 2 years). Only 15% of nonparticipants had a short-term illness in their household in the past year (compared to 44% of participants), and nonparticipants and control respondents had fewer jobs overall and a smaller share of income relative to total household earnings.

Tables 11-14 describe CIG network characteristics, as well as participation in SHG and reasons for why non-participants were not involved in DPIP. Controlling for respondents' participation in SHG is important since the effects of her participation in SHG should not be confounded with her participation in DPIP. Table 11 shows that a significantly higher share of women in all-female, same-caste CIGs were also SHG members, compared to women in same-caste, mixed-gender and all-female, mixed-caste groups. Furthermore, only 4% of nonparticipants were also SHG members, compared to 32% overall for participants. Interestingly, Table 12 shows that most women participating in DPIP joined around the same time or after they formed a CIG.

Tables 13 and 14 give reasons for participating and not participating in DPIP for targeted individuals. Most female participants needed permission from a family member to join, and the large majority, if not all, women who did not need permission were widows.[22] Looking at non-participants, the majority did not participate because they had been unsuccessful in forming a CIG – therefore indicating that unobservable differences between nonparticipants and participants were more related to the ability to mobilize or form a group, not the desire or lack of permission to participate. Most non-participants did believe there was little chance they would participate (Table 14).

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[21]Differences between women in network (A) and those in networks (C) and (D) (all-female, mixed-caste; and mixed-gender, mixed-caste, respectively) were not very significant in this part of the sample; there were also far fewer observations for women in (D) at this stage.

[22]For the part of the sample presented in this paper, there were 8 widowed participants.

4.2.2   Summary statistics across different CIG types: outcomes

Table 15 describes the set of household outcomes that I look at in this paper. Looking at respondents' reach within and outside the village, Tables 16 and 18 describe how many more influential people such as businessmen and members of local government the respondent had met over the past two years, as well as being able to seek/give advice to members inside and out of their village on household economic issues (note that these were for people *outside* of their CIG). Women in all-female, same-caste CIGs seemed to have met significantly more influential people over the past two years, although women in mixed-gender groups (either mixed- or single-caste) found that they were able to interact with more non-family members regarding their household affairs (particularly outside the village). There were some spillover effects for nonparticipants in having met more influential people in the village (over the past two years, control respondents had not), but compared to participants overall, nonparticipants and control respondents had overall almost no new social contacts in the village with whom they could discuss their household economy.

Tables 16 and 17 present changes that have occurred in respondents' control over personal income, as well as level of personal savings. Respondents' share of personal income increased significantly over the last two years for women in mixed-gender, same-caste groups, but not for women in other groups. And, as with the community-level outcomes. nonparticipants and control respondents did not experience any such change. Personal savings, however, did increase significantly for both women in same-caste, all-female groups, as well as same-caste, mixed-gender groups and control respondents. The improvement in control respondents' personal savings (as also might be the caste with participants, which will be tested in the next section) is that many of them were also SHG members, and had joined within the last two years (Table 12). Looking at Table 16, most participants (about 88%) started keeping their personal savings within the past two years.

Finally, looking at women's role in household decisions (Tables 19-20), compared to women participants in all-female, single-caste groups, women participating in different-caste, mixed-gender groups were generally more confident about carrying out various tasks if the main decisionmaker was not present; statisitically significant differences included spending and decisions regarding girls' education, as well as taking and repaying loans. Women in mixed-gender, same-caste groups were on average equally confident about carrying out the range of tasks as women from all-female, single-caste groups, and women in all-female, different-caste groups were less confident overall, in particular for tasks related to sale/purchase of large property, loans, and children's education. Nonparticipants and control respondents were also, on average, less confident than participants that they could perform these tasks effectively if the main decisionmaker was not present – nonparticipants for tasks related to household savings and family (children's education, as well as healthcare for herself), and control respondents for agricultural decisions, loans, and children's work.

In Table 20, predicted probabilities were also calculated for whether the respondent was very or completely confident that she could carry out these tasks given that the main decisionmaker was

not present (the dependent variable, C, was a binary variable equal to 1 if she responded either 4=very confident or 5=completely sure, and 0 otherwise). Conditioning factors including such covariates as adult literacy, caste, total expenditure per capita, what kind of network she was in, as well as other network details such as age of the CIG and her role in the CIG. For each network and household responsibility, two figures were given: the average predicted probability of $C = 1$, and the percentage of women in each group who were actually the secondary decisionmakers in the household for that task (i.e., if the main decisionmaker were not present, she would be the most likely to handle the decision). Looking at Table 20, the average deviation between the predicted probability that the respondent would be at least very confident in handling the household decision and her actual role in the household was not very large for women in all-female, same-caste groups (10%), mixed-gender, same-caste groups (12.3%), participants overall (10%), and control respondents (12.2%). Average deviations for women in all-female, different-caste groups (27%), as well as non-participants (24%) were higher.[23] Looking at specific household tasks, the largest deviations seemed to be for household purchases, and the smallest for adult labor/income generation, buying food from the market, and respondents' own healthcare.

Statistically significant differences between the two reference groups followed a similar pattern as described in Table 18, although some predicted probabilities for women from difference castes were higher in some additional cases (in particular, for child marriage, adult labor, and respondents' own healthcare).

Finally, Table 21 presents data on transfers between the respondent and her husband, other family members, her parents' household, as well as transfers between members of her own village and other villages. Expenditure on health as well as loans repayment are also detailed. The mean transfer for each group, as a share of household expenditure, is presented, as well as the share of individuals in each group for whom transfers had increased or decreased over the past two years. Comparing outcomes for women in networks (B), (C), and (D) with women in (A), as well as nonparticipants and control respondents with participants, there are not many significant differences, although expenditure on loan repayment was higher, on average, for women in mixed-gender, same-caste groups. Transfers between people within the village were also higher, on average, for participants overall compared to non-participants and control respondents. Transfers have not yet been incorporated into the results, which are described below, but will be in future versions of this paper.

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[23]Since being in a mixed-gender, mixed-caste group predicted success perfectly, those observations were dropped from the logit estimation.

5   Results

5.1   Overview

Results are presented in Tables A1-C2. While summary statistics were presented for a subset of the sample, results are presented for the entire sample of women (160 participants, 63 nonparticipants, and 51 control). Sampling weights were also used to ensure the representativeness of the sample.

Tables A1-A5 present household outcomes for participants versus control village respondents, instrumenting for the type of network respondents chose to participate in; Tables B1 and B2 compare outcomes between nonparticipants and control respondents. Finally, Tables C1 and C2 go within targeted villages to compare outcomes between participants and nonparticipants, using an initial program official visit as the instrument for participation as well as the propensity score method described above.

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Table 1. Targeted Districts under DPIP, state of Madhya Pradesh, India

	District	In Numbers				Millions of rupees	
		Total Village	CIGs Formed	Total villages covered	Beneficiaries	Total CIG Contribution	Total Project Amount
1	Chhatarpur	133	447	66	7900	6.2	38.6
2	Damoh	133	249	42	3257	2.7	16.4
3	Guna	225	421	59	4331	5.7	34.7
4	Narsinghpur	153	423	74	7442	4.1	34.8
5	Panna	204	323	65	3333	3.4	23.6
6	Raisen	141	331	52	3520	3.4	23.4
7	Rajgarh	185	573	81	5922	6.9	44.2
8	Rewa	311	428	99	4679	4.0	29.1
9	Sagar	118	261	34	3318	3.6	19.5
10	**Shajapur**	**140**	**499**	**62**	**11990**	**7.9**	**48.5**
11	Sidhi	220	629	94	5718	6.9	44.5
12	Shivpuri	132	313	50	3613	7.3	32.0
13	Tikamgarh	126	391	47	3018	4.3	29.3
14	Vidisha	145	228	26	1689	3.3	18.7
	Total	**2366**	**5516**	**851**	**69730**	69.6	437.4

[1] Source: DPIP, 2003.

Table 2. Caste breakdown and aggregate participation across sample villages

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Suagaon	Ankli	Jhandewali pathar	Kadiya	Digon (control village)	Dhanora (control village)						
Total number of households	**248**	**275**	**120**	**180**	**156**	**111**						
Participants	78.2	33.5	84.2	67.8	-	-						
SC households	70.6	20.4	0.0	22.2	20.5	72.1						
OBC households	28.6	74.9	100.0	37.2	76.9	27.0						
General caste households	0.0	4.7	0.0	40.6	2.6	0.9						
Percent of women participating	13.9	56.5	42.6	38.5	**-**	**-**						
SC	88.9	55.8	0.0	51.1	-	-						
OBC	11.1	11.5	100.0	21.3	-	-						
General	0.0	13.5	0.0	27.7	-	-						
Percent of men participating	86.1	43.5	57.4	61.5	**-**	**-**						
SC	60.5	75.0	0.0	6.7	-	-						
OBC	39.5	20.0	100.0	18.7	-	-						
General	0.0	5.0	0.0	13.3	-	-						
Households interviewed	**27**	**15**	**20**	**20**	**20**	**20**						
Female participants	21	10	16	15	-	-						
Female non-participants	12	7	4	5	-	-						

Table 3. Characteristics of Shajapur district blocks: population and land

Block	Program status	1991 population (percent in parentheses)			Inhabited villages	Total area (hectares)	Cultivable area to total area (percent)	Irrigated area to total cultivable area (percent)	Number of females per 1000 males	Percent of population that is literate		
		Total	Rural (percent)	Urban (percent)						Total	Male	Female
Susner	Targeted	101,386	79.0	21.0	112	62,750	75.8	18.9	946	28.5	44.5	11.6
Nalkheda	Not targeted, control	84,715	80.4	19.6	94	55,104	82.7	20.6	934	29.3	46.7	10.7
Barod	Targeted	92,446	90.1	9.9	140	73,575	87	12.0	938	20.3	33.6	6.2
Agar	Targeted	111,365	73.0	27.0	137	68,103	72.7	14.4	926	25.3	40.2	8.9
Shajapur	Not targeted	203,833	72.3	27.7	172	86,107	82.9	19.0	908	40.0	58.7	19.3
Moman Badodia	Not targeted	142,740	100.0	0.0	168	89,947	88.7	16.6	922	34.9	54.4	13.8
Shujalpur	Not targeted	161,052	69.4	30.6	113	65,778	91.2	17.6	911	37.3	59.5	13.0
Kalapipal	Not targeted	135,711	100.0	0.0	132	87,882	92.2	24.2	902	37.3	59.5	13.0
Total		**1,033,248**	**82.3**	**17.7**	**1068**	**589,246**	**84.7**	**18.1**	**920**	**41.2**	**62.5**	**17.5**

[1] Source: Census of India, 1991.

Table 4. Characteristics of Shajapur district blocks: access to facilities

Block	Number of inhabited villages	Educational	Medical	Drinking water	Post & Telegraph	Market/ Haat	Access to bus stand/ railway	Near a *pucca* (finished) road	Power supply
Susner	112	84.8	8	100	10.7	5.4	15.2	17.9	98.2
Nalkheda	94	79.8	8.5	100	13.8	1.1	4.3	4.3	100
Barod	140	79.3	10	99	7.9	2.9	15.7	15.7	89.3
Agar	137	67.9	5.1	100	8.8	1.5	6.6	14.6	95.6
Shajapur	172	83.7	7	100	13.4	4.1	19.8	22.7	100
Moman Badodia	168	81	7.7	100	11.9	5.4	13.1	20.2	94.1
Shujalpur	113	83.2	11.5	100	17.7	1.8	13.3	22.1	99.1
Kalapipal	132	93.2	12.1	100	21.2	5.3	12.9	12.9	99.2
Total	**1068**	**81.6**	**8.6**	**100**	**13.1**	**3.6**	**13.1**	**17**	**96.7**

[1] Source: Census of India, 1991.

Table 5. Characteristics of sample villages: population and land

	Ankli	Kadiya	Suagaon	Khandwas	Dhabla Piplon	Deoli Piplon	Sirpohi	Umariya Deora	Thadoda	Jhandewali Pathar	Digon	Dhanora
Village type	Program	Program	Program	Program	Program	Program	Program	Program	Program	Program	Control	Control
Block name	Susner	Susner	Barod	Barod	Barod	Barod	Barod	Agar	Agar	Agar	Nalkheda	Nalkheda
Block during 1981 census	Susner	Susner	Agar	Agar	Agar	Agar	Agar	Agar	Agar	Agar	Susner	Susner
Number of households	171	108	130	100	147	108	127	82	119	78	92	114
Total population	856	648	654	633	976	716	786	526	768	459	510	634
Percent men	50.7	50.0	51.1	49.3	49.5	52.0	51.5	50.6	52.1	50.1	48.0	58.8
Percent women	49.3	50.0	48.9	50.7	50.5	48.0	48.5	49.4	47.9	49.9	52.0	48.4
Scheduled castes												
Percent of men	66.4	21.0	69.8	44.9	34.2	50.1	30.1	19.2	48.5	84.0	17.1	33.5
Percent of women	66.6	19.1	71.9	43.9	32.5	45.3	28.6	16.9	45.7	85.0	15.5	39.4
Literates												
Male literacy (%)	14.7	25.9	34.4	23.7	28.4	35.8	18.8	37.6	40.0	23.0	18.0	24.9
Female literacy (%)	0.9	4.0	5.3	1.2	4.1	7.0	2.4	6.9	9.8	3.1	6.8	2.9
Total area of village (hectares)	321.7	610.0	582.8	326.5	624.9	623.5	750.5	303.8	399.1	526.0	311.2	725.2
Irrigated land (hectares):												
By well	-	-	-	5.2	-	11.0	1.0	40.6	74.9	17.1	-	-
By well with electricity	18.0	18.5	77.6	22.1	82.1	31.0	75.2	-	-	-	67.5	51.0
Unirrigated land (hectares)	121.4	456.4	249.9	193.9	444.6	329.4	363.4	141.3	215.1	260.9	150.5	437
Uncultivable area (hectares)	130.2	36.1	114.1	55.1	12.6	110	96	66.1	40.9	168	54.1	77
Total annual rainfall (cm)	92.0	92.0	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.0	92.0
Avg. monthly max. temp. (°C)	32	32	32	32	32	32	32	32	32	32	32.5	32.5
Avg. monthly min. temp. (°C)	17	17	17	17	17	17	17	17	17	17	17.3	17.3

[1] Source: Census of India, 1991.

Table 6. Characteristics of sample villages: access to facilities

	Ankli (P)	Kadiya (P)	Suagaon (P)	Khandwas (P)	Dhabla Piplon (P)	Deoli Piplon (P)	Sirpohi (P)	Umariya Deora (P)	Thadoda (P)	Jhandewali Pathar (P)	Digon (C)	Dhanora (C)
Block name	Susner	Susner	Barod	Barod	Barod	Barod	Barod	Agar	Agar	Agar	Nalkheda	Nalkheda
Dist. to nearest town (km)	4	5	4	5	15	6	10	8	17	24	10	5
Path to village	FP	FP	KR	KR	KR	KR	KR	KR	PR	KR	KR	KR
Length of path (km)	2	1	4	2	3	12	12	8	0	5	4	5
Dist. to nearest post/telegraph (km)	5	5	5	5	5	5	5-10	5-10	5	5	5	5-10
Dist. to nearest market (km)	5	5	5	5-10	≥ 10	≥10	≥10	5-10	5	≥ 10	5-10	5-10
Dist. to nearest bus/rail (km)	5	5	5	5	5	≥ 10	≥ 10	5-10	0 (BS)	5	5	5-10
Dist. to nearest medical (km)	5	5	5	5	0 (CHW)	5	5-10	5-10	5	≥ 10	5	5-10
Educational facilities	PS, OTH	PS, OTH	PS, AL	PS	PS	PS, AL	PS, AL	PS	PS	PS	PS	PS
Drinking water source	W, HP	W, HP	W, HP	W, HP	W, HP	W, HP	W, HP	W, HP	W	W, HP	W, HP	W, HP
Source of power	EAG	EAG	EAG, ECI	EAG, ECI	EAG, ECI	EAG, ECI	EAG, ECI	EAG, ECI	EAG, ECI	EAG	EAG, ECI	EAG, ECI
Medical facilities in nearest town	H, FP	H, FP	HC	HC	HC	HC	HC	H(2), FP	H(2), FP	H(2), FP	HC	HC
Number of beds	8	8	8	8	8	8	8	36	36	36	12	0
Schools in nearest town												
Primary schools	7	7	2	2	2	2	2	12	12	12	6	4
Junior secondary/middle	4	4	1	1	1	1	1	7	7	7	3	1
Secondary/matriculation	2	2	1	1	1	1	1	2	2	2	1	1
Higher secondary	1	1	1	1	1	1	1	2	2	2	1	1
Adult literacy classes/center	1	1	(3 km away)	(3 km away)	(3 km away)	(3 km away)	(3 km away)	(15 km away)	(15 km away)	(15 km away)	(27 km away)	(5 km away)
Banks and credit in nearest town												
Number of banks	3	3	3	3	3	3	3	4	4	4	2	1
Agricultural credit societies	1	1	1	1	1	1	1	1	1	1	2	1
Non-agricultural credit societies	0	0	0	0	0	0	0	18	18	18	1	1

[1] Source: Census of India, 1991.
[2] FP = footpath, KR = Kaccha (unpaved) road, PR = paved road; BS = bus stand; CHW = community health worker; PS = Primary School, OTH = other educational facility; AL = adult literacy course; W = well, HP = handpump; EAG = electricity for agriculture, ECI = electricity for commercial industry; H = hospital, FP = family planning center, HC = other healthcare institution

Table 7. Characteristics of sample villages: employment characteristics

	Ankli	Kadiya	Suagaon	Khandwas	Dhabla Piplon	Deoli Piplon	Sirpohi	Umariya Deora	Thadoda	Jhandewali Pathar	Digon	Dhanora
Village type	Program	Program	Program	Program	Program	Program	Program	Program	Program	Program	Control	Control
Block name	Susner	Susner	Barod	Barod	Barod	Barod	Barod	Agar	Agar	Agar	Nalkheda	Nalkheda
Cultivators												
Percent of men	18.4	40.4	26.6	29.8	40.8	46.0	47.2	35.7	26.3	37.4	31.4	32.2
Percent of women	0.5	0.0	16.3	6.9	1.6	46.2	0.0	14.6	1.1	44.1	0.0	31.6
Agricultural laborers												
Percent of men	9.0	14.2	28.4	17.9	12.6	14.8	12.3	21.8	18.3	8.3	15.5	7.8
Percent of women	4.7	0.3	40.0	19.0	2.2	20.1	10.5	21.9	20.1	9.6	30.9	11.7
Trade and commerce												
Percent of men	24.7	0.0	0.6	0.0	0.6	0.0	0.2	0.0	1.0	0.0	11.4	0.5
Percent of women	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.8	0.0
Other work												
Percent of men	5.3	5.2	2.1	17.6	5.4	1.6	1.2	3.0	9.0	7.4	36.7	5.9
Percent of women	0.2	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.0	6.4	0.7
Marginal workers												
Percent of men	0.0	0.0	0.3	0.0	1.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
Percent of women	32.5	0.0	3.8	0.0	17.0	1.2	54.1	6.9	29.3	0.4	0.0	0.0
Non-workers												
Percent of men	42.6	43.5	41.9	34.3	38.1	37.6	39.0	38.0	45.5	47.0	42.4	42.9
Percent of women	61.6	80.2	40.0	73.8	79.1	32.6	35.4	56.5	48.9	45.9	68.7	54.1

[1] Source: Census of India, 1991.

Table 8. Summary statistics: respondent characteristics across different network types

	(A) Same caste, women	(B) Same caste, mixed gender	(C) Different caste, women	(D) Different caste, mixed gender	(E) All participants	(F) Non participants	(G) Control village respondents
	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Number of observations	**44**	**10**	**6**	**2**	**62**	**28**	**51**
Age: 18-29	61.4	40.0	50.0	0.0	54.8	60.7	49.0
Age: 30 and above	38.6	60.0	50.0	100.0	45.2	39.3	51.0
Not literate	90.9	90.0	83.3	100.0	90.3	89.3	88.2
Can read and/or write	9.1	10.0	16.7	0.0	9.7	10.7	11.8
Scheduled caste	68.2	0.0	0.0	50.0	50.0	57.1	51.0
Other backward caste	31.8	90.0	50.0	50.0	43.5	42.9	47.1
General caste							
Main occupation:							
At home	20.5	10.0	50.0	0.0	21.0	39.3	27.5
Agriculture: own farm	6.8	70.0	16.7	0.0	17.7	10.7	7.8
Agriculture: other's farm	43.2	10.0	16.7	50.0	35.5	28.6	49.0
Skilled labor	20.5	10.0	0.0	50.0	17.7	17.9	2.0
Unskilled labor	6.8	0.0	16.7	0.0	6.5	3.6	13.7
CIG work	2.3	0.0	0.0	0.0	1.6	0.0	0.0
Secondary occupation:							
At home	13.6	50.0	16.7	50.0	21.0	46.4	47.1
Agriculture: own farm	4.5	10.0	0.0	0.0	4.8	14.3	9.8
Agriculture: other's farm	31.8	20.0	66.7	0.0	32.3	32.1	29.4
Skilled labor	15.9	20.0	16.7	50.0	17.7	7.1	0.0
Unskilled labor	22.7	0.0	0.0	0.0	16.1	0.0	13.7
CIG work	11.4	0.0	0.0	0.0	8.1	0.0	0.0

Table 9. Summary statistics: respondents across different network types, continued

	(A) Same caste, women	(B) Same caste, mixed gender		(C) Different caste, women		(D) Different caste, mixed gender		(E) All participants	(F) Non participants		(G) Control village respondents	
	Mean	Mean	*p*	Mean	*p*	Mean	*p*	Mean	Mean	*p*	Mean	*p*
Observations	**44**	**10**		**6**		**2**		**62**	**28**		**51**	
Years of marriage	19.3 [9.5]	24.7 [15.6]	*0.16*	23.8 [5.5]	*0.26*	17.5 [4.9]	*0.79*	20.6 [10.4]	18.8 [14.3]	*0.50*	19.8 [12.0]	*0.74*
Widowed	0.18 [0.39]	0.20 [0.42]	*0.89*	0.17 [0.41]	*0.93*	0.5 [0.71]	*0.28*	0.19 [0.40]	0.11 [0.31]	*0.31*	0.08* [0.27]	*0.08*
Short-term illness in family (in past year) (1=yes, 0=no) [2]	0.5 [0.51]	0.2* [0.42]	*0.08*	0.17 [0.41]	*0.13*	1.0 [-]	-	0.44 [0.50]	0.15*** [0.36]	*0.001*	0.51 [0.50]	*0.43*
Long-term illness (for more than 1year) (1=yes, 0=no)	0.20 [0.41]	0.20 [0.42]	*0.97*	0.00 [0.00]	*0.23*	0.00 [0.00]	*0.49*	0.18 [0.39]	0.04* [0.19]	*0.07*	0.10 [0.30]	*0.23*
Anyone with chronic illness in the family (1=yes, 0=no)	0.09 [0.29]	0.10 [0.32]	*0.93*	0.00 [0.00]	*0.45*	0.00 [0.00]	*0.67*	0.08 [0.27]	0.14 [0.36]	*0.37*	0.12 [0.33]	*0.51*
Number of jobs	1.97 [1.11]	1.5 [0.97]	*0.21*	1.0** [0.63]	*0.04*	1.5 [0.71]	*0.55*	1.79 [1.07]	1.21*** [0.74]	*0.01*	1.37** [0.89]	*0.03*
Income (share of household expenditure)	0.35 [0.32]	0.58* [0.65]	*0.10*	0.30 [0.34]	*0.72*	0.49 [0.35]	*0.55*	0.39 [0.39]	0.29 [0.30]	*0.21*	0.20*** [0.21]	*0.003*

[1] *p* = p-value. p-values are given for tests of equality of means; for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E).
[2] for (D), there was only 1 observation.

Table 10. Time-varying summary statistics, respondent characteristics [1]

	Same caste, women			Same caste, mixed gender			Different caste, women			Different caste, mixed gender			All participants			Non participants			Control village respondents		
	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p
Observations	44			10			6			2			62			28			51		
Share of girls who are literate	0.65 [0.44]	0.55 [0.49]	0.42	0.63 [0.48]	0.50 [0.50]	0.75	0.44 [0.51]	0.20 [0.4]	0.51	0.00 [-]	0.00 [-]	-	0.61 [0.45]	0.48 [0.48]	0.24	0.58 [0.42]	0.40 [0.46]	0.31	0.46 [0.09]	0.30 [0.07]	0.16
Share of boys who are literate	0.74 [0.42]	0.57 [0.46]	0.16	0.80 [0.20]	1.0 [0.0]	0.48	0.70 [0.45]	0.63 [0.48]	0.82	0.5 [-]	0.00 [0.00]	-	0.74 [0.41]	0.58 [0.46]	0.13	0.69 [0.33]	0.73 [0.39]	0.79	0.79 [0.36]	0.64 [0.41]	0.12
Share of adult women who are literate	0.08 [0.24]	0.08 [0.27]	0.94	0.15 [0.34]	0.15 [0.34]	1.00	0.17 [0.41]	0.17 [0.41]	1.00	0.00 [0.00]	0.00 [0.00]	1.00	0.10 [0.27]	0.10 [0.29]	0.96	0.12 [0.32]	0.12 [0.32]	1.00	0.13 [0.27]	0.16 [0.34]	0.59
Share of adult men who are literate	0.38 [0.45]	0.37 [0.44]	0.91	0.40 [0.52]	0.40 [0.52]	1.00	0.39 [0.44]	0.44 [0.50]	0.84	0.17 [0.24]	0.25 [0.35]	0.81	0.38 [0.44]	0.38 [0.45]	0.99	0.32 [0.42]	0.32 [0.42]	1.00	0.35 [0.37]	0.42 [0.46]	0.42
Land	1.08 [1.25]	0.73 [1.07]	0.17	2.52 [1.95]	2.42 [2.06]	0.91	1.72 [1.86]	1.72 [1.86]	1.00	1.6 [2.26]	1.6 [2.26]	1.00	1.39 [1.52]	1.13 [1.49]	0.34	2.11 [1.77]	2.39 [2.17]	0.59	3.67 [4.08]	3.35 [3.45]	0.67
Household savings																					
Main occup. changed over last 2 yrs [2]	0.16 [0.37]		-	0.50** [0.53]		0.02	0.17 [0.41]		0.96	0.50 [0.71]		0.22	0.23 [0.34]		-	0.11 [0.31]		0.19	0.04*** [0.20]		0.004
Second occup. changed over last 2 yrs [2]	0.34 [0.48]		-	0.30 [0.48]		0.80	0.33 [0.52]		0.97	0.50 [0.71]		0.65	0.34 [0.48]		-	0.11** [0.31]		0.02	0.10*** [0.30]		0.002

[1] p = p-value.
[2] when testing for equality of means, for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E).

Table 11. Network details: respondents across different network types

	(A) Same caste, women	(B) Same caste, mixed gender		(C) Different caste, women		(D) Different caste, mixed gender		(E) All participants	(F) Non participants		(G) Control village respondents	
	Mean	Mean	*p*	Mean	*p*	Mean	*p*	Mean	Mean	*p*	Mean	*p*
Observations	**44**	**10**		**6**		**2**		**62**	**28**		**51**	
Network details:												
Also in SHG	0.41 [0.50]	0.10* [0.32]	*0.07*	0.00** [0.00]	*0.05*	0.50 [0.71]	*0.80*	0.32 [0.47]	0.04*** [0.189	*0.003*	0.29 [0.54]	*0.77*
Also in z-category activity	0.25 [0.44]	0.00 [0.00]	*0.08*	0.00 [0.00]	*0.17*	0.00 [0.00]	*0.42*	0.18 [0.39]	-	-	-	-
How old is CIG (months)	14.6 [4.8]	16.3 [3.7]	*0.28*	7.2*** [4.0]	*0.001*	16.1 [7.4]	*0.69*	14.3 [5.1]	-	-	-	-
CIG size	6.6 [1.5]	5.4*** [0.8]	*0.02*	5.0*** [0.0]	*0.01*	5.0 [0.0]	*0.14*	6.2 [1.5]	-	-	-	-
Number of other men in the CIG	-	3.2 [0.8]	-	-	-	3.5 [0.7]	-	0.6 [1.3]	-	-	-	-
Number of female family members in other CIGs	1.3 [1.1]	0.6* [0.8]	*0.08*	0.7 [0.8]	*0.22*	1.0 [0.0]	*0.75*	1.1 [1.0]	-	-	-	-
Number of male family members in other CIGs	3.5 [3.2]	1.3** [1.6]	*0.03*	0.3** [0.5]	*0.02*	0.5 [0.7]	*0.19*	2.8 [3.0]	-	-	-	-
Number of members from same community in CIG	5.6 [1.5]	4.3*** [1.0]	*0.01*	1.0*** [1.1]	*0.000*	1.0*** [1.4]	*0.000*	4.8 [2.1]	-	-	-	-
Standard deviation of wealth ranking in CIG	38.2 [18.1]	28.3 [15.6]	*0.11*	36.3 [2.9]	*0.80*	38.6 [13.1]	*0.97*	36.4 [16.8]	-	-	-	-

[1] *p* = p-value. p-values are given for tests of equality of means; for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E).
[2] for (D), there was only 1 observation.

Table 12. Respondents' length of participation in SHG, relative to length of DPIP participation

Type of network	When did network form	When did respondent join SHG				Not SHG member	Number of observations
		Within last 6 months	6 months – 1 year	1 year – 2 years	more than 2 years		
Same caste, women	6 months ago	0	0	0	0	0	
	6 months – 1 year	1	1	0	0	9	**44**
	1 year- 2 years	1	9	3	2	18	
Same caste, mixed gender	6 months ago	0	0	0	0	0	
	6 months – 1 year	0	0	0	0	0	**10**
	1 year- 2 years	1	0	0	1	8	
Different caste, women	6 months ago	0	0	0	0	3	
	6 months – 1 year	0	0	0	0	3	**6**
	1 year- 2 years	0	0	0	0	0	
Different caste, mixed gender	6 months ago	0	0	0	0	0	
	6 months – 1 year	1	0	0	0	0	**2**
	1 year- 2 years	0	0	0	0	1	
Participants	6 months ago	0	0	0	0	3	
	6 months – 1 year	2	1	0	0	12	**62**
	1 year- 2 years	2	9	3	3	27	
Non-Participants	-	1	0	0	1	26	**28**
Control	-	3	6	1	0	41	**51**

Table 13. Participants: reasons for joining and roles in CIG

	(A) Same caste, women	(B) Same caste, mixed gender	(C) Different caste, women	(D) Different caste, mixed gender	(E) Z-category project	(F) All participants
	Mean	Mean	Mean	Mean	Mean	Mean
Number of observations	**42**	**10**	**6**	**2**	**11**	**60**
Permission needed to join:						
No permission needed	8	1	0	1	2	10
(Number widowed)	(5)	(1)	(0)	(1)	(1)	(7)
Husband	32	7	6	1	9	46
Father in law	1	0	0	0	0	1
Mother in law	0	1	0	0	0	1
Father	0	0	0	0	0	0
Mother	1	0	0	0	0	1
Daughter in law	0	1	0	0	0	1
Role in CIG:						
Call meeting of group	3	7	0	0	10	0
Providing loan	0	1	0	0	1	0
Cash book/ledger maintenance	6	1	5	0	9	0
Leadership of group	10	0	0	2	5	0
Labor	3	0	0	0	5	11
Whatever group decides / general member	14	1	1	0	25	0
Why did respondent choose to participate in CIG:						
Greater income for household	39	10	5	2	0	56
Good for village/ community	5	0	0	0	0	0
Both	0	0	1	0	11	6

Table 14. Non-participants' reasons for not joining DPIP

	(G) Non participants
	Mean
Number of observations	**28**
Why do non-participants not participate:	
No faith	4
No time	0
Not permitted	3
Wanted to join, but unsuccessful in forming CIG	21
How likely does non-participant believe she will join a CIG within the next year (scale of 1 to 5):	
1 = not at all	2
2 = little chance	13
3 = neutral	2
4 = much chance	8
5 = definitely	3

Table 15. Household outcomes for respondents: description and how variables were recorded

	Description	Recorded for current period	Retrospective (what was situation 2 years ago)	Change over the past 2 years
1. How much personal savings does respondent keep (under her own control, and as a share of household savings/assets)	rupees	√	√	√
2. Respondent's share over her own income that she can keep for personal expenditure (own clothing, etc.)	0=none, 1=less than or equal to one-fourth, 2=greater than one-fourth and less than one-half, 3=one-half, 4=more than half, 5=all	√	√	√
3. <u>How many more new</u> acquaintances made that respondent can seek advice from, and give advice to, regarding household affairs (economic and personal): [1]				
This village, higher caste	-			√
This village, same caste	-			√
This village, lower caste	-			√
Outside villages, higher caste	-			√
Outside villages, same caste	-			√
Outside villages, lower caste	-			√
4. Who is secondary decisionmaker / participates in household decision X *(see Table 19)*	(same as outcome 5)	√		
5. What is the respondent's confidence, given that the main decisionmaker is not present and leaves household decision X entirely up to her, that she can carry out the task with no difficulty	1=not at all confident, 2=very little confidence, 3=neutral, 4=very confident, 5=completely sure	√		

[1] In this version of the paper, all individuals in each group were summed up to create an aggregate variable of the number of people who the respondent can now interact with regarding important household decisions.

Table 16. Time-varying summary statistics, measures of respondents' influence in household and community

	(A) Same caste, women			(B) Same caste, mixed gender			(C) Different caste, women			(D) Different caste, mixed gender			(E) All participants			(F) Non participants			(G) Control village respondents		
	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p	Now	2 yrs ago	p
Number of observations	44			10			6			2			62			28			51		
Local traders met	8.3** [7.3]	4.9** [5.0]	0.01	4.5 [4.1]	2.7 [3.1]	0.28	2.3 [1.4]	1.7 [1.0]	0.36	11.5 [12.1]	6.5 [7.8]	0.67	7.3** [6.9]	4.3** [4.6]	0.01	4.4** [2.5]	3.1** [2.0]	0.04	4.0 [3.3]	3.2 [2.7]	0.19
Outside traders met	3.5** [4.6]	1.8** [2.3]	0.03	2.2 [3.2]	1.3 [1.8]	0.45	0.7 [1.6]	0.7 [1.6]	1.00	10 [14.1]	8 [11.3]	0.89	3.3** [4.7]	1.8** [2.8]	0.04	1.4* [1.2]	0.9* [0.9]	0.09	2 [1.5]	1.7 [1.4]	0.28
Panchayat members met	3.2** [2.1]	2.1** [2.2]	0.02	3.1 [2.4]	2.3 [1.0]	0.34	2.8 [0.8]	2.5 [1.0]	0.54	3.5 [2.1]	1.0 [1.4]	0.30	3.1** [2.0]	2.1** [1.9]	0.01	1.0 [1.0]	0.7 [1.0]	0.18	0.7 [0.7]	0.6 [0.7]	0.66
Share of own income for personal use	0.82 [1.19]	0.45 [1.11]	0.14	0.90** [0.30]	0.20** [0.10]	0.03	0.17 [0.41]	0.00 [0.00]	0.34	1.5 [2.1]	1.5 [2.1]	1.00	0.79** [0.14]	0.40** [0.13]	0.05	0.32 [0.98]	0.25 [0.97]	0.79	1.2 [1.46]	1.07 [1.50]	0.67
Share of spouse's income he keeps for himself [2]	1.00 [0.93]	0.83 [1.08]	0.48	0.73 [0.79]	0.64 [1.03]	0.81	1.20 [0.84]	1.00 [1.00]	0.74	2.0 [-]	2.0 [-]	-	0.96 [0.89]	0.78 [1.03]	0.36	2.92 [1.82]	2.79 [1.98]	0.82	1.2 [1.46]	1.07 [1.50]	0.67
Personal savings	656.4*** [811.9]	103.9*** [350.0]	0.00	1465** [1981.3]	0.0** [0.0]	0.03	175 [306.2]	66.67 [163.3]	0.46	2000 [2828.4]	500 [707.1]	0.54	783.5*** [1164.2]	96.3*** [322.1]	0.00	392.9 [686.3]	160.7 [472.5]	0.15	557.1*** [954.7]	107.8*** [461.7]	0.00

[2] The coding of this variable was as follows: 0=none, 1= one-fourth, 2=between one-fourth and one half, 3=half, 4=more than half, 5=all. The responses were coded this way since almost all families spent most of their income on household purchases.

Table 17. When respondents started keeping personal savings, relative to length of DPIP participation

Type of network	When did network form	When did respondent start to keep personal savings				No personal savings	**Number of observations**
		Within last 6 months	6 months – 1 year	1 year – 2 years	more than 2 years		
Same caste, women	6 months ago	0	0	0	0	0	
	6 months – 1 year	4	2	0	1	4	**44**
	1 year- 2 years	2	15	1	4	11	
Same caste, mixed gender	6 months ago	0	0	0	0	0	
	6 months – 1 year	0	0	0	0	0	**10**
	1 year- 2 years	3	4	0	0	3	
Different caste, women	6 months ago	0	0	0	1	2	
	6 months – 1 year	1	0	0	0	2	**6**
	1 year- 2 years	0	0	0	0	0	
Different caste, mixed gender	6 months ago	0	0	0	0	0	
	6 months – 1 year	0	0	0	1	0	**2**
	1 year- 2 years	0	0	0	0	1	
Participants	6 months ago	0	0	0	1	2	
	6 months – 1 year	5	2	0	2	6	**62**
	1 year- 2 years	5	19	1	4	15	
Non-Participants	-	1	5	0	4	18	28
Control	-	12	10	2	3	24	51

Table 18. Change in social contacts over the last 2 years

	(A) Same caste, women		(B) Same caste, mixed gender		(C) Different caste, women		(D) Different caste, mixed gender		(E) All participants		(F) Non participants		(G) Control village respondents	
How many more new people can seek advice from:	mean	max	mean	max	mean	max	mean	max	mean	max	mean	max	mean	max
This village, higher caste	2.9 [3.1]	2	1.0* [1.7]	4	0.7* [1.0]	2	4.0 [5.5]	8	2.4 [3.0]	10	0.2*** [0.5]	2	0.0*** [0.2]	1
This village, lower caste	0.3 [1.0]	6	0.3 [0.7]	2	0.0 [0.0]	0	1.5* [2.1]	3	0.3 [1.0]	6	0.0 [0.0]	0	0.0* [0.2]	1
This village, same caste	1.0 [2.0]	10	0 [0.0]	0	0.3 [0.8]	2	2.5 [3.5]	5	0.8 [1.8]	10	0.1** [0.3]	1	0.2** [0.5]	2
Any outside village, higher caste	0.6 [1.2]	4	0 [0.0]	0	0.0 [0.0]	0	0.0 [0.0]	0	0.4 [1.1]	4	0.1 [0.4]	2	0.0*** [0.1]	1
Any outside village, lower caste	0.1 [0.6]	4	0 [0.0]	0	0.0 [0.0]	0	1.0** [1.4]	2	0.1 [0.6]	4	0.0 [0.2]	1	0.0* [0.1]	1
Any outside village, same caste	0.2 [0.8]	4	0 [0.0]	0	0.0 [0.0]	0	4.0*** [5.7]	8	0.3 [1.2]	8	0.0 [0.2]	1	0.0* [0.0]	0
Other	0.5 [1.5]	8	0 [0.0]	0	0.0 [0.0]	0	0.0 [0.0]	0	0.3 [1.3]	8	0.0 [0.0]	0	0.0 [0.0]	0
How many more new people can give advice to:														
This village, higher caste	1.8 [2.0]	7	0*** [0.0]	0	1.5 [1.8]	4	1.0 [1.4]	2	1.5 [1.9]	7	0.3*** [0.9]	4	0.1*** [0.3]	1
This village, lower caste	0.1 [0.6]	4	0 [0.0]	0	0.2 [0.4]	1	0.0 [0.0]	0	0.1 [0.5]	4	0.1 [0.4]	2	0.0 [0.1]	1
This village, same caste	0.4 [1.1]	4	0.2 [0.6]	2	0.0 [0.0]	2	1.5 [2.1]	3	0.4 [1.0]	4	0.0* [0.2]	1	0.2 [0.5]	2
Any outside village, higher caste	0.3 [0.9]	5	0 [0.0]	0	0.0 [0.0]	0	0.0 [0.0]	0	0.2 [0.7]	5	0.0 [0.0]	0	0.0 [0.2]	1
Any outside village, lower caste	0.0 [0.0]	0	0.5** [1.6]	5	0.0 [0.0]	0	0.5*** [0.7]	1	0.1 [0.6]	5	0.0 [0.0]	0	0.0 [0.1]	1
Any outside village, same caste	0.1 [0.7]	4	0 [0.0]	0	0.0 [0.0]	0	2.5*** [3.5]	5	0.2 [0.8]	5	0.0 [0.0]	0	0.0 [0.1]	1
Any outside village, other	0.3 [0.9]	4	0 [0.0]	0	0.0 [0.0]	0	0.0 [0.0]	0	0.2 [0.7]	4	0.0 [0.0]	0	0.0** [0.0]	0

[1] Testing equality of means; for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E).
significant differences are marked *** (0.01 level), ** (0.05 level), and * (0.10 level)

Table 19. Respondents' confidence on carrying out different household responsibilities[1]

	(A) Same caste, women	(B) Same caste, mixed gender		(C) Different caste, women		(D) Different caste, mixed gender		(E) All participants	(F) Non participants		(G) Control village respondents	
	mean	mean	p-value	mean	p-value	mean	p-value	mean	mean	p-value	mean	p-value
Sale/purchase of immovable property and assets	3.4 [1.3]	2.9 [1.3]	0.24	2.3** [0.8]	0.05	4.5 [0.7]	0.24	3.3 [1.3]	3.1 [1.3]	0.51	2.9 [1.2]	0.15
Sale/purchase of movable property and assets	3.7 [1.4]	3.5 [1.0]	0.64	2.8 [1.0]	0.14	4.5 [0.7]	0.43	3.6 [1.3]	3.3 [1.3]	0.22	3.6 [1.3]	0.97
Children's education (girls)	4.3 [0.9]	3.7 [1.0]	0.16	3.2** [1.1]	0.03	3.0* [2.8]	0.10	4.0 [1.1]	3.3** [1.3]	0.02	4.2 [1.1]	0.46
Children's education (boys)	4.3 [1.1]	4.0 [1.1]	0.61	3.2* [1.1]	0.06	3.0 [2.8]	0.17	4.0 [1.2]	3.2*** [1.4]	0.01	4.2 [1.1]	0.71
Children working/engaging in economic activities	4.1 [1.1]	4.1 [1.1]	0.96	3.6 [0.9]	0.32	4.5 [0.7]	0.61	4.0 [1.0]	3.0*** [1.5]	0.00	3.7* [1.2]	0.06
Children's marriage	3.7 [1.3]	4.1 [1.2]	0.46	4.2 [0.4]	0.45	5.0 [0.0]	0.19	3.9 [1.2]	3.4* [1.4]	0.10	3.8 [1.2]	0.78
Decisions regarding agriculture / farm	3.3 [1.3]	3.9 [1.2]	0.20	3.3 [1.0]	0.94	4.5 [0.7]	0.20	3.5 [1.2]	3.1 [1.3]	0.28	3.0* [1.2]	0.09
Loans and repayment of loans	3.4 [1.2]	3.4 [1.3]	0.97	2.3** [1.4]	0.05	5.0* [0.0]	0.08	3.2 [1.3]	2.9 [1.5]	0.22	2.8* [1.3]	0.07
Household savings and accounts	4.3 [1.1]	4.1 [0.9]	0.69	3.8 [1.0]	0.39	3.5 [2.1]	0.37	4.2 [1.1]	3.4*** [1.6]	0.01	4.0 [1.1]	0.28
Adult labor / income generation	3.7 [1.1]	4.1 [1.0]	0.32	4.0 [0.0]	0.54	4.5 [0.7]	0.34	3.8 [1.0]	3.7 [1.2]	0.64	3.7 [1.3]	0.51
Buying food and other consumables from market	4.5 [1.0]	4.4 [0.8]	0.88	4.2 [0.4]	0.48	5.0 [0.0]	0.43	4.4 [0.9]	4.3 [1.1]	0.61	4.6 [0.9]	0.43
Respondent's own healthcare	4.3 [1.0]	4.3 [1.0]	0.98	4.2 [0.4]	0.73	4.5 [0.7]	0.79	4.3 [0.9]	3.8** [0.9]	0.03	4.4 [0.9]	0.68
Husband's healthcare	4.3 [0.8]	4.0 [1.2]	0.39	4.0 [0.0]	0.42	4.0 [0.0]	-	4.2 [0.8]	3.4*** [1.3]	0.00	4.5* [0.8]	0.10
Girls' healthcare	4.4 [1.0]	4.3 [1.0]	0.82	4.2 [0.4]	0.69	5.0 [0.0]	0.38	4.4 [0.9]	4.4 [0.9]	0.96	4.5 [0.8]	0.31
Boys' healthcare	4.5 [1.0]	4.1 [0.9]	0.40	4.2 [0.4]	0.53	5.0 [0.0]	0.47	4.4 [0.9]	4.3 [1.2]	0.70	4.6 [0.8]	0.44

[1] The question asked was, ""If your husband / main decisionmaker for [household decision X] were not present and left the authority to make the decision entirely up to you, how confident (on a scale of 1 to 5) would you be that you could perform the task without help?" To aid in responding, a 5-bar visual scale was used. 1=no confidence, 2=little confidence, 3=confident, 4=very confident, 5=can surely do it.

[2] p = p-value. p-values are given for tests of equality of means; for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E).
Significant differences are marked *** (0.01 level), ** (0.05 level), and * (0.10 level)

Table 20. Respondents' expectations that, given the main decisionmaker is not present, whether she could effectively carry out various household responsibilities without help

	(A) Same caste, women		(B) Same caste, mixed gender		(C) Different caste, women		(D) Different caste, mixed gender		(E) All participants		(F) Non participants		(G) Control village respondents	
	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted [3]	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual
Sale/purchase of immovable property and assets	0.50 [0.21]	64	0.43 [0.15]	80	0.15*** [0.20]	83	-	100	0.45 [0.22]	70	0.43 [0.17]	77	0.39* [0.17]	61
Sale/purchase of movable property and assets	0.61 [0.18]	71	0.64 [0.19]	90	0.35*** [0.18]	1.00	-	100	0.59 [0.19]	78	0.50** [0.18]	81	0.61 [0.15]	60
Children's education (girls)	0.60 [0.15]	56	0.41*** [0.19]	50	0.49* [0.09]	83	-	100	0.56 [0.17]	59	0.43*** [0.07]	72	0.78*** [0.08]	66
Children's education (boys)	0.58 [0.13]	55	0.47 [0.09]	50	0.45** [0.19]	83	-	100	0.55 [0.14]	58	0.39*** [0.14]	63	0.71*** [0.13]	61
Children working/engaging in economic activities	0.60 [0.22]	76	0.63 [0.26]	50	0.59 [0.29]	83	-	100	0.61 [0.23]	72	0.39*** [0.19]	70	0.65 [0.15]	64
Children's marriage	0.51 [0.14]	73	0.53 [0.12]	40	0.77*** [0.12]	67	-	100	0.54 [0.15]	67	0.54 [0.08]	81	0.65*** [0.07]	65
Decisions regarding agriculture / farm	0.36 [0.14]	36	0.70** [0.18]	90	0.31 [0.17]	50	-	0	0.41 [0.20]	47	0.39 [0.11]	63	0.31*** [0.10]	31
Loans and repayment of loans	0.55 [0.21]	64	0.62 [0.23]	80	0.20*** [0.15]	67	-	100	0.53 [0.24]	68	0.29*** [0.15]	64	0.29*** [0.16]	51
Household savings and accounts	0.76 [0.21]	50	0.78 [0.19]	89	0.81 [0.10]	80	-	0	0.77 [0.19]	61	0.57*** [0.15]	68	0.65*** [0.14]	59
Adult labor / income generation	0.62 [0.20]	72	0.74* [0.16]	90	0.96*** [0.04]	100	-	100	0.67 [0.21]	79	0.71 [0.15]	85	0.61** [0.14]	62
Buying food and other consumables from market	0.81 [0.20]	77	0.85 [0.15]	78	0.94 [0.06]	100	-	100	0.83 [0.19]	80	0.79 [0.18]	79	0.86 [0.11]	68
Respondent's own healthcare	0.78 [0.19]	69	0.74 [0.24]	70	0.96** [0.04]	40	-	100	0.79 [0.20]	67	0.79 [0.22]	70	0.84 [0.13]	65
Husband's healthcare	0.70 [0.34]	61	0.54 [0.33]	67	0.77 [0.38]	33	-	50	0.67 [0.35]	59	0.50** [0.29]	76	0.82** [0.25]	50
Girls' healthcare	0.69 [0.28]	63	0.50** [0.16]	56	0.75 [0.28]	60	-	100	0.66 [0.26]	62	0.79** [0.09]	74	0.82*** [0.11]	59
Boys' healthcare	0.68 [0.20]	56	0.49** [0.24]	60	0.73 [0.36]	67	-	100	0.65 [0.24]	59	0.72 [0.21]	67	0.78*** [0.15]	53

[1] The first column is the predicted probability that the respondent is very confident or 100% confident that she could perform the job effectively (a response of 4 or 5 to the main question). The second column is the actual percentage of respondents who are responsible for making the decision in the main decisionmaker's absence.

[2] For tests of equality of means, for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E). Significant differences are marked *** (0.01 level), ** (0.05 level), and * (0.10 level)

[3] In these cases, being in a mixed-gender, mixed-caste group predicted success perfectly, so those observations were dropped and the variable not used.

Table 21. Transfers between respondent and others over past two years

	(A) Same caste, women			(B) Same caste, mixed gender			(C) Different caste, women			(D) Different caste, mixed gender		
	Mean (divided by household expenditure)	From 2 years ago:		Mean (divided by hhd expenditure)	From 2 years ago:		Mean (divided by hhd expenditure)	From 2 years ago:		Mean (divided by hhd expenditure)	From 2 years ago:	
		Increased	Decreased		Increased	Decreased		Increased	Decreased		Increased	Decreased
Between husband	0.083 [0.115]	15/37	3/37	0.120 [0.203]	3/8	1/8	0.161 [0.304]	0/5	1/5	0.000 [-]	0/1	0/1
Between other family members	-0.002 [0.027]	4/44	11/44	-0.009 [0.024]	1/10	1/10	0.024 [0.046]	1/6	1/6	0.090 [0.154]	0/2	1/2
Between maternal household	0.021 [0.030]	6/44	5/44	0.015 [0.022]	0/10	1/10	0.022 [0.019]	0/6	3/6	-0.0002 [0.0004]	0/2	0/2
Between people within the village	0.052 [0.200]	11/44	6/44	-0.003 [0.018]	0/10	2/10	0.001 [0.009]	0/6	0/6	-0.005 [0.007]	0/2	0/2
Between people outside the village	0.002 [0.013]	3/44	2/44	-0.004 [0.008]	0/10	2/10	-0.0001 [0.0004]	0/6	0/6	-0.007 [0.010]	0/2	1/2
Health expenditure per capita	948.30 [1036.78]	30/44	1/44	819.67 [510.75]	6/10	0/10	300.48 [176.07]	1/6	0/6	377.5 [102.53]	2/2	0/2
Expenditure on repayment of loans	111.71 [235.86]	4/44	1/44	666.67*** [1138.55]	2/10	0/10	130 [185.74]	0/6	0/6	100 [141.42]	0/2	1/2

	(E) Participants			(F) Non-participants			(G) Control village		
	Mean (divided by household expenditure)	From 2 years ago:		Mean (divided by household expenditure)	From 2 years ago:		Mean (divided by household expenditure)	From 2 years ago:	
		Increased	Decreased		Increased	Decreased		Increased	Decreased
Between husband	0.093 [0.153]	18/51	5/51	0.110 [0.168]	3/27	3/27	0.065 [0.114]	12/47	3/47
Between other family members	0.012 [0.049]	6/62	14/62	0.018 [0.059]	2/28	4/28	0.069 [0.330]	9/51	7/51
Between maternal household	0.020 [0.027]	6/62	9/62	0.018 [0.029]	6/28	1/28	0.030 [0.085]	6/51	4/51
Between people within the village	0.038 [0.162]	11/62	8/62	-0.014* [0.052]	1/28	6/28	0.0002* [0.016]	7/51	6/51
Between people outside the village	0.001 [0.012]	3/62	5/62	-0.001 [0.016]	0/28	0/28	-0.0001 [0.005]	1/51	2/51
Health expenditure per capita	859.54 [938.35]	39/62	1/62	650.55 [719.79]	17/28	1/28	508.21 [337.90]	27/51	1/51
Expenditure on repayment of loans	183.58 [472.09]	6/62	2/62	144.98 [312.91]	6/28	0/28	80.81 [199.35]	4/51	0/51

[1] Testing equality of means; for (B)-(D), means were compared to (A), and for (F)-(G), means were compared to (E). significant differences are marked *** (0.01 level), ** (0.05 level), and * (0.10 level)

[2] For whether the transfers increased or decreased compared to two years ago, the actual number of respondents in this category is divided by the number of people who responded in that category.

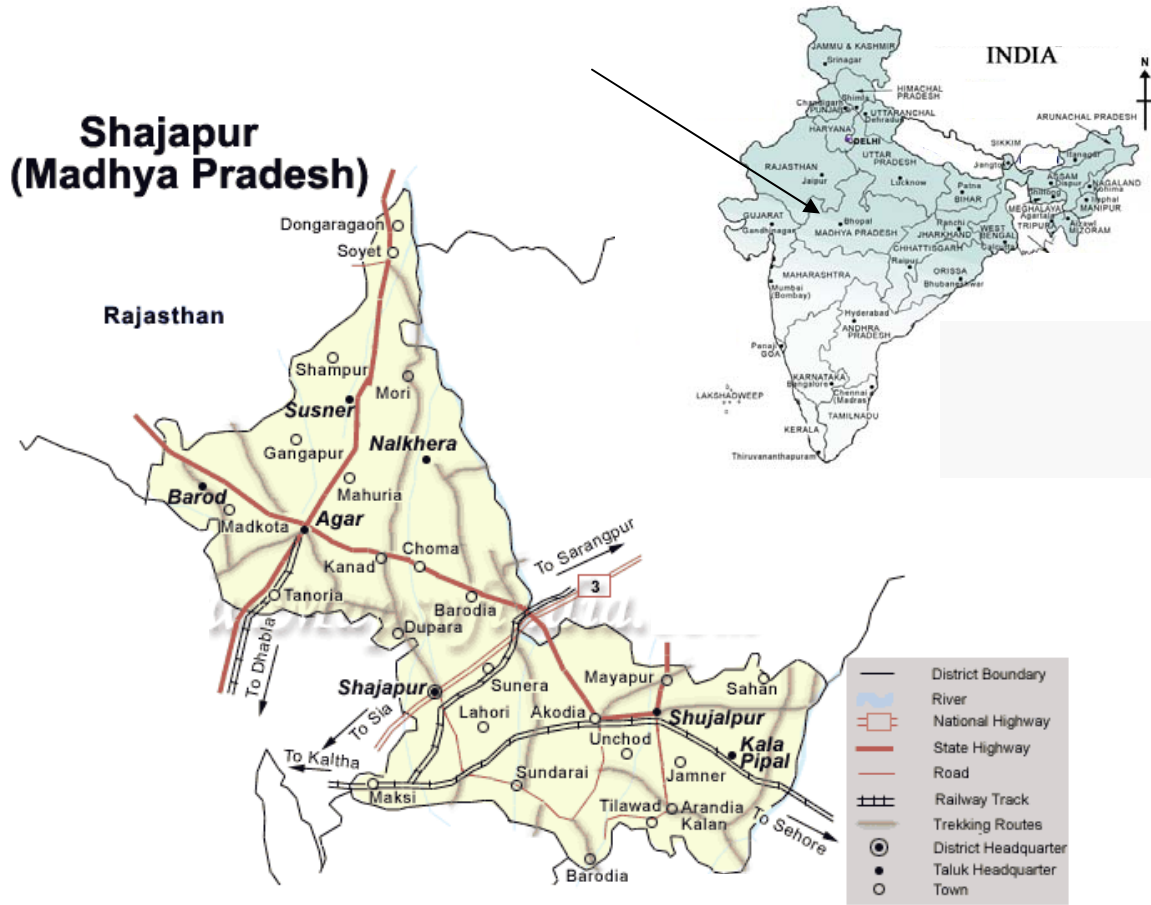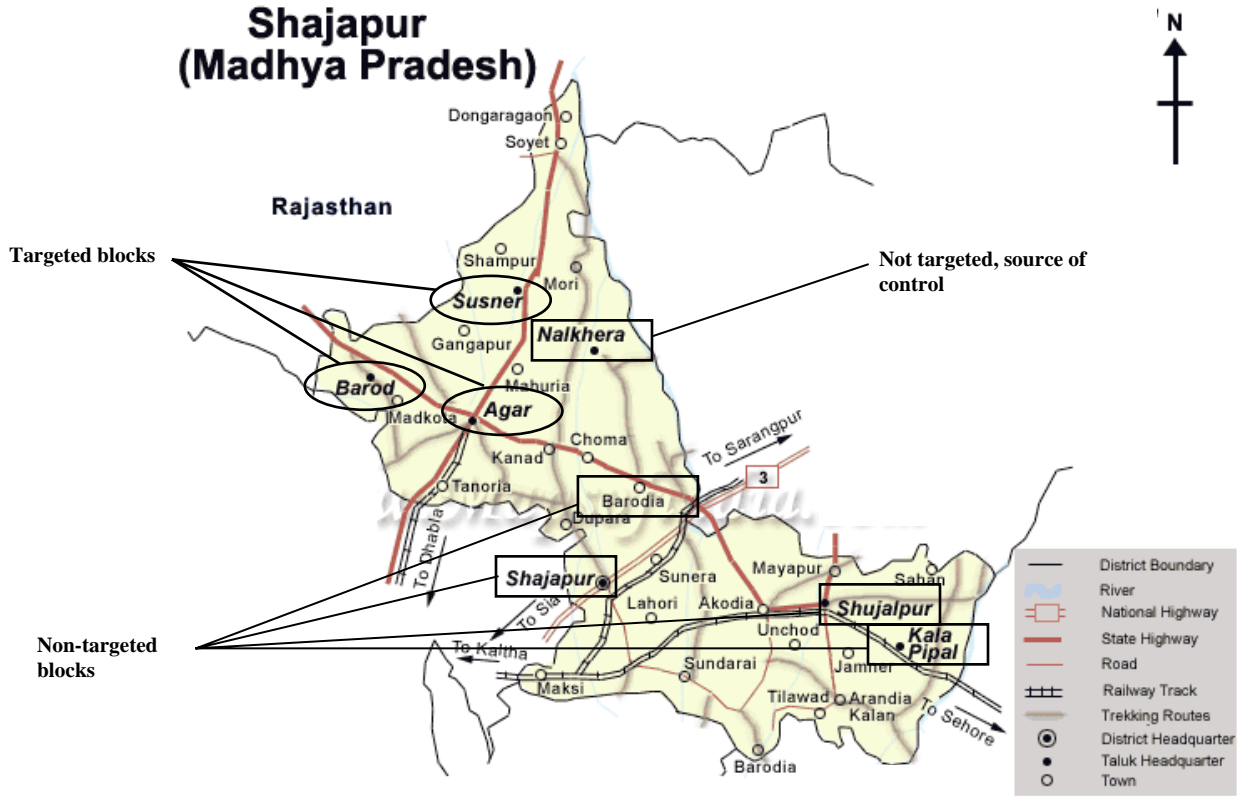**Figure 1. Survey Area: Shajapur District, state of Madhya Pradesh, India**

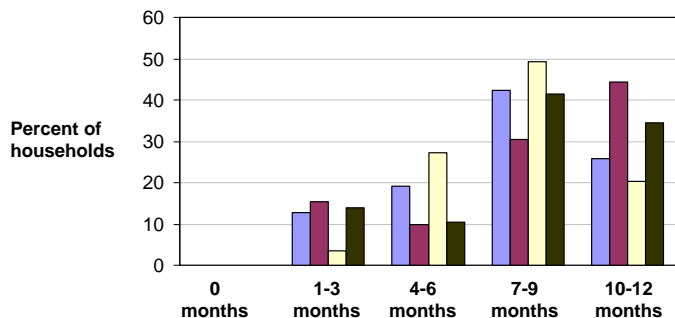**Figure 2. Targeted and Non-targeted blocks in Shajapur under DPIP**
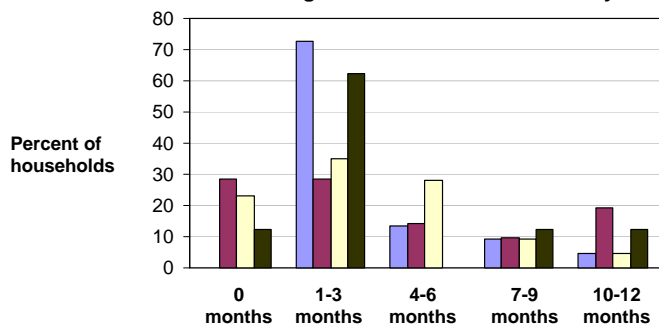
Figure 3. Household Behavior Across Different Blocks

(source: DPIP Baseline Data, 2001)

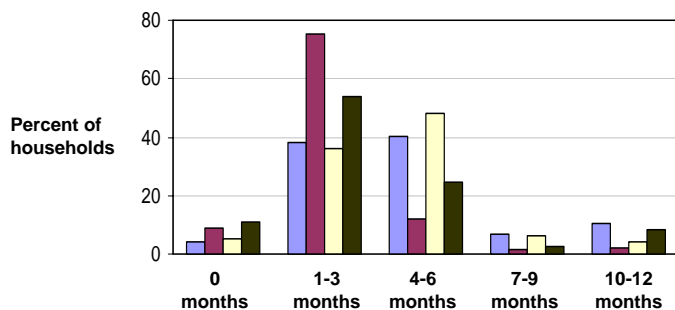Legend: ▢ Agar block ▮ Barod block ▢ Susner block ▮ Control villages

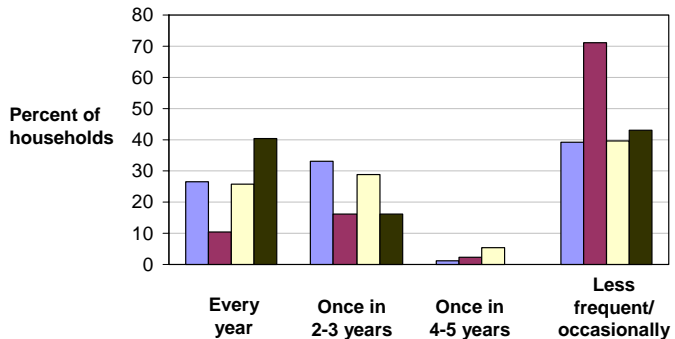### 3.1 Number of months in the year that households are dependent on their own agriculture

3.5 Households that experienced any natural disaster or epidemic in last two years

3.2 Number of months in the year that household members migrate to earn income for family
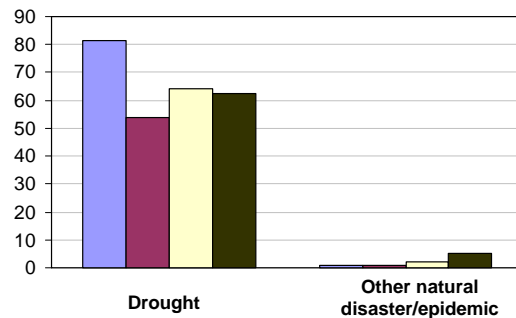
3.6 Households' participation in government anti-poverty schemes

3.3 Number of months in the year that household has to struggle for food
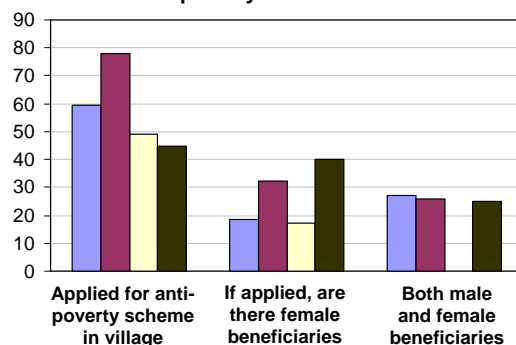
3.7 Households' participation in other community organizations (credit, forest committee)

3.4 How often does the household suffer from a food crisis

3.8 Caste inequalities

☐ Agar block   ☐ Barod block   ☐ Susner block   ☐ Control villages

3.9   Which sources of income generation do households believe will significantly enhance their income

Percent of households

1 = agricultural production
2 = animal husbandry
3 = small scale enterprise
4 = local handicrafts
5 = other
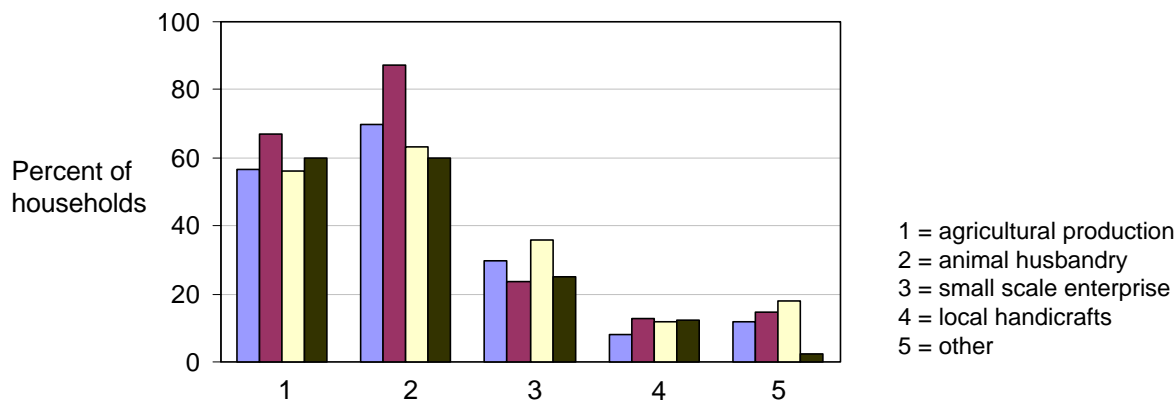
3.10a   What do households believe to be the most important (and neglected) issue at the community level

Percent of households
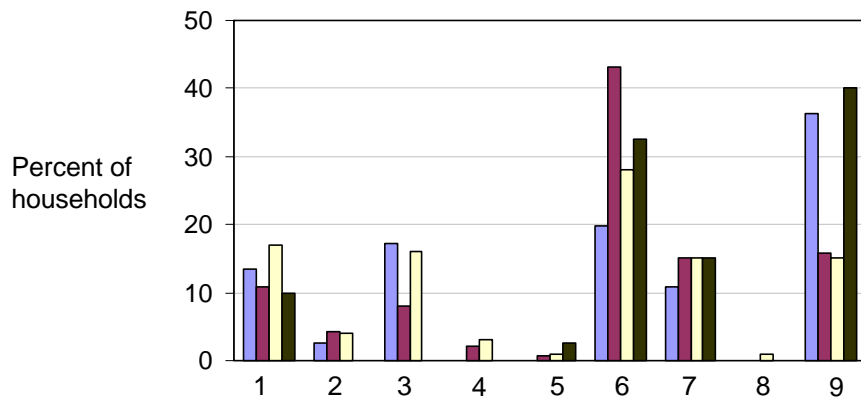
3.10b   What do households believe to be the most important (and neglected) issue at the household level

Percent of households

1 =Health
2=Education
3=Employment
4=Food Security
5=Social Inequalities (caste, dowry)
6=Drinking water
7=Water for irrigation/agriculture
8=Forest
9=Other
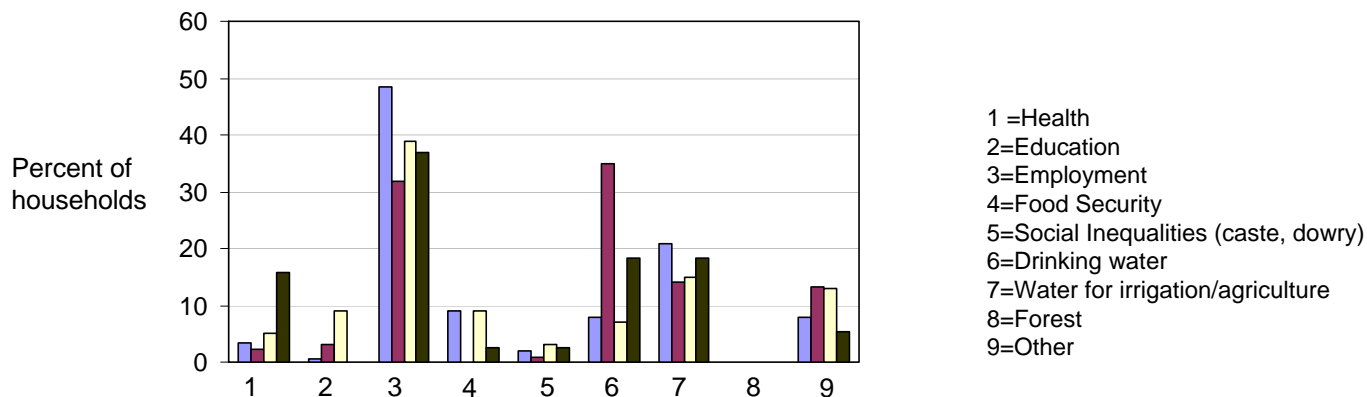
Figure 4. Predicted probabilities that respondent reports she will be very or fully confident that she can carry out various household responsibilities, without help, and in absence of main decisionmaker
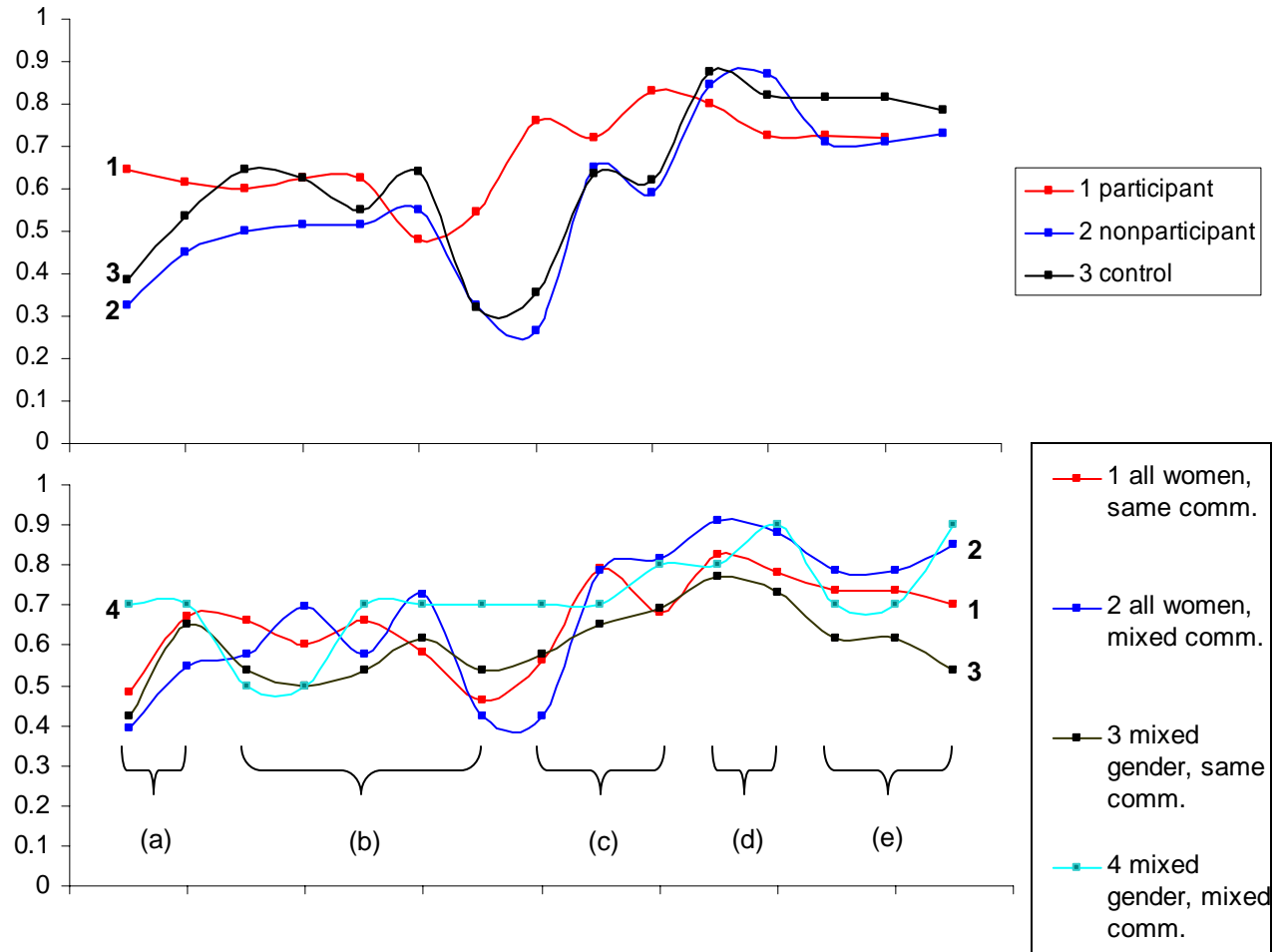
(a) major household purchases
(b) children's outcomes (labor, education)
(c) savings and loans
(d) market activities (work, going to market)
(e) healthcare for family (respondent, husband, children)

Table A1. Participants versus control: whether respondent participates in household decisionmaking over taking/repaying loans

	IV [1]		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z
Men in CIG, all same community	0.914 (0.404)	2.26	0.209 (0.109)	1.92	0.212 (0.101)	1.81
Men in CIG, different communities	0.108 (0.690)	0.16	0.016 (0.159)	0.10	0.014 (0.166)	0.08
Participant (Y=1, N=0)	0.127 (0.145)	0.88	0.160 (0.119)	1.34	0.177 (0.135)	1.32
Age of CIG (months)	-0.009 (0.006)	-1.63	-0.005 (0.005)	-1.08	-0.006 (0.005)	-1.04
More than 35 years of age (Y=1, N=0)	-0.214 (0.079)	-2.71	-0.209 (0.071)	-2.96	-0.221 (0.075)	-2.86
Mother-in-law at home	-0.311 (0.147)	-2.12	-0.175 (0.100)	-1.74	-0.205 (0.107)	-1.92
Widow	-0.219 (0.195)	-1.12	0.023 (0.098)	0.23	0.033 (0.104)	0.31
Any literate adult in the household (Y=1, N=0)	0.187 (0.078)	2.41	0.183 (0.066)	2.78	0.197 (0.070)	2.74
Scheduled Caste household (Y=1, N=0)	-0.095 (0.083)	-1.14	-0.091 (0.074)	-1.23	-0.102 (0.080)	-1.27
Total expenditure per capita (1000s of rupees)	0.023 (0.028)	0.82	0.028 (0.023)	1.18	0.031 (0.028)	1.11
Distance to nearest town (km)	-0.020 (0.010)	-1.96	-0.008 (0.007)	-1.14	-0.009 (0.008)	-1.14
Sudden costly illness in household last year (Y=1, N=0)	0.170 (0.125)	1.36	0.070 (0.104)	0.68	0.069 (0.111)	0.61
Constant	0.702 (0.170)	4.14	0.571 (0.136)	4.20		
Number of observations	208		208		208	
R-squared	0.58		0.66		0.09	
Wu-Hausman F statistic (p-value)	0.07					
Observed XB / Predicted XB					0.62/0.63	

[1] Since estimation was only for participants in targeted villages and control village respondents (nonparticipants were excluded in this estimation), only whether the respondent's group had members of different communities and/or male members were instrumented. Instruments were the number of households of different communities in a 30-household neighborhood around the respondent's residence, and whether the CIG was initially formed in the second half of the year (July – December).
[2] Sampling weights were used to ensure the samples of participants and control respondents were representative.

Table A2. Participants versus control: whether respondent participates in agricultural / land decisions

	IV [1]		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z
Men in CIG, all same community	0.552 (0.352)	1.57	0.377 (0.088)	4.28	0.381 (0.070)	3.74
Men in CIG, different communities	0.314 (0.499)	0.63	0.099 (0.165)	0.60	0.112 (0.155)	0.67
Participant (Y=1, N=0)	0.031 (0.156)	0.20	0.068 (0.140)	0.49	0.072 (0.153)	0.48
Age of CIG (months)	0.001 (0.006)	0.13	0.001 (0.006)	0.12	0.001 (0.006)	0.14
More than 35 years of age (Y=1, N=0)	-0.180 (0.077)	-2.35	-0.178 (0.075)	-2.36	-0.190 (0.080)	-2.32
Mother-in-law at home	-0.119 (0.112)	-1.06	-0.086 (0.096)	-0.90	-0.123 (0.110)	-1.14
Widow	-0.095 (0.171)	-0.55	-0.009 (0.099)	-0.10	-0.029 (0.116)	-0.25
Any literate adult in the household (Y=1, N=0)	0.235 (0.069)	3.40	0.230 (0.068)	3.37	0.253 (0.074)	3.33
Scheduled Caste household (Y=1, N=0)	-0.034 (0.085)	-0.40	-0.040 (0.082)	-0.49	-0.051 (0.090)	-0.56
Total expenditure per capita (1000s of rupees)	0.019 (0.026)	0.75	0.022 (0.025)	0.87	0.025 (0.031)	0.82
Distance to nearest town (km)	-0.012 (0.011)	-1.08	-0.009 (0.008)	-1.14	-0.011 (0.009)	-1.12
Sudden costly illness in household last year (Y=1, N=0)	0.057 (0.134)	0.42	0.041 (0.114)	0.36	0.034 (0.122)	0.28
Constant	0.511 (0.164)	3.12	0.481 (0.151)	3.18		
Number of observations	183		183		183	
R-squared	0.66		0.67		0.12	
Wu-Hausman F statistic (p-value)	0.58					
Observed XB / Predicted XB					0.61/0.63	

[1] Since estimation was only for participants in targeted villages and control village respondents (nonparticipants were excluded in this estimation), only whether the respondent's group had members of different communities and/or male members were instrumented. Instruments were the number of households of different communities in a 30-household neighborhood around the respondent's residence, and whether the CIG was initially formed in the second half of the year (July – December).

[2] Sampling weights were used to ensure the samples of participants and control respondents were representative.

Table A3. Participants versus control: whether respondent participates in decisions regarding purchases of large property/assets

	IV [1]		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z
Men in CIG, all same community	0.357 (0.342)	1.04	0.248 (0.098)	0.098	0.224 (0.075)	2.14
Men in CIG, different communities	0.086 (0.521)	0.16	0.048 (0.175)	0.175	0.033 (0.156)	0.20
Participant (Y=1, N=0)	0.044 (0.123)	0.35	0.052 (0.106)	0.106	0.063 (0.117)	0.55
Age of CIG (months)	-0.001 (0.004)	-0.21	0.000 (0.004)	0.004	0.000 (0.004)	-0.08
More than 35 years of age (Y=1, N=0)	-0.147 (0.068)	-2.16	-0.147 (0.068)	0.068	-0.149 (0.069)	-2.13
Mother-in-law at home	-0.200 (0.111)	-1.81	-0.178 (0.092)	0.092	-0.206 (0.105)	-2.07
Widow	-0.041 (0.160)	-0.26	-0.004 (0.098)	0.098	0.007 (0.099)	0.07
Any literate adult in the household (Y=1, N=0)	0.180 (0.060)	3.00	0.180 (0.060)	0.060	0.186 (0.063)	2.86
Scheduled Caste household (Y=1, N=0)	-0.037 (0.069)	-0.54	-0.037 (0.068)	0.068	-0.045 (0.070)	-0.64
Total expenditure per capita (1000s of rupees)	0.025 (0.022)	1.16	0.025 (0.021)	0.021	0.026 (0.025)	1.05
Distance to nearest town (km)	-0.008 (0.007)	-1.06	-0.006 (0.006)	0.006	-0.007 (0.007)	-1.05
Sudden costly illness in household last year (Y=1, N=0)	0.122 (0.100)	1.22	0.110 (0.090)	0.090	0.114 (0.088)	1.15
Constant	0.642 (0.141)	4.55	0.624 (0.135)	0.135		
Number of observations	211		211		211	
R-squared	0.74		0.74		0.10	
Wu-Hausman F statistic (p-value)	0.86					
Observed XB / Predicted XB					0.72/0.74	

[1] Since estimation was only for participants in targeted villages and control village respondents (nonparticipants were excluded in this estimation), only whether the respondent's group had members of different communities and/or male members were instrumented. Instruments were the number of households of different communities in a 30-household neighborhood around the respondent's residence, and whether the CIG was initially formed in the second half of the year (July – December).

[2] Sampling weights were used to ensure the samples of participants and control respondents were representative.

Table A4. Participants versus control: how much more personal savings (as a share of household savings) has the respondent started keeping in the past year

	IV [1]		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z
Men in CIG, all same community	-0.655 (0.805)	-0.81	0.055 (0.091)	0.61	0.047 (0.125)	0.38
Men in CIG, different communities	2.064 (1.480)	1.39	-0.187 (0.165)	-1.14	-0.169 (0.178)	-0.85
Members of different communities in CIG	-0.477 (0.670)	-0.71	0.232 (0.093)	2.51	0.314 (0.105)	2.86
Participant (Y=1, N=0)	0.027 (0.330)	0.08	-0.192 (0.113)	-1.69	-0.291 (0.133)	-2.09
Age of CIG (months)	0.006 (0.007)	0.90	0.004 (0.004)	0.92	0.008 (0.006)	1.34
More than 35 years of age (Y=1, N=0)	-0.021 (0.103)	-0.20	-0.047 (0.061)	-0.78	-0.071 (0.077)	-0.92
Mother-in-law at home	-0.014 (0.189)	-0.08	0.005 (0.078)	0.06	-0.048 (0.101)	-0.47
Widow	-0.043 (0.289)	-0.15	-0.131 (0.079)	-1.67	-0.077 (0.101)	-0.74
Any literate adult in the household (Y=1, N=0)	0.051 (0.088)	0.58	0.023 (0.057)	0.41	0.009 (0.073)	0.12
Scheduled Caste household (Y=1, N=0)	0.034 (0.115)	0.30	0.075 (0.067)	1.12	0.139 (0.082)	1.69
Total expenditure per capita (1000s of rupees)	-0.051 (0.039)	-1.30	-0.015 (0.019)	-0.81	-0.010 (0.027)	-0.37
Distance to nearest town (km)	0.068 (0.159)	0.43	0.034 (0.099)	0.34	0.018 (0.121)	0.15
Sudden costly illness in household last year (Y=1, N=0)	0.008 (0.013)	0.63	0.005 (0.006)	0.87	0.004 (0.008)	0.51
Constant	0.396 (0.220)	1.80	0.331 (0.125)	2.65		
Number of observations	211		211		211	
R-squared	0.30		0.39		0.07	
Wu-Hausman F statistic (p-value)	0.11					
Observed XB / Predicted XB					0.41/0.40	

[1] Since estimation was only for participants in targeted villages and control village respondents (nonparticipants were excluded in this estimation), only whether the respondent's group had members of different communities and/or male members were instrumented. Instruments were the number of households of different communities in a 30-household neighborhood around the respondent's residence, and whether the CIG was initially formed in the second half of the year (July – December).

[2] Sampling weights were used to ensure the samples of participants and control respondents were representative.

Table A5. Participants versus control: how many more new people have started coming to respondent for advice on household affairs in the last two years (economic and personal decisions)

	IV [1]		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z
Men in CIG, all same community	-1.166 (5.304)	-0.22	-1.709 (0.639)	-2.67	-0.208 (0.111)	-1.75
Men in CIG, different communities	1.419 (5.955)	0.24	0.318 (1.319)	0.24	0.064 (0.194)	0.33
Members of different communities in CIG	-2.095 (4.549)	-0.46	-0.919 (0.881)	-1.04	-0.242 (0.099)	-2.31
Participant (Y=1, N=0)	2.332 (2.411)	0.97	1.839 (0.760)	2.42	0.439 (0.092)	3.59
Age of CIG (months)	0.072 (0.045)	1.59	0.084 (0.041)	2.03	-0.002 (0.006)	-0.42
More than 35 years of age (Y=1, N=0)	-0.371 (0.486)	-0.76	-0.410 (0.514)	-0.80	-0.170 (0.077)	-2.17
Mother-in-law at home	-1.116 (0.735)	-1.52	-0.752 (0.576)	-1.30	0.010 (0.111)	0.09
Widow	0.147 (1.791)	0.08	0.409 (0.641)	0.64	0.090 (0.109)	0.81
Any literate adult in the household (Y=1, N=0)	0.131 (0.472)	0.28	0.123 (0.463)	0.27	-0.064 (0.076)	-0.84
Scheduled Caste household (Y=1, N=0)	-0.990 (0.656)	-1.51	-0.881 (0.529)	-1.67	-0.038 (0.085)	-0.45
Total expenditure per capita (1000s of rupees)	-0.018 (0.235)	-0.07	0.038 (0.161)	0.23	-0.021 (0.029)	-0.72
Distance to nearest town (km)	-0.051 (0.056)	-0.92	-0.025 (0.046)	-0.54	-0.009 (0.008)	-1.19
Sudden costly illness in household last year (Y=1, N=0)	-0.639 (0.848)	-0.75	-0.968 (0.634)	-1.53	-0.026 (0.119)	-0.22
Constant	1.555 (1.123)	1.38	1.133 (0.792)	1.43		
Number of observations	211		211		211	
R-squared	0.42		0.44		0.10	
Wu-Hausman F statistic (p-value)	0.83					
Observed XB / Predicted XB					0.49/0.48	

[1] Since estimation was only for participants in targeted villages and control village respondents (nonparticipants were excluded in this estimation), only whether the respondent's group had members of different communities and/or male members were instrumented. Instruments were the number of households of different communities in a 30-household neighborhood around the respondent's residence, and whether the CIG was initially formed in the second half of the year (July – December).
[2] Sampling weights were used to ensure the samples of participants and control respondents were representative.

Table B1. Selected nonparticipant versus control outcomes: personal savings and decisionmaking over household purchases

	Dependent variable: How much more personal savings (as a share of household savings) has the respondent started keeping in the past year				Dependent variable: whether respondent participates in household decisions regarding major household purchases			
	OLS		Probit (Marginal Effect)		OLS		Probit (Marginal Effect)	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
Nonparticipant in targeted village (Y=1, N=0)	-0.150 (0.075)	-2.00	-0.221 (0.099)	-2.17	0.126 (0.067)	1.89	0.122 (0.066)	1.88
More than 35 years of age (Y=1, N=0)	0.014 (0.080)	0.18	-0.055 (0.101)	-0.54	-0.003 (0.065)	-0.05	-0.011 (0.065)	-0.17
Mother-in-law at home	-0.001 (0.128)	0.00	-0.068 (0.133)	-0.49	-0.109 (0.113)	-0.97	-0.125 (0.137)	-1.09
Widow	0.093 (0.106)	0.88	0.072 (0.144)	0.51	-0.051 (0.106)	-0.48	-0.027 (0.085)	-0.34
Any literate adult in the household (Y=1, N=0)	0.152 (0.075)	2.02	0.176 (0.098)	1.78	0.068 (0.069)	0.99	0.057 (0.062)	0.91
Scheduled Caste household (Y=1, N=0)	0.104 (0.075)	1.38	0.183 (0.098)	1.84	0.076 (0.080)	0.95	0.056 (0.070)	0.79
Total expenditure per capita (1000s of rupees)	0.038 (0.044)	0.86	0.052 (0.056)	0.93	0.015 (0.037)	0.41	0.011 (0.037)	0.31
Distance to nearest town (km)	0.010 (0.007)	1.44	0.017 (0.010)	1.70	-0.001 (0.005)	-0.24	-0.003 (0.006)	-0.43
Sudden costly illness in family last year (Y=1, N=0)	-0.175 (0.193)	-0.91	-0.198 (0.176)	-0.93	0.145 (0.070)	2.08	(*)	
Constant	0.006 (0.158)	0.04			0.729 (0.163)	4.48		
Number of observations	114		114		114		106	
R-squared	0.38		0.10		0.89		0.08	
Observed XB / Predicted XB			0.38/0.37				0.88/0.89	

* Having an illness in the household perfectly determined participation in this estimation.
[2] Sampling weights were used to ensure the samples of nonparticipants and control respondents were representative.

Table B2. Selected nonparticipant versus control outcomes: decisionmaking over loans, and how many more people can respondent turn to for advice on household affairs

	Dependent variable: whether respondent participates in household decisions regarding loans/repayment		Dependent variable: how many more new people over the last two years, in this village and outside villages, are now coming to respondent for advice on household affairs (economic and personal)	
	OLS		OLS	
	Coef.	z	Coef.	z
Nonparticipant in targeted village (Y=1, N=0)	-0.004 (0.101)	-0.04	0.923 (0.431)	2.14
More than 35 years of age (Y=1, N=0)	-0.121 (0.100)	-1.21	-0.545 (0.348)	-1.57
Mother-in-law at home	-0.034 (0.142)	-0.24	0.038 (0.626)	0.06
Widow	-0.165 (0.151)	-1.09	-0.710 (0.344)	-2.06
Any literate adult in the household (Y=1, N=0)	-0.012 (0.100)	-0.12	-0.131 (0.373)	-0.35
Scheduled Caste household (Y=1, N=0)	0.053 (0.104)	0.52	0.818 (0.407)	2.01
Total expenditure per capita (1000s of rupees)	0.032 (0.047)	0.67	0.115 (0.147)	0.78
Distance to nearest town (km)	0.001 (0.009)	0.16	0.018 (0.034)	0.55
Sudden costly illness in family last year (Y=1, N=0)	-0.240 (0.177)	-1.35	1.149 (0.937)	1.23
Constant	0.529 (0.196)	2.70	-0.208 (0.618)	-0.34
Number of observations	113		114	
R-squared	0.58		0.20	

[2] Sampling weights were used to ensure the samples of nonparticipants and control respondents were representative.

Table C1. Selected participant versus nonparticipant outcomes: using propensity score

	Dependent variable: How much more personal savings (as a share of household savings) has the respondent started keeping in the past year				Dependent variable: whether respondent has started participating in household decisions regarding major household purchases			
	IV		OLS		IV		OLS	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
Participant (Y=1, N=0)	0.149 (0.204)	0.73	0.104 (0.059)	1.78	0.020 (0.155)	0.13	-0.035 (0.040)	-0.88
More than 35 years of age (Y=1, N=0)	-0.052 (0.060)	-0.88	-0.051 (0.059)	-0.87	-0.016 (0.049)	-0.33	-0.015 (0.047)	-0.31
Mother-in-law at home	-0.075 (0.072)	-1.04	-0.074 (0.072)	-1.04	-0.049 (0.059)	-0.83	-0.048 (0.059)	-0.82
Widow	-0.127 (0.066)	-1.92	-0.123 (0.063)	-1.94	0.019 (0.056)	0.34	0.024 (0.058)	0.42
Any literate adult in the household (Y=1, N=0)	-0.030 (0.061)	-0.50	-0.027 (0.059)	-0.46	0.036 (0.041)	0.89	0.040 (0.041)	0.99
Scheduled Caste household (Y=1, N=0)	0.050 (0.064)	0.79	0.051 (0.064)	0.80	-0.028 (0.045)	-0.63	-0.027 (0.046)	-0.59
Total expenditure per capita (1000s of rupees)	-0.026 (0.018)	-1.40	-0.026 (0.018)	-1.45	-0.006 (0.015)	-0.41	-0.007 (0.015)	-0.45
Distance to nearest town (km)	0.002 (0.005)	0.33	0.002 (0.005)	0.34	0.003 (0.003)	0.92	0.003 (0.003)	0.94
Sudden costly illness in family last year (Y=1, N=0)	0.103 (0.112)	0.92	0.109 (0.106)	1.03	-0.028 (0.072)	-0.39	-0.021 (0.068)	-0.30
Constant	0.252 (0.180)	1.40	0.287 (0.107)	2.68	0.902 (0.145)	6.22	0.945 (0.076)	12.36
Number of observations	223		223		223		223	
R-squared	0.35		0.35		0.91		0.91	
Wu-Hausman F statistic (p-value)	0.82				0.76			

[1] Participation was instrumented for by whether the respondent had been visited randomly by a program official at the onset of the program.

Table C2. Selected participant versus nonparticipant outcomes: using propensity score

	Dependent variable: whether respondent participates in household decisions regarding loans/repayment				Dependent variable: how many more new people over the last two years, in this village and outside villages, are now coming to respondent for advice on household affairs (economic and personal)			
	IV		OLS		IV		OLS	
	Coef.	z	Coef.	z	Coef.	z	Coef.	z
Participant (Y=1, N=0)	0.369 (0.261)	1.41	0.030 (0.078)	0.39	0.321 (0.250)	1.28	0.370 (0.065)	5.68
More than 35 years of age (Y=1, N=0)	-0.148 (0.075)	-1.99	-0.139 (0.072)	-1.95	-0.163 (0.073)	-2.25	-0.164 (0.072)	-2.27
Mother-in-law at home	-0.159 (0.095)	-1.67	-0.153 (0.094)	-1.62	0.047 (0.092)	0.51	0.046 (0.092)	0.50
Widow	0.073 (0.087)	0.85	0.104 (0.084)	1.23	0.014 (0.097)	0.14	0.009 (0.093)	0.10
Any literate adult in the household (Y=1, N=0)	0.132 (0.068)	1.93	0.157 (0.067)	2.36	-0.073 (0.073)	-0.99	-0.076 (0.071)	-1.07
Scheduled Caste household (Y=1, N=0)	-0.085 (0.077)	-1.11	-0.076 (0.076)	-1.01	-0.039 (0.078)	-0.49	-0.040 (0.078)	-0.51
Total expenditure per capita (1000s of rupees)	0.025 (0.023)	1.09	0.021 (0.023)	0.91	-0.019 (0.027)	-0.72	-0.019 (0.026)	-0.70
Distance to nearest town (km)	-0.001 (0.006)	-0.16	-0.001 (0.006)	-0.12	-0.008 (0.006)	-1.29	-0.008 (0.006)	-1.31
Sudden costly illness in family last year (Y=1, N=0)	0.010 (0.111)	0.09	0.055 (0.105)	0.52	0.033 (0.119)	0.28	0.027 (0.116)	0.23
Constant	0.301 (0.232)	1.30	0.563 (0.134)	4.21	0.481 (0.224)	2.14	0.442 (0.137)	3.23
Number of observations	219		219		223		223	
R-squared	0.62		0.65		0.55		0.55	
Wu-Hausman F statistic (p-value)	0.75				0.15			

[1] Participation was instrumented for by whether the respondent had been visited randomly by a program official at the onset of the program.