

EMPOWERING POOR RURAL WOMEN IN INDIA:
EMPIRICAL EVIDENCE FROM ANDHRA PRADESH

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1. Introduction

While India has recently experienced an impressive economic growth, rural areas and agriculture have largely been bypassed and the ratio of rural to urban poverty has increased. As a consequence, some of the marginalized groups in a society that is already characterized by a high level of inequality in opportunities and segregation along lines of, gender, caste, and social status, are widely reckoned to not have benefited from overall growth. This has corrupted the functioning of local governments with a number of undesirable consequences. In particular, it tends to bias provision of public goods by local governments in favor of the rich, undermines accountability in the implementation of programs to support the poor thereby leading to tremendous leakages, undermining the prospects for sustained pro-poor growth.

International financial institutions have traditionally focused on providing infrastructure and capital to foster development in addition to support to the neediest. However, realization that it will be difficult to make the best use of these investments (or even to maintain them properly), without adequate structures of governance at the local level has given rise to a large shift of resources into programs of “community-driven” development; depending on the measure, the total volume of lending going to this type of project now stands at almost US \$ Mn 7 (Mansuri and Rao 2004). Despite considerable differences in the way in which these are implemented in detail, the unifying idea is that to empower poor people by allowing them to participate in local groups that receive financial resources to implement projects the nature of which is determined at the local level in a participatory way.

Despite the increase in the popularity of such programs, very few serious efforts at evaluating them have been undertaken; in fact even the definition of “empowerment” varies widely across the literature. Without such a definition it will be very difficult to determine whether such projects are reaching the desired outcomes, or what to do to help them in doing so. In this paper, we use one of the earliest projects of this nature, the Andhra Pradesh (AP) District Poverty Initiatives Project (APDPIP), a US \$ 250 Mn intervention that was started in 2000, to make inferences on this issue. We are particularly interested in three main questions.

First, to what extent did the APDPIP project succeed in expanding, deepening and improving governance structures of community organizations while increasing participation of the poor? There is a possible trade-off between these and we use a set of household, group and community instruments to shed light on how the APDPIP has balanced these factors.

Second, to what extent have women been empowered to overcome social barriers? To evaluate the empowerment of women to overcome social barriers, we measure changes that we assume are catalytic to

such empowerment (such as changes in knowledge of, participation in and strengthening of local institutions). We also measure the changes in social outcomes of empowerment, such as changes in the independence of and respect for women in their households. We do this utilizing single differences between treatment and control areas as well as double differences which compare changes over time between treatment and control areas.

Third, to what extent has the project led to new economic diversification, resilience to shocks as well as increased levels of income and productivity? We track the economic activities, the food security, and the access to internal and external lending, etc over the period 2000-2003. While we treat the social dimension of empowerment largely in a gender differentiated manner, for the assessment of the economic impact we rely on household level information.

This paper is an analysis of the APDPIPs success in empowering poor rural women, their families and organizations. Section two gives a short definition of empowerment and discusses the analysis of empowerment in the context of APDPIP. Section three describes the setting of rural AP and the challenges this implies for the project. Section four describes the information gathered at the group and federative level to illustrate the type of interventions advanced by the project and how these differ from earlier approaches. Section five discusses evidence on the impact, in terms of women's empowerment, access to public services, risk coping and asset accumulation. Section six concludes our findings.

2. Empowerment, characteristics of the AP-DPIP and their implications for analysis

Perhaps for the lack of a clear concept and for lack of consensus on its measurement, rigorous studies of actual CDD projects and the extent to which they have led to empowerment are very sparse¹. Given the lack of a clear and accepted definition of CDD and Empowerment we first discuss these concepts and their interrelation with decentralization and social capital.

2.1 Rationale and characteristics of the CDD approach

Central governments trying to reach poor parts of the population often face the problem, that they do not possess detailed local knowledge. While they can target poor geographical areas, they must often leave the targeting of households within communities to lower levels of government, whose actions they cannot easily control and where corruption can lead to large leakages and diversions. An illustrative example is that of the Targeted Public Distribution System (TPDS) in India which is an important part of the Government of India's (GOI) poverty reduction policy. TPDS was devised in 1997 following the failure of the PDS system. It is aimed at delivering highly subsidies food grains to the population below the

¹ Several recent studies point to the severe lack of rigorous definition and evaluation of CDD (Platteau 2004, Mansuri and Rao 2004, Stern *et al.* 2005, Narayan 2005).

poverty line (BPL). However the Programme Evaluation Organisation of the GOIs Planning Commission recently found that of 14 million tones of grain for BPL families more than 8 million tones never reached them. The study finds that using the TPDS “the GOI spends Rs 3.65 through budgetary food subsidies to transfer Rs 1 to the poor” (Planning Commission 2005).

On this background it is not surprising that governments and donors seek new more cost efficient ways to fight the multiple aspects of poverty. Since the early 1990s projects that include community participation in project targeting or implementation have received increasing attention and there is much anecdotal evidence of their success. The APDPIP is such a project. The project adapts a self-help approach, organizes groups of women, and trains them to gradually make their economic activities more profitable or even to move on to new more lucrative activities. To give a few examples: small scale weavers have experienced the advantages of buying inputs together at great savings, groups of women who subsisted as casual laborers have received small loans from revolving project funds, that have enabled them to start trading business and have dramatically increased their earnings. Federated SHGs have formed consumer cooperatives lowering their members’ expenditures on staple foods. At the same time as addressing the pressing economic needs of the beneficiaries and their families, the project has managed to address social issues and groups have formed that have dealt with issues such as child marriage, untouchability, and alcohol consumption. Such evidence, however compelling, remains anecdotal. How and the extent to which community driven projects like the APDPIP work, remains largely undocumented.

A big problem in studying community driven development and empowerment is the lack of consensus on what the very terms mean. Much of the present discourse on decentralization, participation, CDD, empowerment and social capital entangle the concepts in each other and with the concepts of sustainability and poverty alleviation.

We define empowerment in the following way: Empowerment is the positive change in persons’ or groups’ ability to satisfy their wants and promote their interests. Anyone can be empowered, not just the poor. However, the case for empowerment in development is one of equity and rests on the assumption that the vulnerable and their communities do not command enough voice and resources to further their interests, even in a decentralized context. The roads to empowerment can be through the augmentation of human, social and productive capital. As the poor become better able to satisfy their wants and further their interests, the (power) relations within communities and between communities and government can change making empowerment a politically sensitive issue.

The arguments for decentralization are often based on efficiency considerations. The case for decentralization rests largely on the assumptions that i) the transaction costs in obtaining and acting on information about local preferences are lower for a decentralized government than for a centralized

government, and that ii) information on the actions of local government officials is more transparent to citizens. Thus local government can better adapt programmes to local preferences and locals can better hold government accountable. By bringing government and citizens closer, the benefits of this information can be reaped, and in the absence of too large negative externalities lead to an increase in societal welfare. Classic works illustrating how information and adaptability, exit and voice favor decentralization include those of Tiebout and Hirschman (Tiebout 1956, Hirschman 1970).

While serious research continues to focus on the information advantage of the local level government (Alderman 2002), there is an increasing emphasis on the importance of citizens' and communities' participation as a key factor for successful decentralization. Participation is the main vehicle of CDD and the CDD approach lends from both decentralization and empowerment. It recognizes that to reap the potential benefits of decentralization, the disempowerment of the poor must be addressed before or simultaneously with decentralization or CDD. Otherwise elite capture is a likely consequence with possibly detrimental effects on societal welfare (Platteau and Gaspart 2003, Ibanez and Rao 2003). Rather than bringing government closer to the people, as in decentralization, the focus of CDD is bottom up, on empowering communities and local governments with resources and authority to take control of their development (Binswanger and Aiyar 2003). For a project to be a community driven development project it must define community, what resources and authority the community can "drive" and towards what aspect of development the project will facilitate this drive. Thus CDD projects can differ in all aspects but having community participation as a central design element.

Much of the literature advocating CDD argues that the CDD approach helps improve accountability by bringing power back into the local community. However it is not clear that community leaders are more accountable than higher level officials and politicians, or that the CDD approach will align the priorities of the community leaders with their communities. Like centralized projects, CDD projects are prone to elite capture (Platteau and Gaspart 2003). We analyze the conflicts and group functioning to assess whether the project has created structures that are inclusive of women from vulnerable groups

Perhaps the most difficult issue in assessing the success of CDD projects in empowering the vulnerable is the measurement of social capital. Arrow early pointed out that practically all commercial transactions depend on trust (Arrow 1972). But only after Putnam published his findings on the correlation between civic engagement and government quality in northern Italy (Putnam *et al.* 1993) has the debate on social capital really picked up. The definitions of social capital are legion. However the main divide is whether social capital should be understood as trust or as networks. Finally there are those economists like Arrow who believe, that whatever the term refers to, it is not capital and that the term should be abandoned (Dasgupta 2000). Rather than discuss what it is or is not, this paper analyses the way the APDPIP groups

have influenced their members' in five dimensions often associated with social capital: networks, trust, capacity for collective action, information, and political participation. Thus we designed our survey instrument to capture group membership and changes over time in the households' ability to tap into networks for credit, their access to other government programs, their confidence in other community members, outsiders and government officials, how much the communities have come together to address common problems, how much information men and women have on local institutions, and the extent to which they participate in local government structures (political participation). We take these to be proxies for empowerment. With few exceptions, studies of community driven projects have generally not been actual impact evaluations, have utilized techniques such as Beneficiary Assessments without proper counterfactuals or have been biased by a 'praise culture' (Ibanez and Rao 2003, Platteau 2004, Mansuri and Rao 2004, Rawlings 2004). Social funds are probably the most well studied of the approaches in community led development. Studies such as the World Bank's Social Fund 2000 set of studies in Armenia, Bolivia, Honduras, Nicaragua, Peru, and Zambia address sustainability, efficiency, targeting and the changes in living standards. Other studies of community based targeting (CBT) find that household targeting by communities works better the more equal the land distribution and the less remote the community is (Galasso and Ravallion 2005). While these are very all relevant and interesting issues, still very little is known about the way empowerment works (Stern *et al.* 2005).

2.2 Different types of interventions

CDD projects such as the APDPIP differ from non-CDD projects by striving to empower beneficiaries economically and socially, this implies that the instruments used in the analysis will have to go beyond standard economic ones. However, this only provides scant guidance in designing an impact evaluation. Except for the commonality of community involvement as a major design component, CDD projects exhibit great variation in project design and assumptions. CDD projects are found in a number of forms: i) single or multi-sectoral projects ii) implemented within existing government structures or creating new parallel or supplementary structures iii) focused on income generation or public service delivery iv) seeking to strengthen the individual agency or collective action iv) geographically or vocationally oriented, v) inclusive of all strata of a population or targeted to specific groups vi) focused on self-help and sustainability or grants based. Such project aspects largely determine which kind of surveying and analysis is relevant and possible.

Like other DPIPs and many CDD projects, the APDPIP aims to improve the livelihood opportunities of the poor by providing them with access to financial resources as well as improved capacity. However, there are a number of differences between AP and other CDD projects. We briefly describe these and discuss how they will affect the type of analysis to be performed

First, an interesting aspects of the AP program that greatly facilitates the assessment of its impact is the fact that only women's groups were eligible and that where possible it built on pre-existing group structures. It is therefore possible to compare between women and men in the project area, as well as between pre-existing groups in areas affected by the project and in areas that were not eligible, to assess project impacts.

Second, an important objective of the project is to not only strengthen existing SHGs but also to expand the outreach of existing SHGs by bringing in women, especially from outlying areas and marginalized groups who may not have participated initially due to limitations in their endowments with human and physical capital. As SHGs are likely to acquire additional skills as they go through their "life-cycle" distinguishing between SHGs that have been newly established or strengthened under the project and those that have existed for a long time provides us with a possibility of studying project performance and relevance to different types of groups.

Third, recognizing the limitations of SHGs in terms of providing public goods, interacting with the government bureaucracy, accessing the resources needed to build members' capacity, and also dealing with providers of financial services, the project has made the establishment of SHG federations, at the village level through VOs and at the mandal (county) level through mandal samakhyas (MSs). Characterizing these federations, their activities as well as the income streams of the household in areas with and without such federations facilitates the assessment of the project impact.

2.3 Data sources

This paper is thus based on two surveys one for APDPIP (Velugu Phase I) and AP Rural Poverty Reduction Project (Velugu Phase II). For APDPIP we use a comprehensive set of survey instruments covering 3 districts, 2,700 households (with separate questionnaires being administered to men and women in the household), 2,200 self-help groups, and 200 village organizations in both project and control areas.

The control group originally chosen for the project's baseline survey was small and contaminated in the sense that a significant amount of project activity has been undertaken in control areas. However, while the DPIP was active only in 6 districts, the project has recently been expanded (Velugu Phase Two) to cover the whole state. The ability to design and use the baseline survey of Velugu Phase Two as a control group, and to rely on recall questions to assess changes in key indicators and household assets over time provides a unique opportunity to enhance the controls and minimize contamination in the assessment of the APDPIPs impact on poor rural women and their households. The use of data from Velugu Phase II brings the total number of household included in the analysis to 7000 and the number of SHGs to 4000.

The questionnaires used contained elaborate sections on social empowerment, participation in groups, and actual as well as hypothetical borrowing capacity.

3. The setting and the resulting challenges

This section uses the survey data to illustrate household and community characteristics without the project, using either recall or baseline information, at household and village levels. In addition, information based on household data is also disaggregated by SHG participation, to provide the basis for a discussion of targeting in section 3. In all tables, we include t-tests for the equality of means between the two groups.

3.1 Sources of livelihood

We note that, in DPIP areas, households have very low endowments with physical and human capital which limit their ability for gainful self-employment. At the same time, agriculture is the main source of livelihood and there are very few non-agricultural livelihood opportunities. The resulting seasonality of employment opportunities, as well as the scope for periodic droughts, not only make investment risky but also imply that the wage labor market may dry up. This leads to lots of hidden unemployment, a high budget share of alcohol, and despair migration which further undermines livelihood opportunities. High levels of poverty are the result.

Table 1 illustrates that only about one third of the household heads have any formal education and only about an equal share can either read or write. The high level of gender discrimination is illustrated by the fact that only 16% of spouses had any formal education, a share that is significantly higher in the project areas chosen under DPIP. Agriculture provides the mainstay of more than two thirds of the households in the sample. Overall, 28% of the sample are self-employed in agriculture, 32% engage in casual agricultural work, and another 15% rely on livestock husbandry and CPRs as their main occupation. About 12% of households engage in non-agricultural casual work, and about 7% each are self employed in non-agriculture or salaried. These aggregate figures hide significant regional variation across districts. Although they are still mainly rural, the share of households that rely primarily on agriculture is significantly lower in case of the RPRP villages. This is reflected in the occupation of the head, with 39% self-employed, 31% being an agricultural casual worker, and 15% having their own enterprise.

Households' endowments with assets and consumer goods in the project area are low, even though the reliance on agriculture implies that the share of land ownership is significantly higher (77% as compared to 53% in RPRP areas). Similarly, animal ownership is, with about 27% for both milch and drought animals, much higher in DPIP than in non-DPIP areas. Endowments with consumer goods are fairly similar; about 18% owned a bike, 16% a radio, and 50% a watch. By comparison, the fact that the share

of tribals in the target area is significantly higher, implies that the access of households to sanitation is significantly worse than that of households in non-project areas: 34% (compared to 17%) have only an unprotected water source, 52% no drainage, 10% a toilet, and 19% have to go more than 250 yards to reach a source of drinking water.

The community survey illustrates that in two thirds of the villages in the DPIP areas, households do migrate in order to improve their income. Contrary to other examples, e.g. in China, where migration by individual family members has been a very successful strategy for rural households to generate resources that can be used to invest locally, this type of migration is generally motivated by despair and failure to find any local employment. Especially in the case of landless, it generally involves the whole family, implying interruptions in children's schooling and the loss of local social capital. Since the resources generated are generally enough only for subsistence, it does not lead to the accumulation of resources.

3.2 Access to public services

The negative impact of limited endowments and inadequate sanitary conditions in the target area is exacerbated by limited quality of and access to public health services that lead to high levels of sickness and loss of income earning opportunities due to ill-health. Although the overall supply of school infrastructure, at least at the primary level, is quite good, it is significantly lower in DPIP as compared to non-DPIP areas and things deteriorate rapidly for upper primary and high schools. Households' economic conditions imply that the poorest are unable to take advantage of the opportunities provided, implying that they either do not attend or interrupt schooling. This is borne out by the fact that in the project area, 18% of households have children who never attended school (11% of them with girls) and 15% of households had children who were forced to interrupt school at least once.

Poor sanitary conditions are likely to be the main reasons for households in the project area to have significantly higher levels of sickness than those outside it. This causes them not only to lose valuable labor time but also requires them to spend large amounts of resources for dealing with illnesses. In fact, households affected by sickness in the treatment mandals spent more than Rs 4000 to deal with the main event of sickness during the last 12 months.

The main problems to development, as perceived by women in the households interviewed, are given in the lower panel of table 2. The relative ranking is quite similar between project and non-project areas - with infrastructure coming first, followed by sanitation and drinking water, communication, irrigation and electricity, and social issues such as child marriages and untouchability. One notes, however, that the rate at which such concerns are raised is significantly higher in project areas as compared to non-project as well as treatment mandals as compared to control mandals. To give just one example, 63% of women in

DPIP areas (65% in those targeted for intervention) feel that internal roads are an important problem in DPIP areas as compared to 46% in non-DPIP areas.

Social backwardness of the project areas is illustrated by the high frequency of women mentioning access to communication (46%) child marriages (34%), and untouchability (32%). It certainly merits the focus of different groups on these issues as a primary focus of attention before turning to addressing pressing economic problems and suggests that proper sequencing will be important to have a maximum impact.

3.3 Risk and vulnerability to shocks

Given the limited access to irrigation, agricultural income is exposed to the vicissitudes of weather risk, in particular periodic droughts, which affect not only land owners but also users of common property resources and wage earners. The adverse impact of these is compounded by the losses sustained through general ill-health and periodic health shocks and the weakness of coping strategies. Although there are government programs to enable poor people deal with such shocks, their outreach, especially to the poor, was limited. Taken together, and combined with the lack of these factors imply high levels of food insecurity and vulnerability.

The high level of risk is illustrated by the fact that 42% of households experienced at least one incident of drought, a share that is highest in Anantapur (75%) compared with only 12% in Adilabad and slightly less than 50% in Srikakulam. The systematic nature of these shocks implies that it will be difficult to rely on local networks for insurance and that, because of the difficulty of households insuring each other, macro-economic consequences such as systematic fluctuations of asset prices. The losses sustained as a consequence are by no means inconsequential; in fact the mean loss associated with the most severe incident amounted to more than Rs 8,000, in many cases higher than the per capita income of the household. Even though government program

The impact of risk is visible from the fact that more than one quarter of households (26%) in intervention areas had at least one incident of food insecurity during the last 3 years, defined as a period of at least 2 weeks during which less than 2 square meals per day were available. This highlights the importance of enabling households to deal with the consequences of fluctuations as a first area of intervention taken on by the project.

3.4 Inequality and gender discrimination

A long history of discrimination manifests itself not only in social but also in economic terms, in particular in high levels of inequality of asset endowments by caste and of economic opportunities by gender. The impact of measures to positively discriminate in favor of historically disadvantaged groups is constrained, in addition to their low endowments, by the limited knowledge about such measures by the

affected groups, their scant involvement in formal and informal village institutions, and a profound lack of trust in other castes. Unless these are overcome, it will be difficult to achieve effective participation. In the absence of awareness of government programs among the target population, elite capture becomes relatively easy.

While a range of studies indicate that women's access to income and assets will have an impact on the way in which spending is distributed, a further justification for focusing attention under the project on females is the fact that the opportunities of asset-less women in the wage labor market are severely constrained and that therefore access to the assets needed for self-employment will have a particularly large welfare effect. This is visible from table 3 which shows that the wages received by casual female labor are consistently less than two thirds of what is received by men for tasks that are comparable.

It is now widely accepted that the inability to trust others can seriously undermine the scope for economic and non-economic interaction and all the benefits (in terms of expanding knowledge and exchange that go with it. Table 3 illustrates that in DPIIP areas, only about 70% of women indicated that they had high trust in the same caste group within their village, a share that decreased to 37% for non-residents of the village and 34% and 10% for different caste groups within the same village and in another village, respectively. In view of the fact that only 23% and 16%, respectively, indicated that they had high trust in government employees or elected representatives, it is not surprising to find that both the outreach and effectiveness of government programs to assist the poorest has remained quite limited.

Very limited trust in others is supported and reinforced by extremely low levels of knowledge. Only less than one third of women knew of the reservation of seats for women's representation at the Gram Panchayat (GP) level existed, and only 6%, 13%, and 30%, had during the preceding month, read a newspaper, listened to the radio, or watched TV. In fact, 26% of women surveyed are afraid to disagree with their husband.

4. Program institutions and targeting

One of the basic assumptions of the project is that SHGs fulfill a positive role but that their impact on reducing poverty and empowering women on a broader scale is constrained by limited outreach and scope. In this section, we explore the extent to which the DPIIP has been able to expand in both areas. To assess gains in outreach that go beyond the mere numbers of participants, we perform regressions of program targeting, complemented by the share of different caste groups. These are complemented by an assessment of the governance structure as well as SHGs' lending and non-lending activities. Examination of the lending portfolio also provides a yardstick against which to assess the performance of the groups.

4.1 Targeting and expansion of scope

To assess whether DPIP has been able to further reach out to previously marginalized groups, we run simple probit regressions for participation in non-DPIP and in newly established DPIP groups (Table 5), respectively, using as right hand side variables indicators referring to conditions 3 years ago.² Right hand side variables include invariant household-specific characteristics, the poverty group, housing conditions, the level of women's empowerment, and asset ownership. A number of findings of interest emerge.

First, we note that both DPIP and other programs appear to have included preferentially households those who already had a minimum level of human capital (somebody in the household can read), a tendency to participate in other groups, and a higher propensity to save part of which can be explained by the fact that even groups including marginalized households can benefit significantly from the presence of some members with higher levels of human capital. At the same time, one observes a clear shift towards more poor people in DPIP: rather than savings by the women (as in the case for pre-existing groups), they target only households with some savings and the coefficient on these savings (as well as for participation in other groups and in particular literacy) is significantly lower.

Second, DPIP has made clear advances in targeting of households classified as poorest of the poor (POP) and poor by the Participatory Identification of the Poor (PIP) that was carried out state-wide in AP. The coefficients on both categories are highly significant and of considerable magnitude, compared to what is observed for pre-existing groups where only the coefficient on poor but not POP is significant. The targeting of the vulnerable population is supported by the fact that the coefficient on having experienced food insecurity is highly significant. This turn towards the poorer parts of the population is supported by the coefficients on housing conditions as well as non-land assets. At the same time, while the coefficient on land ownership is insignificant in most regression, the significance of the coefficient on land values suggests that both of the programs have been more successful targeting the landed (and therefore less mobile) population, implying that strategies to ensure gainful participation of other marginal groups, in particular migrants, may be needed.

Third, even though part of this may reflect past program effects (which is one of the reasons for which we estimate regressions with and without these variables), we note a clear difference between pre-existing and DPIP groups in terms of the extent to which the former included women who were already fairly empowered (in terms of having high trust in others, participating and speaking up in community

² Note that, to the extent that non-DPIP groups were established more than 3 years ago and have had an impact on the variables of certain time-varying factors, the estimated coefficients on these factors would be biased towards zero.

assemblies) as compared to DPIP which truly integrates households where women are disempowered in all of these respects, with the possible exception of knowledge on the GS reservations.

To assess the extent to which DPIP SHGs' portfolio of activities has expanded beyond that of "traditional" SHGs, we compare members' subjective perception of the benefits they derive from participating in an SHG between the different types of groups. Doing so illustrates that the project is more effectively dealing with social issues, issues which are of a broader appeal to different sections of the population. It also shows that, in the economic sphere, the project's expansion into areas such as RCL and insurance that deal more explicitly with risk and vulnerability, has provided benefits to a greater number of members and thus been critical in expanding the outreach as compared to earlier programs.

4.2 Governance structure and general characteristics of SHGs

Using data on almost 4,000 SHGs to illustrate some basic characteristics of SHGs illustrates the constancy in the number of members (13 on average) and the fact that, with an average age of more than 4 years, some of these groups had considerable experience. The share of SCs, STs, and minorities is, with 38%, marginally higher for DPIP than for non-DPIP groups, mainly due to the fact that newly formed groups contain on average 42% of members from this category, compared to 35% in non-DPIP ones.

Although more intensive training, which was imparted to 65% of DPIP as compared to 50% of non-DPIP groups, was supposed to enable the newly formed groups to respond to the challenge of such an expansion, this does not seem to have been the case.

The data suggest that this expansion of coverage has been associated with declines in the quality of internal controls and discipline that imply that, despite training and other efforts that are significantly higher than for pre-existing groups, these indicators are significantly lower for DPIP than for non-DPIP groups. For example, even though a significantly higher share of groups impose sanctions for non-attendance, in the average DPIP group only 65% of meetings are held as scheduled and only 62% of the membership attends them, compared to 83% and 79% for non-DPIP groups, respectively. Part of this can be explained by the fact that non-DPIP groups that are no longer functional (and where members no longer perceive any benefits), will just dissolve, implying that those that are in existence are clearly the most dynamic and viable.

The need for an evolution of groups over the life cycle is supported by the benefits which members of different types of groups perceive to be associated with participation. In the economic sphere, an average of 43% indicate that the group helped to strengthen existing income sources, 37% point towards new sources of income generation, 57% highlight benefits in terms of credit access, and about 9% benefit from marketing activities. While income-related benefits are most pronounced in pre-existing groups (47% for

strengthening and 41% for new sources) and DPIP groups that existed previously (40% and 34% respectively), they are still modest in newly formed ones (29% and 20%), implying the need for training and building up of group capacity to enable members to take advantage of the economic opportunities available. Marketing, an activity that was not in the earlier menu of interventions, is still more limited (9% overall) though taken on more by DPIP than non-DPIP groups. The one clear exception refers to credit access which, with 61% as compared to 55%, is more frequent in groups under DPIP than others, even though the fact that only 51% of newly formed as compared to 67% for converted groups benefit from credit suggests that there is some selection within DPIP.

The fact that, by taking up issues of food security and insurance, DPIP has expanded into an area that had earlier received very little attention is confirmed by the fact that, even though 36% and 12% of DPIP groups benefited from these interventions, non of the non-DPIP groups mentioned this type of benefit. In addition to the total amount of resources required to bring about benefits in this areas being much less than for income benefits, the data also highlight that insurance and food security are more inclusive than benefits accruing in the economic sphere; 90% of those mentioning insurance benefits and 75% of those pointing towards food security benefits highlight that these benefit all members equally rather than just a few.

To assess the potential for realizing economic benefits, it is of interest to review presence of the management needs required for a group to engage in successful lending. Table 7 reports probit regressions for different specifications with both the presence of serious and infrequent conflict as the dependent variable. Results point towards considerable deficiencies in DPIP groups. Compared to 41% of non-DPIP ones who have books checked by a Master Bookkeeper (MBK) , only 37% of DPIP groups do so. The share of groups where the quality of book-keeping is bad or very bad is, with 40% for DPIP groups (equally for converted and newly established ones) much lower than for non-DPIP ones where it reaches only 30%. By contrast, only 25% of DPIP, compared to 30% of non-DPIP groups have good quality of book-keeping. While training of book-keepers should help to address this issue in principle, and indeed 60% of DPIP groups have one available as compared to 35% of non-DPIP groups, this does not seem to make a difference in terms of the final outcome.

We note that 14% of groups were affected by serious conflicts -which are more frequent in non-DPIP (16%) than in DPIP groups (11%) and 22% by temporary conflicts which are much more prevalent in DPIP groups (40%) as compared to others (13%). This pattern is consistent with the hypothesis that, once conflict is allowed to fester, it is very difficult to get rid off and suggests that great attention to any factors that may increase the conflict potential will be particularly warranted. Before exploring such factors in more detail, we note that about 60% of serious conflicts are related to either loans (22%), repayments

(18%), or savings (19%), a pattern that is very similar for temporary conflicts. Not inconsistent with expectations, a higher share of DPIP groups are affected by conflicts on attendance.

Exploring possible reasons for conflicts in a regression framework yields a number of interesting and policy-relevant insights. First, we note that quality of book-keeping is of critical importance to reduce the incidence of both frequent and temporary conflict with a reduction of 5.5 and 5 points, respectively. In addition, having an independent check on the books by a MBK brings a further 2.2 point reduction. Both measures together will, according to the estimate, be sufficient to more than halve the incidence of serious conflict, suggesting that serious attention to better adherence to such simple internal controls may have very high payoffs. At the same time, availability of a trained book-keeper within the group is, somewhat surprisingly, estimated to increase the incidence of both infrequent and frequent conflict. This suggests that training initiatives which do not result in significant improvement of the desired parameters may be of little value and may also imply that, unless a group is very mature, having one member appointed (or trained) to take care of the books without some external reference for accountability may generate more problems than it solves.

A second area of interest refers to group characteristics. We find that groups formed under DPIP are slightly (3.7 points) less likely to be affected by a serious conflict and that the initial number of SC/ST members tends to increase the potential for conflict. The negative, though very small, coefficient on group age for serious conflict (and the opposite sign for temporary ones) suggests that age does not have a clear-cut effect (and may also reflect some sort of survivor bias in the case of non-DPIP groups).

Concerning lending and savings, one notes that having any internal saving as well as lending increases the conflict potential even though the negative coefficient on the amount saved per member (significant in some specifications) suggests that higher amounts of savings do actually have a very positive effect. By contrast, having access to external lending is estimated to have contributed to a significant reduction in the conflict potential. Note, however, that having a loan overdue (either external or internal) is associated with a significant and quantitatively large increase in the conflict potential; having external lending overdue increases the potential by 5.8 points and having internal lending overdue by 3.3 points. This suggests that, other factors constant, it should be possible to eliminate the vast majority of conflicts by adequately maintained books and timely repayment.

A final group of variables relates to the presence of specific benefits from SHG membership which we expect to reduce the potential for conflict. The regression confirms this notion to some extent. Benefits reduce the potential for conflict the more the broader their incidence (as for social unity, community decision-making, RCL, and marketing benefits for temporary conflicts). The need for proper sequencing and provision of a menu of training choices that is in line with group capacity is illustrated by the fact that

some activities, in particular benefits in articulation, are estimated to contribute to a significant increase in the conflict potential. Overall, and especially in view of the fact that even small conflicts can easily escalate into bigger ones that may eventually undermine group sustainability, with very negative consequences for members, the results clearly point towards the need to be aware of the importance of internal management arrangements, the proper sequencing of training and lending activities, and where needed external intervention to resolve conflicts early on, in order to ensure maximum sustainability of the groups formed under DPIP.

4.3 Economic initiatives advanced by SHGs

The fact that almost 90% of SHGs in the sample rely on regular internal saving illustrates the importance of such savings to the broader strategy and to establish discipline in the group, especially in cases where internal lending is not provided equally to all members but only to a select few. This is the case in the vast majority of groups; in fact the share of groups where all members simultaneously benefit from internal lending is quite low. The peer pressure for repayment that results from such asymmetry appears to be one of the key factors underlying the fact that internal lending is in default in only about 10% of groups, in marked contrast to external lending where repayment incentives appear to be much lower.

Concerning external lending which benefits 34% of groups on average, though with a strong bias towards DPIP groups (57% vs. 23% for non-DPIP ones), the data facilitate a number of observations of interest. First, a large share of groups has access to bank loans, implying that project resources are by no means the only source of capital but that groups are able to draw on financing from outside for some of their needs. While 64% of groups with loans have access to bank loans, only 15% have accessed the CIF (28% in DPIP-formed groups and about 18% in pre-existing groups). Further analysis will be useful to determine whether the fact that the much higher share of bank loans in DPIP as compared to non-DPIP groups is evidence of a crowding-out or just an indication of an increase in groups' absorptive capacity and ability to put money to beneficial use. We also find that, concerning the purposes of external linkages, about 52% is used for working capital, 15% for investment, and somewhat above 10% each for food and health, other non-capital items (e.g. social expenditures), and with no purpose given.

Second, even though not everybody benefits equally, most group members have received access to external loans. In complete difference to internal lending, in a large number of groups all members appear to benefit from external lending. The amounts involved are significantly higher than in the case of internal lending (a total of 44,000 Rs. for DPIP and 33,000 Rs. for non-DPIP groups per loan). While converted groups benefit from almost 50,000 Rs. in external loans, even newly established ones have, with Rs. 36,000, access to significantly higher amounts than those outside the project area.

Third, while most of the groups make some repayments, the fact that almost 50% of loan amounts are overdue may be reason for project concern. This calls for a more detailed analysis of these loans at the group and household level to assess whether the overdue loans were taken on more recently in efforts to expand the program, whether they can be associated with specific purposes (e.g. short term consumptive use) so as to determine adequate measures that can be taken to ensure that repayment difficulties do not develop into a permanent bottleneck that can eventually undermine not only the sustainability of the groups but also the social accomplishments of the project.

4.4 The federated structure

Even though most of the VOs and MSs were formed quite recently, the fact that these are one of the distinguishing features of DPIIP implies that it will be useful to assess the extent to which they performance their functions. A first finding is that these groups offer leadership opportunities to disadvantaged groups as evidenced by a significant increase in the share of women from SC or ST households who, over time, have held leadership positions in VOs. Also, even though the number of members trained remains very low (and varies a lot among districts, with Anantapur having the most inclusive training program), the fact that about 70% of VOs have conducted training activities, most relying on MS staff, illustrates that they are starting to assume their function of building up SHG capacity.

The amount of marketing activities undertaken is somewhat out of line with the resource endowment. In fact, due partly to their limited age and experience, the share of VO who have own assets remains, with 12% of the total, very limited, making them essentially conduits of programs and initiatives managed at a higher level. Case studies of the value added through marketing activities as well as RCL and others could be very helpful to see how this process can be improved.

5. Evidence on impact

In line with the multi-dimensional nature of poverty and the project interventions aiming to reduce it, we discuss impacts on both the social and the economic sphere and the likely links between the two. We start with evidence on greater empowerment of women that manifests itself in greater involvement in intra-household decision-making, trust in government officials, other villagers, and outsiders, and participation in village assemblies. Access to other government programs is measured directly, by the share of households who know how to address problems in schooling and health and by direct outcomes, in terms of health-related knowledge and participation in education. This suggests that women's increased access to resources and their enhanced borrowing capacity did not only improve the ability to deal with shocks and smoothing consumption but also provided the basis for a broader social transformation in program

areas. We conclude with an assessment of the impact of the program on the ability to make use of existing endowments and on asset accumulation that draws both on descriptive, recall-based, as well as econometric evidence that relies on comparing baseline with current information for panel households included in the sample. Not surprisingly, this impact is more limited.

5.1 Women's empowerment

Women's empowerment is measured by a number of measures relating to their bargaining power within the household, their trust in others in the community, and their participation in community-level decision-making for which we report levels or changes over time based on recall information.

A first indication for the program having made significant progress towards greater empowerment of women is the fact that, even though the share of households where the husband alone takes decisions on debt, income generating activities, and children's education is significantly higher in DPIP areas than in the districts not targeted by the program, the share is significantly lower throughout for those participating in SHGs than for those who do not. While this could, of course, be a result of the voluntary nature of program participation, fears that self-selection of households is driving the result can be allayed by noting that for the majority of indicators there is no significant difference between new and more established groups.

More conclusive evidence of a program effect is provided by the fact that the changes over time in the share of women who are afraid to disagree with their husband now and who are not allowed to manage resources independently has significantly decreased in treatment as compared to control areas. The hypothesis (underlying the program) that differentially improving women's access to economically valuable resources can lead to greater social empowerment is supported by the fact that the reduction in the share of women who report to have been exposed to domestic violence or not received proper respect in their family has indeed declined significantly more in treatment as compared to control areas. This result is paralleled by a significant increase in women's trust in government officials, members of different castes, and outsiders. All of this is part of an expansion of women's economic and non-economic opportunities that is at least partly facilitated by the project. Trust in others also has increased significantly.

Data on women's participation and their raising issues in village assemblies (gram sabhas) support the hypothesis that greater empowerment of women within the household provides a basis for allowing them to more effectively participate in community level decisions and provide an opportunity to slowly close the gap to economically and socially more advanced regions. Even though the share of women who participated regularly in gram sabhas is only between one third and half of what is found outside the

project area, the significantly larger rate of change in such participation in project as compared to non-project areas suggests that this gap is slowly being narrowed. Moreover, apparently at least in part due to the presence of the project, the nature of such participation is qualitatively different from that in non-project areas. In fact, the overall share of women (not only among participants) who report to have raised issues in such meetings is significantly higher and has increased at a faster rate in project as compared to non-project areas and among members of SHGs as compared to non-members.

5.2 Social capital and access to other government programs

While we have noted earlier that the effectiveness of many government programs may be limited by the fact that the target population is unaware of them, the outreach campaigns conducted by Velugu seem to have been effective in overcoming this danger. In fact, in DPIP areas, 93% of women are aware of the existence of a Velugu SHG, even though less than half of them actually participate.

Although it should not come as a surprise to find high levels of awareness of Velugu, the intention was for these to act as a catalyst that would allow households to more effectively access other types of programs as well. Available data suggest that this expectation has been borne out; not only is the share of households who indicate to benefit from other programs significantly higher in DPIP as compared to non-DPIP areas and in treatment as compared to control mandals, we also note that the change in the share of households who accessed such programs is, with 31%, 7 points higher (significant at 1%) in the former as compared to the latter. Further a significantly higher share of households indicate that the community takes action with respect to a wide variety of social and economic problems that range from the quality of internal roads, sanitation and access to drinking water to child marriages, disability, and access to formal credit.

More specific indicators for households' knowledge on specific issues, their ability to address shortcomings in service delivery of health and education services support the general conclusions reached earlier and, in addition, raise a number of issues. We note that the share of households who indicate that they know how to deal with problems in health service delivery has increased much more, and more significantly, in DPIP as compared to non-DPIP areas and for SHG participants compared to non-participants. This appears to have provided a mechanism to more broadly improve the quality of services available at the local level, thereby lending support to the hypothesis that action by SHGs can indeed contribute to an improvement in service delivery by line departments that has implications beyond the confines of the program. Even though we do not have data on changes over time that would allow to draw similar conclusions for education (where impacts on enrolment also would need longer time to show up in the data), this suggests that SHGs can indeed perform a useful function not only in spreading substantive

knowledge (as, for example, in the case of family planning) but also as a means to increase the incentives of local governments to provide services efficiently and in a way that reaches the poor.

5.3 Risk coping and consumption smoothing

The most direct evidence on the program having the desired impact on participating households' ability to confront the multiple risks they are exposed to on a day-to-day basis comes from the fact that a much higher share (11% as compared to 4%) of households in treatment as compared to control areas indicates that dealing with drought today would be easier than it was 3 years ago. A difference of similar magnitude (13% vs. 5%) is visible in the share of households indicating that dealing with health shocks would now be easier than in the past. However, the fact that in this case the distinction is between SHG members and non-members suggests that the access to mechanisms to smooth consumption such as internal lending, credit, and informal support by other members, may play a more important role, consistent with the notion that the advantage of such groups is greatest for idiosyncratic as compared to covariate shocks.

Data on women's savings and credit access support the notion that, in addition to any possible impact which the program may have on local governments' incentives to respond effectively to emergencies, individuals' ability to accumulate savings, together with the greater borrowing capacity associated with program participation, is a key reason for such outcomes to be observed. We note marked and statistically significant increases in the share of women who have access to own savings as well as credit. While there have been only marginal increases in the ability of women to borrow from the formal sector (and greater care has to be taken in any case because it is a hypothetical issue), the total amount which women indicate they could borrow from all sources together has increased significantly more for those in SHGs than for those outside them, pointing towards a direct program effect. As the earlier discussion illustrated that a key function of VOs is financial intermediation, it may be difficult to identify the source of a particular loan at the household level. The fact that this effect comes largely from strengthened DWACRA groups, rather than ones that have been newly established under DPIP, suggests that this is part of a gradual process which could expand with these groups gradually maturing.

6. Conclusions and policy implication

Comparison between pre-existing groups in intervention and control areas points towards significantly different rates of improvements in terms of group management and internal controls (e.g. members being fined for non-attendance, internal bookkeeping being of high quality). These, together with the federated structure, appear to have allowed groups in intervention areas to significantly expand the availability of credit to members and to access loans by other financial institutions. Second-tier institutions in self-help

group federations were able to take on completely new activities (e.g. taking over distribution of subsidized food grains from “fair price shops” which had often remained out of the reach of the poor) that significantly improved participants’ ability to smooth consumption. This is supported by evidence from the household level suggesting that, even though the incidence of shocks was higher for households in treatment areas than outside, households were able to deal with such shocks more easily than they had been able to in the past.

The hypothesis that the improvement in access to credit can be attributed to the project is supported by the finding that the unambiguous and significant increase in the amount which women in areas eligible for the project as compared to those that were not, were able to borrow both from the formal and the informal sector is not matched by a commensurate increase in credit availability for men. To the contrary, credit access for men was higher in areas not eligible for the project (marginally significant) as compared to areas that were eligible.

The logic of the project to use improved access to resources to empower women and overcome social barriers is corroborated by the fact that the change in the share of women who receive high respect in their family and who were not subject to domestic violence was indeed significantly lower in control than in intervention areas where women also have significantly higher participation in family matters relating to income generating activities, debt and savings, as well as family planning and the number of children. In fact, the improvements in women’s participation seem to transcend the realm of the family and extent to the community level: the change in the share of women who always know of or participate in village assemblies, who are aware of other types of community institutions, and who are able to freely interact with government officials and villagers of other caste or religion is significantly higher in intervention than in control villages.

While all of this suggests that the project has not only improved access to credit and risk diversification but also significantly increased women’s empowerment, these significant effects were, however, not matched by increased beneficiary savings, possibly because the resources generated by productive activities initiated under the project are yet to mature. To explore this, a closer look at the extent to which the project has increased access of the poor to resources and/or enabled them to use these resources more effectively is needed. Even though productivity of resource use is similar between areas eligible and non-eligible for the project, there is clear evidence that the project has helped to significantly expand the share of households who own productive assets. The key challenge to ensure sustainability and replicability of the intervention is thus to match the rather impressive performance in terms of social empowerment with an equally significant transfer of technical skills that would, by facilitating more productive use of such assets, put participants economic basis on a stronger footing. The ability to use the federated structure to

provide effective technical assistance and to liaise with line ministries to ensure that services are available to the poor, the feasibility of which has been demonstrated in a number of individual cases, is likely to be a key issue in doing so.

Table 1 Key household characteristics

	Total	Overall			Project area only		By district			
		Non-Project	Project area		Treatment	Control	Srik.	Anant.	Adil.	
Caste composition & education										
Household is SC	0.214	0.239	0.166	***	0.161	0.185		0.106	0.228	0.164
Household is ST	0.167	0.150	0.195	***	0.214	0.126	***	0.110	0.034	0.450
Household is BC	0.446	0.410	0.512	***	0.512	0.512		0.710	0.522	0.297
Household size	4.336	4.108	4.747	***	4.843	4.385	***	4.391	4.656	5.196
Head female	0.122	0.120	0.124		0.113	0.166	***	0.136	0.133	0.101
Head has formal education	0.366	0.362	0.372		0.369	0.385		0.369	0.368	0.381
Years of schooling of head	6.684	6.739	6.582		6.571	6.621		6.634	6.375	6.742
Spouse has formal education	0.167	0.175	0.151	***	0.153	0.144		0.156	0.165	0.132
Head can read	0.347	0.341	0.358		0.355	0.372		0.341	0.365	0.370
Head's main occupation:										
Agricultural self-employed	0.278	0.220	0.385	***	0.405	0.308	***	0.256	0.358	0.541
Agricultural casual worker	0.325	0.357	0.267	***	0.264	0.280		0.316	0.306	0.179
Non-agricultural labor	0.113	0.119	0.102	**	0.100	0.106		0.100	0.128	0.076
Non-agric. self-employed	0.071	0.078	0.060	***	0.053	0.086	***	0.118	0.041	0.021
Salaried	0.066	0.074	0.052	***	0.053	0.048		0.041	0.033	0.083
Livestock, CPR & others	0.147	0.153	0.136	**	0.126	0.172	***	0.171	0.134	0.101
Household is POP	0.399	0.397	0.401		0.406	0.381		0.400	0.335	0.469
Household is Poor	0.308	0.306	0.313		0.313	0.316		0.304	0.320	0.316
Budget shares:										
Food	0.514	0.521	0.500	***	0.503	0.491	**	0.501	0.520	0.480
Alcohol & tobacco	0.049	0.051	0.043	***	0.043	0.043		0.046	0.028	0.055
Education	0.021	0.019	0.024	***	0.023	0.027		0.019	0.024	0.029
Health	0.075	0.076	0.073		0.073	0.077		0.086	0.064	0.070
Income shares:										
Agricultural wages	0.317	0.345	0.266	***	0.266	0.264		0.270	0.362	0.165
Ag. self-employment	0.223	0.172	0.315	***	0.329	0.262	***	0.290	0.231	0.425
Housing ownership:										
Owns residential house then	0.938	0.938	0.937		0.939	0.928		0.930	0.919	0.962
House has electricity then	0.461	0.464	0.458		0.451	0.484		0.486	0.527	0.357
House has toilet 3 yrs ago	0.118	0.125	0.102	***	0.094	0.131	**	0.067	0.172	0.066
House has no drainage 3 yrs ago	0.505	0.492	0.523	**	0.545	0.443	***	0.683	0.756	0.122
House has only unprotected water	0.229	0.171	0.338	***	0.327	0.380	**	0.595	0.069	0.355
More than 250 yds to drinking	0.156	0.147	0.174	***	0.187	0.126	***	0.157	0.105	0.262
Ownership of productive assets:										
Household owned bike	0.206	0.219	0.179	***	0.166	0.229	***	0.233	0.136	0.169
Household owned radio	0.145	0.137	0.160	***	0.158	0.169		0.159	0.162	0.158
Household owned fan	0.351	0.373	0.311	***	0.300	0.354	**	0.361	0.319	0.251
Household owned watch	0.420	0.393	0.471	***	0.462	0.501		0.458	0.489	0.464
HH owned milch animal	0.208	0.174	0.269	***	0.274	0.250		0.198	0.221	0.391
HH owned draught animal	0.155	0.088	0.276	***	0.292	0.216	***	0.207	0.209	0.416
HH owned small animal	0.052	0.039	0.076	***	0.085	0.042	***	0.061	0.081	0.085
Households owns any land	0.617	0.529	0.772	***	0.774	0.768		0.651	0.870	0.796
Total land acres	2.844	2.173	3.663	***	3.938	2.615	***	1.892	3.215	5.650
Total land value	67338	54162	84491	***	73078	127991	***	229788	25101	28894
No of observations	7479	4797	2641		2089	552		890	885	867

Note: All figures on housing and productive assets refer to initial endowments (3 years ago) based on recall information

Source: Own computation from CESS/WB DPIP/RPRP survey

Table 2: Schooling, health, and other public services

	Total	Project area		Only project		By district				
		Yes	No	Treat.	Control	Srik.	Anant	Adil		
Access to education:										
Primary school exists	0.952	0.913	0.973	***	0.914	0.911		0.923	0.890	0.927
Upper primary school exists	0.646	0.535	0.707	***	0.525	0.574	**	0.563	0.543	0.500
High school exists	0.477	0.325	0.560	***	0.322	0.338		0.363	0.327	0.285
HH w. kids who never attended school	0.150	0.173	0.135	***	0.177	0.160		0.110	0.191	0.212
HH w. fem. kids who never att. school	0.093	0.108	0.083	***	0.111	0.099		0.069	0.115	0.136
HH. w. kids who interrupted school	0.075	0.137	0.036	***	0.145	0.102	**	0.053	0.252	0.101
Access to health care:										
Lost days to illness for adults	0.347	0.406	0.315	***	0.409	0.397		0.544	0.241	0.436
Days lost to illness for adults	14.894	16.874	13.924	***	17.256	15.432		23.697	9.139	17.830
Lost days to caring for ill by adults	0.346	0.405	0.315	***	0.408	0.391		0.544	0.239	0.434
Days lost to caring for ill by adults	14.304	16.024	13.471	***	16.408	14.571		22.573	8.893	16.638
Total spending on all illnesses	3123	3752	2799	***	4024	2720	*	4652	2663	3947
Child has immunization card then	0.767	0.727	0.793	***	0.707	0.827	**	0.867	0.749	0.632
BCG vaccination then	0.913	0.879	0.937	***	0.870	0.923		0.956	0.967	0.776
Measle vaccination then	0.865	0.824	0.893	***	0.807	0.904	**	0.930	0.934	0.688
Main problems as perceived by women:										
Quality of internal road	0.520	0.629	0.464	***	0.648	0.554	***	0.634	0.733	0.517
Sanitation condition	0.457	0.548	0.410	***	0.559	0.504	**	0.640	0.695	0.302
Access to drinking water	0.368	0.336	0.381	***	0.348	0.290	***	0.272	0.373	0.363
Access to communication	0.337	0.445	0.280	***	0.464	0.375	***	0.545	0.398	0.392
Irrigation facilities	0.297	0.307	0.294		0.330	0.223	***	0.537	0.294	0.087
Access to electricity supply	0.266	0.097	0.362	***	0.101	0.082		0.043	0.108	0.142
Child marriages	0.256	0.324	0.221	***	0.338	0.272	***	0.331	0.393	0.247
Untouchability	0.172	0.312	0.096	***	0.322	0.275	**	0.134	0.712	0.088
Quality of education	0.137	0.203	0.102	***	0.221	0.134	***	0.202	0.289	0.116
Access to formal credit	0.115	0.228	0.054	***	0.257	0.120	***	0.108	0.438	0.135
Disability	0.131	0.268	0.056	***	0.256	0.317	***	0.288	0.398	0.116

Source: Own computation from CESS/WB DPIIP/RPRP survey

Table 3: Vulnerability and Inequality

	Total	Project area			DPIP area only			By district		
		Yes	No		Treat.	Control		Srik.	Anant.	Adil.
Had drought	0.420	0.455	0.401	***	0.468	0.406	***	0.461	0.745	0.152
Total loss	8263	7989	8451		8427	6089	***	3371	10567	9248
Had death of family member	0.050	0.059	0.046	**	0.053	0.081	**	0.084	0.054	0.037
Total loss	7595	5635	9282	***	5052	7164		5864	4021	8519
Had health shock	0.102	0.127	0.09	***	0.118	0.162	***	0.153	0.063	0.163
Total loss	8711	8144	9196		8116	8223		6222	8046	10174
Had food insecurity 3 yrs ago	0.168	0.254	0.123	***	0.26	0.23		0.56	0.127	0.07
Daily wages received:										
Agric. Males	43.052	40.603	44.449	***	40.269	42.176	**	46.28	31.33	45.842
Agric. Females	25.853	25.511	26.054	***	25.603	25.14		27.19	22.122	27.919
Non-agric. Males	52.163	50.787	52.898	**	51.042	49.926		51.79	46.116	55.895
Non-agric. Females	32.312	31.607	32.86	*	32.403	29.082	***	28.951	33.737	33.175
High trust/knowledge by women:										
Same caste group same village	0.777	0.689	0.828	***	0.695	0.667		0.798	0.777	0.487
Same caste group different village	0.431	0.369	0.468	***	0.387	0.301	***	0.307	0.538	0.26
Different caste same village	0.448	0.338	0.513	***	0.341	0.326		0.564	0.31	0.135
Different caste different village	0.18	0.106	0.222	***	0.115	0.069	***	0.181	0.105	0.028
Different religious group same village	0.31	0.127	0.414	***	0.128	0.123		0.24	0.052	0.088
Different religious group different village	0.134	0.046	0.183	***	0.048	0.04		0.091	0.019	0.028
Elected representatives	0.276	0.156	0.344	***	0.157	0.154		0.127	0.075	0.27
Gov't employees	0.337	0.225	0.402	***	0.226	0.219		0.165	0.226	0.285
Access to information										
Knows GP reservation for women exists	0.274	0.323	0.249	***	0.327	0.31		0.38	0.344	0.246
Read newspaper now - woman	0.059	0.057	0.059		0.056	0.061		0.051	0.059	0.060
Listened to radio now - woman	0.134	0.154	0.123	***	0.160	0.133		0.121	0.140	0.202
Watches TV now - woman	0.300	0.301	0.301		0.306	0.281		0.286	0.419	0.194
Knows of village development committee	0.12	0.132	0.107	**	0.14	0.104	**	0.023	0.09	0.286
Knows about mother's committee	0.244	0.557	0.072	***	0.584	0.455	***	0.592	0.671	0.403
Afraid to disagree with husband	0.256	0.287	0.201	***	0.208	0.173	***	0.315	0.213	0.074

Source: Own computation from CESS/WB DPIP/RPRP survey

Table 4: Basic characteristics of SHGs and members' perception of benefits received

	Project area			Group type		Region		
	Yes	No		New	Converted	Srik.	Anant	Adil
Basic group characteristics:								
Group formed under DPIIP	0.132	0.410	0.000 ***	1.000	0.000	0.335	0.486	0.427
Age of group	4.181	3.620	4.439 ***	1.811	4.927 ***	3.533	3.573	3.748
Size of SHG at start	13.166	13.258	13.126	12.477	13.790 ***	13.348	12.792	13.568
Share of SC/ST & minorities	0.361	0.381	0.352 *	0.416	0.358 **	0.218	0.227	0.667
Share of BCs at start	0.461	0.502	0.442 ***	0.478	0.518	0.693	0.560	0.273
Share of OCs at start	0.172	0.104	0.203 ***	0.087	0.116 **	0.074	0.207	0.045
Share of meetings held in 2003	0.773	0.653	0.832 ***	0.710	0.613 ***	0.462	0.831	0.695
Share of members attended 2003	0.734	0.622	0.789 ***	0.674	0.585 ***	0.512	0.707	0.662
Any savings in 2003	0.88	0.90	0.87 ***	0.92	0.89	0.86	0.92	0.94
savings per member in 2003	501	412	544 **	332	466	348	401	479
Any internal lending in 2003	0.45	0.45	0.45	0.41	0.48 **	0.63	0.31	0.39
Int. loan amount sanctioned	6262	4601	6860 ***	3161	5319 ***	4220	5910	4244
>90% of members get internal loans	0.13	0.1	0.14 ***	0.12	0.1	0.04	0.12	0.15
pct (value) of int. loans overdue	0.12	0.12	0.12	0.09	0.15 ***	0.13	0.03	0.2
Training and capacity building:								
Group received any training	0.543	0.644	0.495 ***	0.671	0.626	0.637	0.635	0.660
Training was sufficient	0.248	0.327	0.211 ***	0.340	0.318	0.421	0.211	0.325
Perception of benefits:								
New income generation	0.370	0.285	0.411 ***	0.204	0.341 ***	0.179	0.425	0.278
Strengthening of existing income sources	0.431	0.356	0.467 ***	0.294	0.400 ***	0.197	0.323	0.557
Marketing benefits	0.090	0.093	0.089	0.075	0.106 *	0.101	0.061	0.113
Credit access	0.570	0.607	0.552 ***	0.510	0.674 ***	0.536	0.688	0.613
Food security (RCL)	0.116	0.361	0.001 ***	0.420	0.321 ***	0.245	0.431	0.427
Insurance benefits	0.041	0.126	0.000 ***	0.086	0.153 ***	0.269	0.017	0.064
New income affects all	0.613	0.455	0.665 ***	0.404	0.476	0.561	0.435	0.407
Strengthening of income affects all	0.594	0.544	0.612 **	0.433	0.601 ***	0.744	0.205	0.636
Marketing affects all	0.500	0.595	0.453 **	0.579	0.603	0.609	0.136	0.792
Credit affects all	0.716	0.741	0.703 *	0.685	0.771 ***	0.906	0.522	0.796
Food security (RCL) benefits all	0.741	0.744	0.000 **	0.738	0.749	0.866	0.699	0.707
Insurance benefits all	0.898	0.904	0.000	0.886	0.911	0.951	0.333	0.815
Internal controls:								
Trained book-keeper available now	0.436	0.603	0.352 ***	0.603	0.602	0.446	0.589	0.755
MBK checks books now	0.397	0.367	0.411 **	0.437	0.319 ***	0.024	0.688	0.405
change: MBK checks books	0.090	0.157	0.056 ***	0.092	0.191 ***	0.003	0.317	0.198
Quality of bookkeeping poor	0.329	0.395	0.296 ***	0.385	0.401	0.370	0.342	0.462
Change since 3 years ago	-0.102	-0.153	-0.077	-0.099	-0.183	-0.046	-0.150	-0.253
Quality of bookkeeping good	0.289	0.258	0.305 ***	0.254	0.261	0.332	0.211	0.231
Change since 3 years ago	0.059	0.091	0.043	0.088	0.093	0.070	0.068	0.123
Sanctions for non-attendance	0.178	0.240	0.148 ***	0.276	0.215 **	0.066	0.531	0.150
Serious conflict in 2003	0.141	0.112	0.156 ***	0.088	0.129 **	0.083	0.077	0.167
Temporary conflict in 2003	0.221	0.397	0.131 ***	0.372	0.415	0.079	0.491	0.630
Reasons for serious conflicts:								
Attendance	0.228	0.206	0.235	0.159	0.230	0.125	0.099	0.285
Savings	0.194	0.205	0.190	0.225	0.194	0.231	0.352	0.135
Leadership	0.117	0.036	0.146 ***	0.023	0.042	0.026	0.086	0.021
Loans	0.220	0.197	0.228	0.264	0.163 *	0.216	0.284	0.154
Repayments	0.183	0.208	0.175	0.159	0.233	0.294	0.167	0.185

Reasons for temporary conflicts:

Attendance	0.252	0.328	0.181 ***	0.346	0.316	0.163	0.390	0.311
Savings	0.219	0.223	0.215	0.206	0.235	0.232	0.263	0.197
Leadership	0.112	0.042	0.176 ***	0.027	0.052 **	0.100	0.027	0.043
Loans	0.183	0.170	0.195	0.179	0.165	0.135	0.181	0.169
Repayments	0.166	0.130	0.199 ***	0.108	0.145 **	0.267	0.069	0.150
Attendance resolved internally	0.843	0.833	0.853	0.819	0.843	0.591	0.917	0.810
Leadership resolved internally	0.863	0.667	0.905 ***	0.625	0.679	0.333	0.615	0.766
Loans resolved internally	0.725	0.608	0.812 ***	0.545	0.649 *	0.667	0.838	0.491
Repayment resolved internally	0.755	0.581	0.864 ***	0.500	0.620 *	0.541	0.872	0.506

Access to external loans:

Had ext. loans in 2003	0.338	0.571	0.229 ***	0.471	0.641 ***	0.698	0.348	0.625
Members benefiting	12.45	12.46	12.44	11.73	12.84 ***	13.00	10.50	12.87
More than 90% of members benefit	0.865	0.849	0.882 *	0.833	0.857	0.928	0.723	0.828
Amount of loans	39005	44004	33099 ***	36149	48014 ***	36608	32639	58309

Main purpose by amounts:

No main purpose	10182	16833	2325 ***	17929	16273	6870	6938	33530
Food and health	1965	2240	1641	1650	2541	4800	0	223
Other non-capital	3909	2089	6060 ***	994	2648	2558	4500	377
Fixed capital	5565	4564	6747 **	5077	4303	2740	4063	7000
Working capital	17349	18278	16252	10500	22250 ***	19641	17138	17180
Share with no purpose	0.090	0.110	0.066 ***	0.067	0.132 ***	0.134	0.106	0.082
Share for food and health	0.103	0.103	0.102	0.120	0.095	0.197	0.036	0.023
Share for other non-capital	0.137	0.074	0.212 ***	0.076	0.072	0.086	0.131	0.031
Share for fixed capital	0.149	0.152	0.146	0.197	0.129 **	0.083	0.147	0.238
Share for working capital	0.521	0.561	0.473 ***	0.540	0.572	0.499	0.581	0.626

Source of external lending:

Bank loans	0.641	0.555	0.742 ***	0.572	0.546	0.673	0.553	0.414
CIF-SP	0.146	0.216	0.062 ***	0.285	0.181 ***	0.054	0.168	0.436
DRDA	0.049	0.071	0.024 ***	0.036	0.088 ***	0.013	0.209	0.074
Repayments due	0.772	0.775	0.767	0.870	0.734 ***	0.649	0.797	0.935
Repayments made	0.679	0.696	0.658	0.781	0.659 ***	0.573	0.753	0.832
Total dues	36555	44789	25752 ***	35397	49597 **	33577	19025	67882
Total repayment	17583	21647	12252 ***	16936	24059 ***	16159	14839	30149
Pct overdue	0.466	0.456	0.480	0.465	0.451	0.478	0.239	0.536

No of observations	3874	1243	2629	510	733	457	362	424
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Source: Own computation from CESS/WB DPIIP/RPRP survey

Table 5: Determinants of participation in DPIIP vs. pre-existing groups

	Participation in pre-existing group		DPIIP participation	
			Whole sample	New members only
Total initial saving by household (log)	0.007 (1.14)	0.006 (0.94)	0.009*** (2.95)	0.003 (1.04)
Total initial saving by woman (log)	0.025*** (3.56)	0.027*** (3.84)	-0.001 (0.31)	0.001 (0.32)
Knew to deal with health service Problems	0.055*** (3.09)	0.061*** (3.50)	-0.005 (0.51)	0.005 (0.43)
Household is POP	0.029 (1.57)	0.027 (1.43)	0.065*** (6.27)	0.029*** (2.91)
Household is Poor	0.053*** (3.09)	0.050*** (2.93)	0.049*** (5.03)	0.019** (2.01)
Household is SC	0.095*** (4.31)	0.096*** (4.36)	0.026* (1.95)	0.069*** (4.29)
Household is ST	0.063*** (2.64)	0.062*** (2.61)	0.137*** (7.83)	0.136*** (6.63)
Household is BC	0.041** (2.27)	0.040** (2.20)	0.048*** (4.46)	0.045*** (4.00)
Household size	0.014*** (3.91)	0.013*** (3.65)	0.009*** (4.85)	0.007*** (3.81)
Head has formal education	-0.005 (0.38)	0.001 (0.05)	-0.011 (1.49)	-0.001 (0.17)
Head's main occ. agr. casual work	0.035** (2.22)	0.033** (3.47)	-0.027*** (3.47)	-0.012 (1.55)
Head's occ. non-ag. worker	0.046** (2.17)	0.057** (2.25)	-0.011 (1.37)	-0.017 (1.59)
Head's occ. non-ag. self-employed	0.055** (2.17)	0.047** (2.19)	-0.015 (0.86)	-0.017 (1.36)
Head's main occ. Salaried	0.007 (0.26)	0.005 (0.19)	-0.006 (0.46)	-0.018 (1.37)
Experienced any food insecurity	0.003 (0.17)	0.003 (0.17)	0.182*** (14.71)	0.096*** (8.34)
Households owns any land	0.026 (1.33)	0.022 (1.12)	0.026** (2.43)	0.012 (1.15)
Somebody can read	0.110*** (6.49)	0.114*** (6.77)	0.031*** (3.54)	0.033*** (4.10)
Household lives in hamlet	0.001 (0.06)	0.002 (0.16)	0.003 (0.44)	0.001 (0.19)
Participated in other groups	0.098*** (3.69)	0.101*** (3.83)	0.099*** (6.03)	0.079*** (4.23)
House has toilet 3 yrs ago	0.011 (0.55)	0.013 (0.64)	-0.034*** (3.53)	-0.022** (2.18)
House has no drainage 3 yrs ago	0.014 (1.03)	0.012 (0.92)	-0.024*** (3.40)	-0.004 (0.60)
House cement/metal roof 3 yrs ago	-0.005 (0.37)	-0.006 (0.41)	0.033*** (4.44)	0.021*** (2.87)
House has mud floor 3 yrs ago	0.000 (0.02)	-0.001 (0.05)	0.017** (2.36)	0.012* (1.65)
Total value of non-land assets (log)	-0.000 (0.06)	0.000 (0.00)	0.002 (1.27)	-0.000 (0.04)
Total value of land (log)	0.003* (1.88)	0.004** (2.06)	0.004*** (4.52)	0.003*** (2.82)
Woman high trust s caste diff. vill	0.046*** (3.63)		-0.014** (2.07)	-0.013** (2.06)
Woman always participated in Panchayat GS	0.022 (1.42)		-0.082*** (10.92)	-0.055*** (7.10)
Woman raised issues in Jan GS 3 yrs ago	0.093*** (4.18)		0.033*** (2.69)	0.019 (1.40)
Woman knew GP reservation for Women	0.044*** (3.17)		0.019*** (2.64)	0.014* (1.90)
Man always participated in Panchayat GS	-0.030** (2.26)		0.007 (1.08)	0.010 (1.46)
Man raised issues in Jan GS	0.001 (0.06)		0.004 (0.48)	0.001 (0.09)
Observations	7256	7256	7256	4501
Log likelihood ratio	-4290.85	-4318.06	-2322.33	-1178.44
Pseudo R-squared	0.11	0.10	0.26	0.24

Absolute value of z statistics in parentheses.

Note: District dummies included but not reported

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6: Characteristics of VOs

	Total	Srikakulam	Anantapur	Adilabad
General characteristics and governance structure:				
No of SHGs in VO	11.97	12.32	13.59	10.08
Pure DPIP SHGs in VO	5.53	4.81	7.07	4.83
Total number of members	152.06	154.24	161.69	140.74
President is SC/ST/min now	0.49	0.25	0.52	0.72
President is SC/ST/min before	0.31	0.08	0.28	0.58
Share of EC members are SC/ST/min now	0.36	0.19	0.31	0.61
Share of EC members are SC/ST/min before	0.27	0.06	0.20	0.56
VO did capacity building 2003	0.70	0.71	0.67	0.72
.. using own staff	0.08	0.06	0.13	0.06
.. using MS staff	0.79	0.75	0.84	0.78
No of members trained	20.72	9.35	41.73	14.98
Had election in VO	0.61	0.74	0.89	0.22
No. of general body meetings held	5.94	2.12	6.20	9.98
VO assets, income, and projects:				
VO owns assets	0.12	0.10	0.07	0.20
Value of assets	61668	208125	1104	12708
VO lent out to SHG	0.41	0.44	0.05	0.72
Total lent out to SHG	301157	237484	34867	357282
Payments due from SHGs	0.45	0.48	0.20	0.66
Total amount due from SHGs	245027	174524	95437	338126
Share of outstanding debts repaid	0.53	0.49	0.71	0.51
All repayments to VO current	0.33	0.35	0.36	0.31
.. more than 75% current	0.06	0.00	0.18	0.06
.. less than 25% current	0.41	0.43	0.18	0.47
VO linkages:				
VO has any financial linkage	0.93	0.86	0.97	0.98
Total amount of linkage	413371	249575	333121	672638
SHG annual membership fee	0.90	0.95	0.98	0.77
Amount of SHG annual membership fee	2218	1414	2525	2837
Amount of SHG savings to VO	8945	1474	81375	13365
CIF-SP Sanctioned	0.61	0.59	0.34	0.88
Amount of CIF-SP Sanctioned	374976	259601	529489	396023
Bank loans	0.59	0.54	0.34	0.86
Amount of Bank loans	337091	245331	471072	345095
Had any RCL margin	0.06	0.03	0.00	0.16
Amount of RCL margin	188045	69500		211754
Any market interventions undertaken	0.39	0.24	0.63	0.33
Procured, value	177596	16000	98537	383379
HH benefited from procurement	109.11	65.00	115.37	99.13
Calculated profits from procurements	20069	24000	15196	32320
No of observations	199	73	61	65

Source: Own computation from CESS/WB DPIP/RPRP survey

Table 7: Determinants of conflict at the SHG level

	Serious conflict			Temporary conflict		
Quality of book-keeping good	-0.055*** (4.64)	-0.048*** (4.29)	-0.050*** (4.44)	-0.050*** (4.51)	-0.043*** (4.03)	-0.043*** (4.03)
MBK checks books now	-0.022* (1.77)	-0.025** (2.13)	-0.023** (1.96)	-0.009 (0.81)	-0.011 (0.97)	-0.011 (0.97)
Trained book-keeper available	0.050*** (3.93)	0.032*** (2.69)	0.030** (2.55)	0.041*** (3.58)	0.023** (2.13)	0.023** (2.13)
Sanctions for non-attendance	0.004 (0.28)	0.008 (0.63)	0.006 (0.49)	0.002 (0.14)	0.008 (0.60)	0.008 (0.60)
Age of group	-0.005* (1.81)	-0.005** (2.12)	-0.005** (2.22)	0.004* (1.74)	0.004* (1.80)	0.004* (1.80)
Received training in group	-0.063** (2.05)	-0.053* (1.84)	-0.057*** (2.68)	0.025 (1.02)	0.028 (1.20)	0.022 (1.03)
Received any training	0.060** (1.98)	0.049* (1.69)	0.045** (2.11)	0.000 (0.00)	-0.011 (0.47)	-0.015 (0.71)
Group formed under DPIP	-0.037** (2.31)	-0.036** (2.38)	-0.037** (2.51)	-0.020 (1.17)	-0.019 (1.20)	-0.019 (1.20)
Group size at start	0.004* (1.91)	0.003 (1.58)	0.002 (1.34)	-0.001 (0.62)	-0.000 (0.20)	-0.000 (0.20)
SC/ST members at start	0.035*** (2.83)	0.034*** (2.93)	0.033*** (2.87)	0.012 (1.05)	0.016 (1.51)	0.016 (1.51)
OC members at start	-0.011 (0.54)	-0.010 (0.53)	-0.010 (0.55)	0.008 (0.47)	0.003 (0.20)	0.003 (0.20)
Any saving	0.090*** (3.54)	0.076*** (3.02)	0.076*** (3.13)	0.063*** (2.89)	0.058*** (2.86)	0.058*** (2.86)
Saving per member (log)	-0.003 (0.57)	-0.006 (1.19)	-0.007 (1.41)	-0.012*** (2.67)	-0.014*** (3.37)	-0.014*** (3.37)
Any internal lending	0.045*** (3.11)	0.042*** (3.05)	0.035*** (3.15)	0.009 (0.87)	-0.008 (0.77)	-0.008 (0.77)
Internal lending overdue	0.033** (2.25)	0.027* (1.95)	0.028** (2.00)	0.061*** (4.61)	0.064*** (4.94)	0.064*** (4.94)
Any external lending	-0.172** (2.04)	-0.161** (2.03)	-0.161** (2.04)	0.322** (2.42)	0.388*** (2.82)	0.388*** (2.82)
Amt of external lending (log)	0.020* (1.95)	0.018* (1.87)	0.018* (1.87)	-0.024** (2.47)	-0.027*** (2.96)	-0.027*** (2.96)
External lending overdue	0.058*** (3.42)	0.053*** (3.29)	0.053*** (3.28)	0.030* (1.92)	0.024 (1.60)	0.024 (1.60)
external loans w short term purpose	0.076*** (3.58)	0.075*** (3.77)	0.076*** (3.83)	-0.035* (1.66)	-0.028 (1.39)	-0.028 (1.39)
Benefits in social unity		-0.027* (1.67)	-0.026 (1.63)		-0.017 (1.05)	-0.017 (1.05)
Benefits in education		-0.016 (0.93)	-0.011 (0.65)		-0.017 (1.03)	-0.017 (1.03)
Benefits in articulation		0.078*** (5.39)	0.077*** (5.36)		0.077*** (5.52)	0.077*** (5.52)
Benefit: Community decision-making		-0.010 (0.86)	-0.010 (0.82)		-0.049*** (4.62)	-0.049*** (4.62)
Benefits from line departments		0.021 (1.59)	0.016 (1.21)		0.034*** (2.74)	0.034*** (2.74)
New income generation benefits		-0.065*** (5.77)	-0.066*** (5.86)		0.086*** (6.98)	0.086*** (6.98)
Strengthened existing income sources		0.073*** (5.72)	0.071*** (5.66)		-0.026** (2.32)	-0.026** (2.32)
Marketing benefits		-0.000 (0.01)	-0.003 (0.19)		-0.056*** (4.61)	-0.056*** (4.61)
RCL benefits		-0.026* (1.87)	-0.027* (1.95)		0.014 (0.85)	0.014 (0.85)
Observations	3862	3862	3862	3862	3862	3862
Log likelihood ratio	-1338.86	-1274.72	-1266.89	-1193.50	-1116.15	-1116.15
Pseudo R-squared	0.26	0.30	0.30	0.19	0.25	0.25

Absolute value of z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8: Woman's position in Household and Community

	Total		Overall		DPIP area only		By district			
	Project	Non-Project	Treat.	Control	Srik.	Anant.	Adil.			
Woman's attitudes:										
Afraid to disagree with husband	0.256	0.200	0.288 ***	0.207	0.174 *	0.310	0.214	0.075		
Diff to 3 years ago	-0.035	-0.073	-0.014 ***	-0.082	-0.041 ***	-0.013	-0.173	-0.031		
Receives respect from family members	0.430	0.432	0.430	0.442	0.391 **	0.351	0.303	0.646		
Diff to 3 years ago	0.036	0.069	0.019 ***	0.081	0.024 ***	0.035	0.047	0.126		
Never beaten by husband	0.611	0.681	0.571 ***	0.695	0.629 ***	0.629	0.625	0.792		
Diff to 3 years ago	0.074	0.091	0.065 ***	0.106	0.034 ***	0.029	0.174	0.067		
Sometimes beaten by husband	0.071	0.064	0.076 *	0.062	0.071	0.082	0.079	0.029		
Diff to 3 years ago	-0.033	-0.050	-0.024 ***	-0.061	-0.011 ***	-0.022	-0.104	-0.024		
Allowed to set money aside now	0.119	0.158	0.099 ***	0.165	0.132 *	0.092	0.148	0.236		
Diff to 3 years ago	0.094	0.097	0.093	0.096	0.103	0.076	0.064	0.152		
Man's dominance:										
Husband alone takes decisions on debt	0.213	0.304	0.166 ***	0.314	0.268 ***	0.196	0.395	0.321		
Husband alone takes decisions on income generating activities	0.119	0.177	0.089 ***	0.175	0.182 ***	0.146	0.232	0.151		
Husband alone takes decisions on boys' education	0.077	0.094	0.069 ***	0.084	0.131 ***	0.081	0.118	0.083		
Husband alone takes decisions on girls' education	0.065	0.074	0.061 **	0.065	0.104 ***	0.067	0.095	0.058		
Woman's community participation:										
Woman knows always about Panchayat GS	0.382	0.324	0.416 ***	0.407	0.260 ***	0.525	0.087	0.361		
Woman knows always about Janmabhoomi GS	0.563	0.457	0.626 ***	0.521	0.408 ***	0.587	0.376	0.407		
Woman always participates in Janmabhoomi GS now	0.407	0.261	0.485 ***	0.328	0.208 ***	0.316	0.229	0.236		
Woman always participates in Janmabhoomi GS 3 years ago	0.367	0.196	0.458 ***	0.237	0.164 ***	0.260	0.181	0.146		
Diff: Woman always part's in Jan GS now-then	0.040	0.065	0.026 ***	0.091	0.044 ***	0.056	0.049	0.090		
Woman raised issues in Jan GS now	0.118	0.141	0.107 ***	0.165	0.122 ***	0.144	0.155	0.123		
Woman raised issues in Jan GS 3 yrs ago	0.088	0.103	0.081 ***	0.115	0.093 *	0.111	0.133	0.062		
Diff: Woman raised issues in Jan GS now	0.030	0.038	0.026 ***	0.050	0.029 ***	0.033	0.021	0.061		
Woman always participates in Panchayat GS now	0.425	0.173	0.561 ***	0.228	0.130 ***	0.270	0.079	0.171		
Woman always participates in Panchayat GS 3 years ago	0.398	0.133	0.541 ***	0.165	0.108 ***	0.227	0.062	0.110		
Diff: Woman always part's in Panchayat GS now-then	0.027	0.040	0.020 ***	0.063	0.022 ***	0.043	0.017	0.061		
Woman raised issues in Panchayat GS now	0.083	0.094	0.078 **	0.123	0.072 ***	0.130	0.060	0.092		
Woman raised issues in Panchayat GS 3 yrs ago	0.063	0.065	0.063	0.080	0.054 ***	0.099	0.046	0.050		
Diff: Woman raised issues in Panchayat GS now	0.020	0.029	0.015 ***	0.043	0.018 ***	0.031	0.014	0.043		

Source: Own computation from CESS/WB DPIP/RPRP survey

Table 9: Access to other government programs and community activity

	Total	Project area		DPIP area only		By district		
		Yes	No	SHG	No SHG	Srik.	Anant	Adil.
Changes in access to gov't programs:								
HH benefits from other programs now	0.629	0.656	0.614 ***	0.730	0.597 ***	0.625	0.669	0.674
Difference: Now-then	0.266	0.311	0.242 ***	0.342	0.287 **	0.313	0.391	0.228
HH participates in other groups now	0.214	0.273	0.182 ***	0.356	0.207 ***	0.325	0.165	0.329
Difference: Now-then	0.159	0.197	0.138 ***	0.238	0.165 ***	0.291	0.125	0.176
Any access to PDS	0.804	0.831	0.789 ***	0.867	0.804 ***	0.845	0.814	0.835
Community action with respect to:								
Internal road	0.248	0.324	0.208 ***	0.332	0.319	0.293	0.390	0.290
Access to drinking water	0.1937	0.2088	0.1870 **	0.2094	0.2065	0.1479	0.2695	0.2093
Quality of drinking water	0.1649	0.1325	0.1841 ***	0.1371	0.1152 ***	0.1745	0.1913	0.0355
Sanitation condition	0.1956	0.2192	0.1842 ***	0.2190	0.2202	0.2456	0.3367	0.0808
Access to communication	0.103	0.127	0.091 ***	0.122	0.131	0.174	0.127	0.080
Child marriages	0.092	0.123	0.075 ***	0.119	0.126	0.084	0.177	0.106
Irrigation facilities	0.090	0.109	0.081 ***	0.104	0.112	0.161	0.131	0.033
Disability	0.063	0.137	0.023 ***	0.118	0.153 ***	0.121	0.216	0.074
Quality of education	0.058	0.079	0.048 ***	0.074	0.082	0.067	0.119	0.050
Untouchability	0.057	0.108	0.029 ***	0.099	0.116	0.053	0.235	0.036
Access to formal credit	0.031	0.066	0.011 ***	0.054	0.075 **	0.025	0.137	0.037
Knowledge about institutions:								
Knows about Velugu SHG	0.369	0.925	0.068 ***	0.981	0.881 ***	0.925	0.890	0.959
Participate in Velugu SHG	0.167	0.445	0.016 ***	0.917	0.073 ***	0.477	0.296	0.564
Knows about DWACRA group	0.304	0.764	0.055 ***	0.769	0.761	0.649	0.857	0.783
Knows about VEC	0.272	0.735	0.020 ***	0.743	0.728	0.865	0.730	0.605
Participate in VEC	0.054	0.150	0.001 ***	0.189	0.119 ***	0.269	0.033	0.147
Knows about WUA	0.546	0.352	0.652 ***	0.385	0.326 ***	0.501	0.233	0.323
Changes in trust:								
High trust in same caste, same village	0.078	0.167	0.029 ***	0.192	0.147 ***	0.069	0.079	0.359
High trust in same caste, diff. village	0.069	0.134	0.034 ***	0.141	0.129	0.031	0.160	0.212
High trust in different caste, same village	0.038	0.062	0.026 ***	0.079	0.049 ***	0.035	0.040	0.114
High trust in diff. caste, diff. village	0.022	0.033	0.016 ***	0.035	0.031	0.006	0.046	0.047
No trust diff. religious group, same village	-0.030	-0.064	-0.011 ***	-0.067	-0.061	-0.024	-0.070	-0.098
No trust diff. religious group, diff. village	-0.017	-0.010	-0.021 *	-0.018	-0.003	-0.008	-0.028	0.007
No trust in elected officials	-0.013	-0.021	-0.009 *	-0.029	-0.015	-0.004	0.006	-0.065
No trust in gov't employees	-0.029	-0.045	-0.020 ***	-0.055	-0.036	-0.007	-0.034	-0.095
Education:								
HH knows how to address school problems	0.230	0.254	0.213 ***	0.271	0.241 *	0.356	0.088	0.317
Difference now-then	0.057	0.063	0.054	0.083	0.047 ***	0.052	0.020	0.117
Has kids who receive school meal	0.727	0.747	0.714 **	0.771	0.722 **	0.707	0.710	0.813
Female kids primary age receiving meal	0.783	0.772	0.789	0.803	0.743 *	0.809	0.755	0.762
Female upper primary age receiving meal	0.362	0.358	0.364	0.431	0.281 ***	0.404	0.208	0.454
Female kids high school age receiving meal	0.095	0.093	0.096	0.125	0.057 *	0.086	0.041	0.146
Health:								
Availability of health worker better now	0.284	0.389	0.227 ***	0.319	0.444 ***	0.147	0.778	0.237
Availability of medicines better now	0.232	0.323	0.182 ***	0.272	0.363 ***	0.147	0.588	0.229
Availability of health services better now	0.243	0.344	0.188 ***	0.297	0.381 ***	0.139	0.667	0.221
Know to address health service problems	0.360	0.355	0.361	0.399	0.320 ***	0.448	0.226	0.393
Knew to address health service problems past	0.149	0.094	0.176 ***	0.106	0.085 *	0.183	0.057	0.043
Diff	0.211	0.261	0.186 ***	0.293	0.235 ***	0.265	0.170	0.350

Source: Own computation from CESS/WB DPIP/RPRP survey

Table 10: Risk coping and access to savings

	Total	Project area		DPIP area only		By district		
		Yes	No	SHG	No SHG	Srik.	Anant.	Adil.
Dealing with drought easier	0.091	0.096	0.088	0.128	0.074 ***	0.201	0.031	0.092
Dealing with death easier	0.062	0.103	0.032 ***	0.114	0.094	0.143	0.043	0.094
Dealing with health shock easier	0.074	0.085	0.066	0.127	0.050 **	0.142	0.036	0.043
Diff: Food insecurity June-Sept	-0.027	-0.039	-0.021 ***	-0.033	-0.044	-0.097	-0.008	-0.012
Diff: Food insecurity Oct-Jan	-0.026	-0.034	-0.022 **	-0.028	-0.039	-0.075	-0.017	-0.010
Diff: Food insecurity Apr.	-0.023	-0.033	-0.018 ***	-0.029	-0.037	-0.054	-0.047	0.002
Diff: Woman has any savings	0.106	0.125	0.095 ***	0.163	0.095 ***	0.137	0.199	0.038
Diff: Woman's access to credit	0.216	0.132	0.264 ***	0.213	0.069 ***	0.104	0.050	0.245
Diff: Total savings by woman	-275.447	-33.787	-410.225 **	179.194	-199.582	-937.345	520.789	325.672
Total borrowing capacity now	5349	6026	4972 ***	6754	5460 ***	7596	4235	6229
Man has any savings now	0.552	0.749	0.445 ***	0.790	0.717 ***	0.715	0.616	0.919
Man had any savings in past	0.073	0.100	0.058 ***	0.098	0.102	0.115	0.053	0.134
Diff: Man has any savings	0.479	0.649	0.388 ***	0.692	0.615 ***	0.600	0.563	0.785
HH has any joint savings	0.070	0.117	0.044 ***	0.113	0.120	0.142	0.129	0.078
HH had any joint savings	0.015	0.021	0.011 ***	0.028	0.015 **	0.044	0.008	0.010
Diff: HH had any joint savings	0.055	0.096	0.033 ***	0.086	0.104	0.098	0.121	0.068
Diff: Man has any access to credit	0.246	0.265	0.236 *	0.307	0.232 ***	0.324	0.163	0.309
Any input on loan?	0.195	0.262	0.137 ***	0.316	0.211 ***	0.068	0.070	0.596

Source: Own computation from CESS/WB DPIP/RPRP survey

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