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Networks and Anti-Poverty Programs:

The NREG Experience[1]

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Abstract

Governments struggle with the reality that the beneficiaries of anti-poverty programs are powerless to influence policies and stem the possibility of capture of benefits by the non-poor. Networks – social and political – are supposed to increase the ability of the less-powerful to access their entitlements. The paper assesses whether socially and politically networked households do in fact have better awareness of the components of the program and of the processes of decision making, and whether such networking makes them more likely to vocalize their dissatisfaction when their entitlements are threatened. India's national rural employment guarantee scheme's (NREG) institutional design (mandating village assemblies to authorize decisions on the projects) makes it a good test case. Our results show that links to social and political networks do significantly increase the awareness of the villagers on the program's components and enhances their ability to seek redress of their grievances.

Keywords: Networks, anti-poverty programs, NREG, India

JEL Classification Code: C21, C81, D31, D60, L14

Introduction

Democracy requires not only the participation of the people but also that their views are reflected in the policies adopted by a body (Saward 1994). However, the reality in many developing countries is that the beneficiaries of anti-poverty programs are powerless to influence policies or even limit the possibility of capture of their benefits by the non-poor. Increasing the awareness of the beneficiaries by supplying information about government actions can at least allow the public and the media to voice complaints and push for public accountability. As Rose-Ackerman (1999) points out, the government must tell its citizens what it is doing so that the public has the information and can then be a check on the arbitrary exercise of power by the government. Such dissemination, scholars argue, enhances the monitoring of the officials' activities and facilitates more efficient delivery of anti-poverty programs (di Rienzo et al. 2007). Another route to creating greater awareness among the citizenry is through promoting associational activities. Networks – social and political – are supposed to increase the ability of the non-powerful to access benefits due to them and may even significantly reduce the probability of a household being poor (Aker 2007).

Our goal in this paper is to contribute to the discussion on the link between networking and awareness. The paper assesses whether socially and politically networked households are more aware of a program's components and the processes of decision making, and whether such networking makes them more likely to vocalize their dissatisfaction when their entitlements are threatened.

The first section assesses the theoretical and empirical literature on the relationship between social and political networks and the ability to access benefits of government programs. The second section outlines the methodology. The third section tests whether networked households are more aware of program components than non-networked ones in the national rural employment guarantee scheme (NREG) in two south Indian states, AP and

Tamil Nadu. The fourth section assesses whether networked households are more likely to vocalize their grievances than non-networked ones. The fifth section weaves in ethnographic evidence from the villages being studied and then concludes.

1. Power, Vulnerability and Participation in Decision-making

The first step towards accessing the benefits of any anti-poverty program is for the beneficiaries to be aware of the components of the program including how and who makes decisions, the program's deliverables and the grievance process. Since bureaucrats and other agents in the public sector have an interest in concealing information, one way to reduce leakage is to enhance local participation in program delivery. There are two approaches to doing so: institutional and non-institutional.

a) Institutional Approach

To reduce leakages and cost padding in public service delivery, many governments have opted for decentralization on the assumption that local levels are in closer proximity to the citizens. The transfer of authority and responsibility for public functions from a central government to subordinate governments involves the devolution of decision making powers to local levels (Von Braun and Grote 2000). The expectation is that such devolution of political, administrative and fiscal power would enhance the effectiveness and responsiveness of the government to the concerns of the citizens and prevent leakages in anti-poverty programs. The assumption is that if citizens participate in taking decisions, they are more likely to be aware of the programs for which resources have been allocated, and are consequently less likely to be duped by government officials and political representatives. In India, the 73rd and 74th constitutional amendments strengthened political decentralization by

mandating quotas for women and lower castes, and by giving rural local governments (gram panchayat) a greater role in administration and more importantly in rural development.[3]

But scholarly literature is not conclusive that decentralization and affirmative action can correct inequities of power, increase awareness among and enable the participation of the non-elites in decisions that affect their daily life. Decentralization has sometimes increased the responsiveness of local government spending to poor people's needs. Foster and Rosenzweig (2001) show that roads were more likely to be favoured by democratically elected local governments than irrigation when the proportion of landless grew in a village. Besley, Pande, Rahman and Rao (2004) found that low caste reservations mandated by India's 73rd constitutional amendment for the village chief's positions increased targeting to low caste households in the form of government and private benefits (eg. a home, toilet, water or electricity received under a government scheme). In another study they also found that villages with higher literacy in South India were more likely to hold village meetings and discuss public resource allocations and actions of officials, and ensure that the allocations favoured the landless and illiterate individuals.

But other empirical evidence highlights the possibilities of "capture" by local elites and the consequent negative implications for responsiveness, equitable participation and equal access of the poor (Bardhan and Mookherjee 2006). In contrast to the South Indian experience highlighted by Besley et al, Bangladeshi villages with high land inequality and more widow headed households experienced poor targeting of the FFE scheme (Galasso and Ravallion 2005). These scholars have argued that decentralization may create pseudo

[3] The 73rd constitutional amendment act of India (1993) made it mandatory for the sub-national levels to hold elections to gram panchayats and give them policy making powers. The gram panchayat (village local government/council) has at least one member from each village and covers several villages. There is a block level panchayat with representatives from the village panchayats in its area, and there is a zilla (district) panchayat with representatives from each block. Voters elect representatives to all three tiers. There are quotas for women and scheduled castes/tribes.

participation and may actually strengthen the local elites (Chattopadhyay et al 2010, Blanchard and Schleifer 2000).

There are also differing views on the solutions to reducing the capture by local elites. Blanchard and Schleifer (2000) show how provincial governors in post-transition Russia were highly susceptible to capture by old industrial firms, and argue that economic (and fiscal)decentralization has to be accompanied by political centralization for decentralization to succeed. In contrast, Bardhan and Mookherjee (2006) view the effect of political centralization in more nuanced terms. They find that greater fiscal autonomy of local governments expands the volume of service delivery but also expands overprovision to local elites at the expense of non-elites. Their study shows that villages with greater land inequality allocated significantly lower share of benefits to scheduled castes and scheduled tribes. Devarajan et al (2007) too point out that decentralization has achieved mixed results because citizens have not been able to hold local government accountable for budgetary allocations and their outcome.

b) Non-Institutional Approach

In this ongoing debate on how to enable the less powerful to access the benefits of anti-poverty programs, the promotion of social capital has been advocated as a route to generating more awareness and accountability. Political scientist Robert Putnam (1993) equates social capital with civicness. In this approach, social capital means features of social organizations such as networks, norms and trust that facilitate action and cooperation for mutual benefit. Such capital is equated with the level of associational involvement in a community and measured by indicators such as newspaper reading, membership in voluntary associations and expressions of trust in political authorities. As Aker (2007) points out, studies on social capital reveal four basic arguments through which such capital can lead to improved economic outcomes. First, communities with strong intra-community ties are better equipped

to cooperate thus reducing the free-rider problem and opportunistic individual behavior. Second, greater associational activity may reduce 'imperfect information' and thereby lower the economic and social transaction costs and lead to higher incomes (Narayan and Pritchett 1999, Isham 1999). Third, such ties allow households to share individual risk and develop informal means of insurance thereby mitigating the negative effect of exogenous shocks (Townsend 1994). Finally, social networks can lead to more efficacious governments and thus contribute to well being (Putnam 1993). This literature seems to presume that pure non-cooperative action leads to inferior outcomes (Narayan and Pritchett 1999) and also tests the impact of social capital on economic outcomes. However, the relationship between social capital and economic outcomes is complex, and the causality could go the other way, namely that the depth of poverty may diminish the ability to engage in civic associations (Aker 2007).

In this paper we examine empirical data to assess whether tapping into social capital (political and social) allows beneficiaries of anti-poverty programs to be more aware of the components of the program, and whether such networking makes them more likely to vocalize their dissatisfaction and perhaps even mobilize when their entitlements are threatened.

2. The Sample and the Methodology

(i) *The National Rural Employment Guarantee (NREG)*

About 70% of Indians live in rural areas, and of these, a majority earn their livelihood from agriculture. Agricultural labourers (253 million in 2004-5) comprise 57% of workers in the workforce and of these about 249 million live in rural areas. About 64% of agricultural labourers are self employed or are farmers and the rest depend on labour, mainly of the casual variety. Not surprisingly, vast majority (77%) of rural inhabitants are poor and have an

average expenditure of less than Rs 20 per day per capita.[4] Of these poor who tend to belong to the economically and socially marginalized groups, 88% are scheduled castes (SC) and scheduled tribes (ST), 80% are other backward castes (OBC), and 85% are Muslim (Chhabra et al 2009).[5]

In the last two decades, India undertook economic liberalization, which had consequences for poverty in the country. The debate is still on as to whether economic growth (of about 5% per annum since the mid-1990s) has reduced poverty and/or increased the intensity of poverty. Several scholars (Deaton and Dreze 2002, Sen and Himanshu 2004, Ravallion 2009, Gaiha and Kulkarni 2009**)** argue that inequality (in rural and urban areas) has risen along with economic growth. Datt and Ravallion (2009) point to evidence of geographic and sectoral divergence in India's growth process, and to dismal statistics on health and education. For instance, official figures from 2004-5 show that about 30% of the rural population in Maharashtra, Madhya Pradesh, Bihar, Orissa, Uttar Pradesh and West Bengal were still poor, while other states (Andhra Pradesh, Punjab, Haryana, Kerala) had succeeded in reducing the rural poor numbers to 5% (from 26% in 1983).[6] High infant mortality rates (80 deaths per thousand live births — 1990 figures) and high illiteracy (less than half the adults are literate) when combined with low farm productivity, and low rural living standards inhibited the prospects of the poor participating in growth of the non-farm sector (Ravallion and Datt 2002).

India has had a long history of direct and targeted interventions to fight poverty through workfare schemes, subsidized food, farm-input and credit scheme subsidies. The

[4] About 42% of Indians lived below the poverty line of $1.25 a day in 2005 prices, as compared to 16% in China and 8% in Brazil (Ravallion 2009). India's official headcount index $1 at 2005 prices brought the number down to 24%.

[5] Scheduled castes are the former untouchables, and scheduled tribes are India's aborigines, and both categories are listed in India's constitution as being eligible for affirmative action. In addition, other backward castes (OBC) that are neither upper caste nor scheduled caste/tribe are also eligible for certain types of affirmative action in a state.

[6] According to the NSSO (2005), the percentage of rural poor in the three states were 8% (AP), 14% (Rajasthan), and 22% (Maharashtra).

NREGA of 2005 is the most recent one. Its main objective is to provide enhancement of livelihood security of the households in rural areas of the country by providing 100 days of guaranteed wage employment to every household in unskilled manual work, at the minimum wage. Some of its unique features include a time-bound employment guarantee and wage payment within 15 days (otherwise the government is penalized), prohibition of the use of contractors (to check leakage of funds) and machinery (to enhance direct benefits of the program to the participants), and a mandatory 33 per cent participation for women. The scheme devolves considerable powers in planning and allocating resources to the local panchayats and through social audits allows the community to monitor the progress.[7] Unlike previous employment guarantee schemes, the NREG is an act of the parliament, and treats employment as a right. The program was rolled out in two stages, starting with 200 poorest districts in the first stage and now covers the entire country.

The NREG's design (which was influenced by a 1970s employment guarantee scheme in Maharashtra) conforms to Galasso and Ravallion's (2005) prescription of a targeted program. Instead of relying on an administrator to choose the beneficiaries, the program expects beneficiaries to select themselves by creating incentives so that only the poor will participate in the scheme. The program's ability to provide self-targeted insurance against down-side risks has a marked advantage (in theory) over conditional cash transfer schemes targeted to poor families (conditional on their children staying in school and obtaining basic health care) in Brazil and other countries (Ravallion 2009). It also compares well (again in theory) with other social protection programs like Bangladesh's Food for Education program and Mexico's *Progresa* program (now called *Oportunidades*).

In practice, however, the self- selection mechanism has been weakened in areas where the NREG wage was higher than the prevailing market wage, and by the low awareness

[7] Section 17 of the NREGA provides for a social audit of all project work in a village by the village assembly (*gram sabha*). The village governing council (*gram panchayat*) has to provide requisite details to the auditors. For a critique of the social audit process in AP, Rajasthan and Madhya Pradesh, see Shankar (2010).

among the beneficiaries of the scheme's components. Other studies (Chhabra 2009) and our own results show that a vast majority of participant households did not know that they would receive additional wages if work was given at a distance of more than five kilometers, or that they were entitled to unemployment allowance in case they were not provided with work. An audit by the Comptroller and Auditor General (CAG 2007) also revealed weaknesses and sparked a contentious public debate on the efficacy of anti-poverty programs. For instance, only 3.2 per cent of the registered needy households in 200 of India's poorest districts received the guaranteed 100 days of employment in a year.

(ii) Methodology

The present analysis draws upon three datasets from Tamil Nadu and Andhra Pradesh. The first dataset (henceforth Dataset 1), a household survey of 500 households per state was designed in the following manner to provide a representative sample. First, a list of NREGS districts was compiled for each state. From these districts, three were selected on the basis of probability proportional to size (in this case, rural population as reported in the 2001 Census) in the case of Tamil Nadu, and six in Andhra Pradesh. The next step proceeded as follows. In the case of Andhra Pradesh, for example, three villages were randomly selected from each district, followed by a random selection of households. Twenty households were selected from each of twenty five villages spread over three districts in Tamil Nadu and six in AP, giving us a sample of 500 households in each state who include participants and non-participants.[8] Apart from household level information, individuals within participant-households were also interviewed. The data include information on caste, occupation, landholdings, household size, NREG participation, type of ration card, and PDS participation. The number of individuals interviewed for Tamil Nadu and Andhra Pradesh were, respectively, 1914 and 2194.

[8] The districts chosen in Tamil Nadu were Sivaganga, Villupuram and Thiruvannamali. In Andhra Pradesh the six districts chosen were Karimnagar, Mahbubnagar, Nalgonda, Warangal, Vizianagaram and Chittoor.

The second dataset (henceforth Dataset 2) is a subset of the first one wherein we focus on surveyed households (697 individuals in AP and 892 in Tamil Nadu) in eight villages in AP and eleven villages in Tamil Nadu.

The third dataset (henceforth Dataset 3) pertains to this subset of villages where detailed ethnographic interviews were conducted of 25 respondents belonging to a cross-section of villagers and block level officials/political leaders. These interviews were conducted in eleven villages in Tamil Nadu and eight in AP selected according to the political affiliation of the village president (sarpanch). Since the sarpanch is elected on non-party lines, we found out his or her political affiliation during the larger household survey. Both states had predominantly two party systems – Congress and TDP in AP and DMK and AIADMK in Tamil Nadu -- and the other parties were allied with one of the two dominant parties. We selected fifty percent of the villages whose sarpanches were affiliated to the Congress party and fifty percent affiliated to TDP in AP, and did the same with DMK and AIADMK in TN. Two trained interviewers in each state team who spoke the local language and were cognizant of the requirements of ethnographic research, conducted the interviews. The interviews contain anecdotes and examples of corruption, the decision making process of the panchayat (village governing body), the process of choosing NREG projects, the influence of political parties on village level issues, the impact of caste and income on the ability to influence decisions, the information available to the respondent about the NREG, and awareness of social audit, right to information, among others.[9] We also conducted focus group sessions with 5-7 beneficiaries in each of the 25 worksites per state.

[9] The interviewees included the village sarpanch, ex-sarpanch, deputy sarpanch, gram sevak, NREG assistant, caste leaders, panchayat members, village development committee members, political activists from the leading parties, NGOs in the village, the Patwari, moneylender, ration shop owner, worksite supervisor, NREG beneficiaries at the worksite, and individual asset creation beneficiaries. At the block level, we interviewed the Block Development Officer, the NREG program officer, the junior engineers, ward panchayat members, and the Pradhan. We also interviewed the member of the Legislative Assembly (MLA).

This paper draws on these three datasets to assess the link between social and political networks and awareness of NREG components, and the implementation of the program.

(iii) Constructing the networking variable

Measurement of social capital includes measuring the attitudes among community members and participation in community associations (Brehm and Rahn 1997, Jackson and Miller, 1998). Associational involvement of households in Indian villages includes participation in village functions, festivals, assemblies, caste groups, self help groups, women's' associations, youth groups, and occupational groups (farmers' union, workers' union), political parties, among others.

We constructed the variables on social and political networks from Dataset 2 – participant and non-participant households interviewed in the subset of eight villages in AP and eleven in Tamil Nadu. The reason for taking the subset was that we had detailed ethnographic information for these villages and were therefore able to also construct village level indicators of political associational activity for this subset. To do so, we interviewed 20-24 respondents per village who occupied a range of positions, occupations and income levels and among other questions, asked them whether in the previous year they had attended meetings called by political parties, and/or made financial contributions to a political party – indicators of broader and more regular political participation. We divided the numbers who said yes to each of the questions by the total number (20-25) interviewed for the ethnographic survey in each village and created two village level variables that indicated the level of political networking in each village. We used these variables as indicators of political connectedness in the mlogit equations in both states.

To construct the social networking variable, we used responses of households in Dataset 2 on their participation in caste groups, self help groups, youth and women's' associations, and farmers' associations.

However, the political networking variable posed a challenge. We first assessed the general nature of political participation of Tamil Nadu and AP households in elections and voting by asking them if the respondent had voted in the most recent national election. Voting figures were high across social groups: about 92% in AP and 98% in Tamil Nadu had voted in the most recent state assembly election.[10] Since these figures did not show much variation, we could not use them to construct the networking variable.

We therefore used another variable – had the individual attended a gram sabha in the previous year – as a proxy for political participation. As mentioned earlier, the NREG tried to ensure a role for vulnerable groups by making the gram sabha (GS) a key body in deciding and signing off on projects. In our larger 500 household survey for the two states, 75% in AP and 35% of households in Tamil Nadu had attended the gram sabha meetings. Taking the official poverty line as the cutoff point, we found that in both states, more non-poor attended the gram sabha (72% in AP and 63% in TN).[11] In the sub-sample, 78% attended in AP and of these, only 28% were poor. In Tamil Nadu, 31% attended, and of these 46% were poor.

Our results are consistent with the findings of Rao and Sanyal (2009) who surveyed South Indian villages and found that, on average, about 83 persons attend a GS out of a population that ranges between 2000 – 10,000 depending on the state. One third of the participants were woman, and 37% were SCs but neither group spoke up in the meetings. Upper castes, on the other hand, were less likely to attend but more likely to dominate the discussions when they did. In another study, Bardhan et al (2008) found that villages with greater gram sabha participation were also those that delivered more benefits to the landless and the SC/ST population; and villages with lower incidence of landlessness and ST presence exhibited greater gram sabha participation. They point out that while this does not provide

[10] Other studies (Krishna 2006) found similar figures for Rajasthan, but rightly point out that such high self-reported voting figures are not reliable indicators of high levels of political participation or active involvement in processes of local self government.
[11] Also see Chattopadhyay et al (2010)

evidence of a causal impact of village meetings on targeting of government schemes, it is consistent with the hypothesis that village meetings 'formed a channel of accountability of village councils (gram panchayat) to poor and low caste groups'. In a study of four south Indian states (including Andhra Pradesh and Tamil Nadu), Besley, Pande and Rao (2004) found that women and illiterates were less likely to have heard of and attended GS meetings, while in contrast, SC/ST and landless were more likely to attend such meetings but no more likely to have heard of GS meetings; upper castes and the wealthy were more likely to have heard of GS but less likely to attend.

Since it is hard to determine whether belonging to a political network influences the probability of belonging to a social network and vice versa, our method has the merit that it does not assume priority of one over the other. We used a multinomial logit regression model because we treat our dependent variables as categorical, which allows for simultaneity of participation in various groups. This method allows us to compare the probability of membership in only political networks, only social networks, both political networks and social networks as compared to the probability of membership in neither political nor social networks.

Thus, if a household head or someone in the household had attended a gram sabha meeting the previous year, we classified the household as belonging to a political network. If someone in the household was a member of a Self Help Group, credit or savings group, religious groups, trade unions, caste associations, agriculture/milk associations, or a womens'/farmers'/youth association, we classified that household as belonging to a social network. If a household had attended the gram sabha and belonged to one of the groups associated with the social network, it was classified as belonging to both, and if the household had done neither, it was classified as belonging to neither.

Table 1 shows that more people in AP, as compared to Tamil Nadu, are networked – over half the sample belonged to social and political networks in the former as compared to only 27% in the latter. About half the TN households did not belong to any network as compared to only 8% in AP. Those belonging only to political networks was higher in AP (27%) than in Tamil Nadu (11%).

The base category was those who did not belong to political or social networks. The associations of being in different networks with household and village characteristics are somewhat weak and uneven

3. Networks and Awareness

(i) Who Belongs to Social And Political Networks?

To determine probabilities of belonging to different networks, an ordered multinomial logit model is used. The results given below denote the probability of being in different networks relative to the omitted category of 'no networks'. The variables in AP were caste (OBC v non-OBC), whether they owned land, whether the village had middle schools (a proxy for education), whether the villagers attended political meetings, and made financial contributions to political parties. In Tamil Nadu, the variables were illiterate (v. educated), SC/ST (v OBC and others), whether the individual owned land, whether the distribution of landholdings was unequal in the village (gini), percentage of households in the village with TVs and cellphones, and whether the villagers attended meetings called by political parties.[12]

In Andhra Pradesh, the mlogit model reveals the following:[13]

[12] For a detailed explanation, see Greene (2003).
[13] As the coefficient estimates could be misleading, it is appropriate to confine our comments to marginal effects. The results of the Mlogits are available with the authors.

- The probability of households belonging to a social network, relative to no networks, was lower in villages where proportions of households that contributed financially to political parties was high.
- By contrast, the relative probability of a household belonging to political and social networks was higher in villages with higher proportions of households participating in political meetings and contributing financially to political parties.

We get a richer set of results for Tamil Nadu going by the marginal effects.

- The relative probability of households belonging to social networks varied with the amount of land owned, negatively with inequality in land distribution, positively with higher proportions of households owning cell phones and TVs, and negatively with higher proportions of households attending political meetings in a village.
- The relative probability of being in a political network varied with proportions of households in a village owning cellphones and TVs, and inequality in land distribution.
- The relative probability of being in both – political and social – networks varied with literacy, negatively with SC/ST affiliation, and landowned, positively with inequality of land distribution, negatively with the proportion of households owning cell phones and TVs, and positively with proportions of households in a village attending political meetings.

We then used these probabilities in probit models to assess the relationship between being networked and being aware of the program's components.

(ii) Networking and Awareness of Decision-making Process

Let us assess the link between being networked and being aware of how decisions were made on choosing NREG projects. One of the factors that seem to deepen the participatory and democratic aspects is the quality of information voters have at their disposal (Blair, 2000; Crook and Sverrisson, 2001; Dreze and Sen, 1996). As discussed earlier, the NREG's assumption was that political and economic decentralization would take the program closer to the community. The village council (henceforth *gram panchayats or GP*) was supposed to be the principal authority for planning and implementing the NREG, and the village assembly (henceforth *gram sabha or GS*) had a key role in selecting and monitoring the performance. [14] Fifty percent of the funds and work were to be executed by the gram panchayat. Once the work commenced, the gram sabha was supposed to monitor the execution of the works and conduct regular social audits. In addition, the representation of poor and vulnerable sections in the GP was made mandatory by reserving seats for women and members of scheduled castes and tribes. The gram sabha was envisaged as a key forum for enhancing the voice and agency of different social groups including the most marginalized sections such as the poor, lower caste and women. The two million village parliaments, which were expected to hold a meeting four times a year, were given the task of discussing and ratifying the decisions made by the gram panchayats on the administrative details of anti-poverty programs. The assumption was that the poor would receive information about the NREG by attending public meetings, enroll in the program and then continue to attend gram sabhas and voice their desires or views when the body chose NREG projects.

We first present the descriptive statistics from the larger household survey (Dataset 1) in the two states. NREG's institutional mechanism tried to reduce corruption by limiting the

[14] The gram sabha, which is expected to meet four times a year, is the general body of villagers (quorum is 10% of villagers of voting age) who meet to discuss issues relating to the development of a village. The village secretary (gram sevak or village level worker) is supposed to maintain a register in which he/she records the agenda, the signatures of the attendees and the minutes of the meeting.

monopoly power of the officials and political representatives over the decisions made in the program. In principle, as mentioned earlier, the projects were to be recommended by the villagers in a meeting of the gram sabha, and the list would then sent by the village chief (sarpanch) to the official (NREG Project Officer) for preliminary approval. We asked the respondent if he/she knew the process by which NREG projects were selected. Their responses indicate high levels of awareness among the households of both states. About 75% of AP respondents said that the panchayat was involved in selecting the project. The respondents said that the decision on who would work for NREG was made primarily by the Sarpanch/panchayat (61%) and to a lesser extent by the NREG assistant (25%). Only 3% of all the respondents did not know about the decision making process. In Tamil Nadu, the statewide household survey reveals similar high levels of awareness. About 76% of the respondents said that the panchayat chose the project. Some 89% said that the Sarpanch or the panchayat decided on who would work for the NREG.

However, one of the problems with relying on self reported levels of satisfaction is the problem of adaptive preferences. A person's sense of satisfaction is dependent on his/her reference frame but, as Amartya Sen (2002) points out, the poor become reconciled to their lot and appreciative of small improvements disproportionate to the benefit judged from a different perspective. He gives the example from a study where widows of Kerala (a state with high life expectancy and low morbidity) self-reported lower satisfaction with their health than their counterparts in Bihar whose objective circumstances were worse. Other studies have found that despite displaying poor health indicators, villagers in Rajasthan not only did not perceive their health status as particularly bad but seemed content with the services they were getting (Bannerjee et al 2003). While some empirical studies have found that income inequality is associated with lower subjective well-being (Alesina et al 2004, Graham 2005), other evidence supports the view that those experiencing relative deprivation are rarely the

most objectively deprived (as seen in the examples cited above). Another problem is that of omitted preferences, namely that a villager's top choices may not have made it to the agenda of a gram sabha. So, let us set the question of satisfaction aside and simply assess the link between awareness of decision making and networking. Our hypothesis is that there is a positive link between being politically and socially networked and being aware of the decision making process and the components of the program.

Probit Model on Participation in NREG

We first generated the predicted probability of participation by running a probit on the variables influencing participation in the NREG. We ran this equation on all 500 respondents in each state who included participants and non-participants. As our sub-sample of those interviewed for assessing awareness of the decision making process and components of NREG is confined to participants in this scheme, the responses obtained are conditional on participation. Here, along with networking probabilities, the probabilities of participating in the NREG are used as explanatory variable in the awareness and related equations. We then used the predicted probability in a probit where the dependent variable was whether the individual was aware of decision making on NREG projects.

The probits in Table 2 reveal the following in AP:

The second column focuses on the attributes of the participants in the NREG. As the age increased, the likelihood of participation increased, but declined for old people, which is not surprising since the work (digging and other manual labour) involved required physical fortitude. Educated persons (primary, middle and secondary levels) were less likely to participate than illiterates; scheduled castes were more likely to participate than Other (a proxy for upper) castes. As land holdings increased, the likelihood of participation decreased.

But as the inequality of land holdings increased in a village, participation decreased. As the ratio of NREG wages to agricultural wages increased, participation also increased.

We derived the predicted probability of participation from the above model and inserted it into a probit equation (the third column) where the dependent variable was whether the individual knew who made decisions on the choice of NREG projects. As household size increased, the probability of knowing about decisionmaking decreased, but after the household reached a certain size, the marginal effect diminished, implying that those who hailed from large households were more likely to be aware of the decisionmaking process. Those with a higher likelihood of participating in the NREG were more likely to be aware than those with a lower likelihood. Illiterates were less likely to know, though the result was weakly significant. Scheduled castes, scheduled tribes and OBCs were less likely to know than Other (upper) castes. But politically and socially networked beneficiaries were more likely to be aware of who decided on the choice of NREG projects than those who did not belong to any network.

Probit Model on Networks and Awareness of Program Components

We now test the hypothesis that politically and socially networked participants would know about the main components of the NREG including the facilities promised on the worksite and in the program (Table 3). These facilities included the provision of crèche for children, shade, and water on the worksite, ensuring that the distance to the worksite did not exceed four kilometers, provision of first aid kits on the worksite and an unemployment allowance if work was not given within 15 days of asking for it, among others. In AP, compared to the non-networked participants, those who were politically and socially networked were more likely to be aware of the facilities promised. A striking finding is that individuals who belonged to the same caste as the sarpanch tended to be more aware. This resonates with our

qualitative research where low caste groups felt comfortable taking their problems directly to the sarpanch when he/she was from the same caste. This could also explain the high awareness among STs as compared to other castes because scheduled tribes tend to live in homogenous villages where the sarpanch is also usually an ST. Those who owned land were more likely to be aware than the landless. Villages with high percentage of cellphones and TVs also tended to have individuals who were more aware of the facilities required to be provided by the NREG. This shows that the use of media by the government to popularize the scheme has had some impact.

Thus networking – political and social – matters in generating awareness of decision-making and of the components of the program on the part of the participants in AP. Let us turn to the situation in Tamil Nadu.

Tamil Nadu

Table 2, column 4 focuses on the attributes of the participants in the NREG.

- Unlike in AP, males were significantly less likely to participate than females in Tamil Nadu.
- Similar to AP, as the age increased, the likelihood of participation increased, but declined for old people.
- Married persons were more likely to participate than unmarried. This corroborates our qualitative evidence from the worksites that men tended to send their wives to NREG worksites while they themselves looked for higher paying jobs elsewhere.
- Education and caste did not return significant results.
- As the ratio of NREG wages to agricultural wages increased, participation also increased, but after a certain level, the effect wore off.

- As the distribution of land holdings in a village became more unequal, the likelihood of participation decreased, but after a certain level of inequality, the effect wore off.
- Villages where households made contributions to political parties were more likely to have higher participation than villages where the contributions were lower or did not occur. We assume that only those households who are interested in politics (either as party members or attendees in political rallies) would make such financial contributions. This could imply that political parties do operate as channels to disseminate information about the NREG.

We generated the predicted probability of participation from the above equation and inserted it into a second probit where the dependent variable was whether the beneficiary knew who made decisions on the choice of NREG projects. Those who were political and socially networked, and those who attended public meetings were more likely to be aware. This also supports the contention of Rao and Sanyal (2009) who after examining 290 transcripts from gram sabhas in South India argue that such participation in gram sabhas creates a culture of civic/political engagement among poor people who then make material and non-material demands in their search for dignity. Other studies (Shankar, 2011 forthcoming) have found that the engagement of political parties with the poor is high in the villages of Tamil Nadu, and could have the effect of increasing awareness. For instance, political party workers in Tamil Nadu had assisted almost 80% of applicants (of whom about 60% had BPL cards) in filling out the requests for information under the RTI act.

Let us consider the results from the probit on whether the participants were aware of specific provisions such as provision of safe drinking water and first aid on the worksite. Table 3 presents the results.

- Men were less likely to be aware than women about first aid.
- As age increased, the awareness of provision of first aid increased.

- STs were significantly more likely to know about the provision of first aid than SCs, OBCs and others.
- Those who were politically and socially networked were significantly more likely to be aware of both facilities than those who were not networked. SCs and STs were more aware than OBCs and others.
- Those who attended public meetings were more aware about the provision of first aid than those who did not attend.
- Higher probability of participation was associated with lower awareness of first aid facilities, presumably because many (especially the poor) with a high probability of participation are likely to be ignorant of specialized facilities such as first aid.

Thus, in AP and Tamil Nadu, networking (particularly those who belonged to social and political networks) contributed to higher awareness of decision-making and of a program's components.

4. Awareness and Complaints

In principle, a person complains if there is a discrepancy between the promised benefit and the actual one, which means that he/she has to know about the program's deliverables. Complaints reveal preferences (Duflo et al 2003) but it must be acknowledged that power asymmetries may not allow the poor to complain (Bardhan 2006).

Let us first examine the results of Dataset 1 for each state. In AP, 26% (92% of participants answered the question) said that they had complained on NREG related issues (primarily late wage payment and work measurement), and of these complainants, about 37% were poor. Poor complainants approached only the supervisor (34%), block officer (17%) and sarpanch (9%). Most of them (90%) had complained verbally. 71% overall (and 77% of the poor) said that their complaints were addressed.

In Tamil Nadu on the other hand, only 16% (all respondents answered the question) had complained, that too verbally on NREG related issues. Of these, 60% had complained to the panchayat, 21% to the village president, and 17% to the supervisor. Less than half (42%) said that their problem was resolved. Of those who complained, the majority (60%) belonged to the non-poor category (calculated on the basis of their monthly consumption expenditure), and more women complained than men. So compared to AP, fewer participants complained in Tamil Nadu, but belonged to social and political networks (Table 1).

We assessed the probability of socially and politically networked participants being more likely to complain in case they felt shortchanged (Table 4). In AP, those with land holdings were less likely to complain , but as revealed in companion papers (Shankar et al 2010, Gaiha et al 2010) this could be because they did not feel the need to complain since they received higher wages and in a more timely manner than poorer beneficiaries. This highlights the fact that high power disparity reduces the ability of weaker sections to complain. Those belonging to larger households were more likely to complain; and those more likely to participate were also more likely to complain. Networking mattered in creating the ability to voice complaints. Compared to those who were not networked, those who belonged to political, social and both types of networks were significantly more likely to complain.

In Tamil Nadu, the probit model reveals that compared to those who were not networked, those who belonged to one of the categories of networks were significantly more likely to complain. This implies that networks provide a support base for the complainant. Those who were likely to participate in the NREG had a higher probability of complaining than non-participants.

Thus, in both states, politically and socially networked individuals and households had higher awareness of the NREG's components and were able to register their displeasure.

Are individuals who are networked more likely to mobilize than those who are not? We ran another probit model where the dependent variable was whether the individual had participated in a collective demand for other things from the government such as improvements in infrastructure.[15] The result in AP reveal that illiterates were less likely to mobilize than the educated. SC/STs were less likely to mobilize than OBCs and Other (mainly upper) castes. Older people and those who belonged to political and social networks were more likely to have made such demands. In Tamil Nadu too, those who belonged to political and social networks were more likely to have mobilized than those who did not belong to any networks. In addition, those who belonged to villages where more inhabitants had made financial contributions to political parties were more likely to have mobilized than in villages where such contributions were not made. This indicates that higher level of mobilization coincides with higher political involvement within villages.

5. Qualitative Validation

We assessed the validity of these results by examining the qualitative responses (Dataset 3) to our question 'who complains in the gram sabha'. The qualitative data from AP supports our model's findings that those who are politically and socially networked seem to feel more emboldened to voice their demands. In AP, the woman MPTC member (Kondair village) said that earlier forward castes and elite members were the only ones who spoke to the officials in the gram sabha. "Currently there is large scale of participation by the women for any meeting and the women are able to speak with the officials, as are SC/ST members." She attributed the newfound participation among the weaker groups to their membership in self-help groups. Her views were corroborated by the worksite beneficiaries in the village who said that all of them had attended the four gram sabha meetings in the previous year, and said that in the previous one they had discussed the calendar for NREG works. Most of the

[15] Results available with the authors

worksite beneficiaries were members of self help groups. A similar story emerged in Kondapuram and Mechurajupalli. “In the past, only elite people spoke in the gram sabhas but now everyone discusses and speaks in these meetings,” said a worksite beneficiary. These interviews also support the findings by Rao and Sanyal (2009) that poor people in southern states (including AP) use gram sabhas to make their demands.

In Tamil Nadu, the qualitative evidence confirmed the results of the larger household survey that few people bothered to complain. In six of the eleven villages, very few complained. In Kottur too, none of the FGD interviewees had attended the gram sabha or complained. In Melathiyapettu, the FGD interviewees (illiterate or had attended upto primary school) did not attend these meetings or complain but reported that in the previous GS (held on Jan 26th 2010) some women had complained about lack of drinking water, transport and school facilities. In Melvillivalam, the six females FDG interviewees had never attended the meetings and were unaware of the process.

In four other villages such as Karai, issues like drinking water and high school facilities were discussed in the previous meeting, while the scheduled castes spoke on the NREG. While the women interviewed in this focus group had never attended the gram sabha, they and the male participants said that middle class women (not poor) tended to attend these meetings. In Kuralur (average yearly income of FDG members was Rs 22000), one of the female NREG workers who had participated in the gram sabha said that on average 50-60 persons attended of which 20 or so were women. Only males complained on issues like street lighting, drinking water and sanitation but the president, clerk and vice president ‘just listen’ but ‘do not take any steps to solve the problems.’ They also said that SCs were favoured and backward castes faced discrimination in the village. In Pudukelvachi, the worksite beneficiaries had raised the issue of NREG wages (to be increased to Rs100) but said that nothing had come of it. In Vasanthakrishnapuram, the FGD members had not attended the

gram sabha but had complained directly to the President (who belonged to their caste) who had resolved their problems 'to a certain extent.' In Melithapakkam (average annual income was Rs. 19000), the gram sabha was relatively well attended (100 or so with about 40 female participants), and women (many of whom were members of SHGs, the beneficiaries said) spoke up on problems of drinking water, street light and roads. The attendees tended to be educated at least upto middle school. In Karuvellampadi village, the NREG FGD participants were better off and earned from Rs 24000—Rs 76000 per annum. In this village, problems such as road facility, bus facility and wage increase in the NREG were raised in the gram sabha.

One of the patterns that emerges from these village surveys particularly in Tamil Nadu is that more educated sections seem to attend gram sabhas and speak up, but illiterate persons neither attend nor complain. More than half the household heads of the interviewees in our qualitative interviews were illiterate. The illiterate and the poor seem to repose very little confidence in the institution of the gram sabha as a channel to resolve disputes. And the fact that even when there are complaints, the elected representatives do not seem to resolve the matter, does not do much to instill confidence in the institution. The qualitative interviews in Tamil Nadu reveal that those villagers are more pessimistic about the gram sabha's potential as a dispute resolution mechanism than those in AP. The interviews also corroborate Bardhan's (2006) view that the absence of complaints were not due to satisfaction with the program but due to other factors such as the assumption that nothing good could come of such complaints. In Tamil Nadu, in Chettiandal village the eight NREG workers (who earned on average Rs 18000 per annum) selected for the focus group discussions said that very few people complained in the gram sabha. 'The meeting is held only for namesake,' said one of the workers who reported that in the previous one, 20 or so persons attended, of whom seven were women (but none spoke up).

6. Conclusion

The links to social and political networks are significant in increasing a household's access to information about an anti-poverty program, in increasing the monitoring of the program, and in helping them voice their dissatisfaction when program objectives are not met. But networking alone, as our results from AP and Tamil Nadu indicate, is not enough to enable the poor to directly influence decision making in a gram sabha. Here, our qualitative interviews support other research on the politicization of decision making in rural areas reflecting the power asymmetries in village society. For awareness of specific details of a project's components, education mattered in AP, and for voicing complaints, education mattered in both states. This highlights the importance of education in instilling not just civic values as suggested by other studies but also for enabling the vulnerable to learn about and monitor the functioning of specific anti-poverty programs. These results show that researchers may not be wrong to argue that the participation of the poor and disadvantaged in democracy can be enhanced through the provision of more information in the short term and more education in the medium term. The political processes in AP and TN generated an awareness of the importance of participating in public meetings. In Tamil Nadu, the presence of political workers from the two main parties at the village level, and the evidence that higher awareness exists among those who belong to villages where financial contributions to political parties is relatively higher is an interesting finding. A challenge then is to understand better the dynamics of how political and social networks emerge and are sustained in different contexts.

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Annex 1:

Table 1: Distribution of Households in Sub-Set (% in brackets)

Social Networks	*Andhra Pradesh*	*Tamil Nadu*
No networks	13 (8%)	103 (47%)
Only social networks	22 (14%)	34 (16%)
Only political network	43 (27%)	23 (11%)
Social and political networks	81 (51%)	59 (27%)
Total	159	219

Table 2: Networks and Awareness of who chooses NREG projects

	Andhra Pradesh		Tamil Nadu	
Dependent variable	NREGS Participation	Whether Aware of Who Decides on Projects	NREGS Participation	Whether Aware of Who Decides on Projects
Explanatory variables	Coeff (t-value)	Coeff (t-value) (Marginal effect)	Coeff (t-value)	Coeff (t-value) (Marginal effect)
Gender	0.200(1.59)		-.777***(-6.94)	.382(1.01) (.008)
Age	0.154***(5.28)		.022***(5.44)	.000(0.02) (8.46)
Square of age	-0.002***(-4.49)			
Marital status: Married	-0.233(-0.96)		1.01***(7.46)	
Illiterate		-.756(-1.61) (-.081)	.039(0.27)	.537(1.37) (.015)
Primary education	-0.490***(-3.14)	-.276(-0.71) (-.033)	.065(0.43)	
Middle school	-0.700***(-2.77)			
Secondary education	-0.683***(-3.06)			
Higher secondary and above	-0.326(-1.24)			
SC	0.703***(2.78)	-1.51**(-2.40) (-.230)		-.561(-0.91) (-.014)
ST	0.212(0.73)	-1.73**(-2.31) (-.377)		
OBC	0.385(1.61)	-1.76**(-2.21) (-.216)	-.075(-0.63)	
Land owned	-.086**(-2.12)	.045(0.48) (.004)	-.078(-1.38)	
Land owned squared				
Only socially networked		-1.97(-0.86) (-.213)		-1.48(-0.92) (.070)
Only politically networked		1.82(1.09) (.196)		10.47*(1.80) (.266)
Politically and socially networked		3.65**(1.89) (.394)		2.77*(1.70) (-.037)
Household size	-0.043 (-1.24)	-.894**(-2.06) (-.096)		
Household size squared		.066*(1.75) (.007)		
Ratio of NREG to AGR wage rate	0.870**(1.95)		8.36**(2.15)	
Ratio of NREG to AGR wage rate squared			-5.46**(-2.29)	
Land Gini index	-2.47***(-4.03)	-35.95(-1.38) (-3.88)	-11.52***(-4.63)	
Land Gini squared		26.81(1.31) (2.89)	10.04***(4.01)	
Village level indicator of financial contribution to political parties			.038**(2.43)	
Average village distance to site			-.233(-1.47)	
Lower Probability of participation (below.5)				-.364(-0.92) (-.010)
Probability of participation		2.98***(3.70) (.321)		
Constant	-2.01(-2.57)	13.52(1.77)	-1.89(-1.02)	1.02(1.25)
Number of obs	697	250	892	242
Wald chi2(15)	247.32			
LR chi2		41.35	343.70	25.75
Pseudo R2	0.3092	0.2477	0.3172	0.2542
Log Likelihood	-4206401.4	-62.773014	-369.9579	-37.780599
LR test of indep. eqns. (rho = 0) i.e. chi-square(1)	Prob>chi2=0.0000	Prob>chi2=0.0002	Prob>chi2=0.0000	0.0012

Notes: ***,**,* refer to significance at the 1 %, 5 % and 10 % level, respectively; and w denotes weakly significant (>10 % level). Figures in the parenthesis are the t-values.

Table 3: Networking and Awareness of Facilities

	Andhra Pradesh	Tamil Nadu	
Dependent variable	Whether they were aware of facilities promised by NREG++	Aware of safe drinking water	Aware of provision of first aid
Explanatory variables	Coeff (t-value) (marginal effect)	Coeff (t-value) (marginal effect)	Coeff (t-value) (marginal effect)
Gender		-.255 (1.11) (.069)	-.612**(-2.00) (-.171)
Age		-.007(-0.81) (-.002)	.027**(2.28) (.007)
Square of age			
Marital status: Married			
Illiterate	-.186(-0.73) (-.058)	.074(0.31) (.021)	.267(0.85) (.070)
Primary education			
Middle school			
Secondary education			
Higher secondary and above			
SC			
ST	.579 (1.64) (.158)	.293(1.11) (.084)	1.17***(3.12) (.317)
OBC	-.319(-1.58) (-.102)		
Land owned	.334***(3.39) (.106)		
Land owned squared			
% of Adults in household			
Politically and socially networked	4.15***(5.09) (1.31)	1.03*(1.74) (.294)	3.41***(4.42) (.878)
Only socially networked		2.99***(2.99) (.083)	1.73*(1.72) (1.286)
Only politically networked	.041(0.05) (.013)	.294(0.14) (.847)	4.99*(1.77) (.445)
Household size			
Ratio of NREG to AGR wage rate			
Land Gini index			
Probability of participation in NREG	-.538(-0.90) (-.171)	.417(0.77) (.118)	-4.02***(-5.03) (-1.03)
Social group of sarpanch same as individual	1.24*** (4.72) (.439)		
% of TVs/cellphones in village	.040***(4.46) (.012)		
Average village distance to site squared			
Constant	-4.305 (-4.59)	-.335(-0.59)	-.368(-0.51)
Number of obs	291	242	241
Pseudo R2	0.2670	0.0758	0.5274
Log Likelihood	-129.21744	-118.72715	-67.314808
LR chi2	109.18	19.48	150.26
Prob>chi2	0.0000	0.0125	0.0000

Notes: ***,**,* refer to significance at the 1%, 5% and 10% level, respectively; and w denotes weakly significant (>10 % level).
Figures in the parenthesis are the t-values.
++ In Tamil Nadu, we ran this equation on the probability of knowing about 2 facilities: safe drinking water and first aid.

Table 4: Networking and Complaints

	Andhra Pradesh	Tamil Nadu
Dependent variable	Whether they complain Coefficient (T-value) (Marginal effects)	Whether they complain
Explanatory variables		
Gender		.239(0.90) (.060)
Age		-.005(.010) (-.001)
Illiterate	-.168 (-0.64) (-.061)	-.202 (-0.78) (-.050)
SC/ST	.245(1.04) (.088)	-.081(-0.33) (.019)
Land owned	-.155**(-1.97) (-.056)	
Politically and socially networked	3.10**(1.90) (1.13)	1.66 ***(2.52) (.404)
Only socially networked	9.31***(4.52) (3.40)	2.07**(2.33) (.505)
Only politically networked	4.79***(3.56) (1.75)	3.55**(1.73) (.868)
Household size	.214***(3.24)	
Land Gini index	-0.468(-0.20) (.171)	
Same caste Sarpanch as the household	.567(1.53) (.193)	
Predicted probability of participation	1.58**(2.32) (.578)	1.28**(1.76) (.311)
Constant	-2.488 (-0.46)	-2.64(-3.67)
Number of obs	225	239
Prob>chi2	0.0000	0.0078
Pseudo R2	0.2180	0.0887
Log Likelihood	-116.75203	-106.68023
LR Chi2	65.26	20.76

Note:s ***,**,* refer to significance at the 1 %, 5 % and 10 % level, respectively; and w denotes weakly significant (>10 % level). Figures in the parenthesis are the t-values.

Table 5: Definitions of the variables used in the analysis

Dependent Variable	Definition
NREGS Participation	NREGS Participation (=1 if participated in NREGS; 0 therwise)
Whether household attends village meeting	Whether household attend village meeting (=1 if household attends any village meeting; 0 otherwise)
Poverty status	1= Acutely poor , 2= Moderately poor , 3= Moderately non-poor , 4= Affluent
Explanatory Variables	
Gender	Gender of household member or head (=1 if male, 0 if female)
Age	Age of household member or head
Square of Age	Square of Age of household member or head
Whether Married	Dummy for being Married (=1 if married; 0 otherwise)
Illiterate (Reference)	Dummy for no education (=1 if illiterate, 0 otherwise)
Below primary education	Dummy for primary education (=1 if literate but upto primary education, 0 otherwise)
Middle school	Dummy for middle school (=1 if passed only upto middle school, 0 otherwise)
Secondary education	Dummy for secondary education (=1 if literate but upto secondary education, 0 otherwise)
Higher secondary plus	Dummy for higher secondary and above (=1 if education upto higher secondary and above, 0 otherwise)
SC	Dummy for SC (=1 if household or member of SC, 0 otherwise)
ST	Dummy for ST (=1 if household or member of ST, 0 otherwise)
OBC	Dummy for OBC (=1 if household or member of OBC, 0 otherwise)
Others (Reference)	Dummy for Others (=1 if household or member of Others caste, 0 otherwise)
Amount of land owned	Amount of land owned (in acre)
Square of amount of land owned	Square of amount of land owned (in acre)
HH size	Size of the household
Square of hh size	Square of size of the household
Number of adult male	Number of adult male in the household
Number of adult female	Number of adult female in the household
Ratio of NREG to AGR wage rate	Ratio of NREG wage to agricultural wage rate at village level
Square of Ratio of NREG to AGR wage rate	Square of ratio of NREG wage to agricultural wage rate at village level
Land Gini index	Gini index of inequality of landholdings
Square of Land Gini index	Square of Gini index of inequality of landholdings
Interaction: Ratio NREGAGRWR with LGI	Interaction of Ratio of NREG wage to agricultural wage rate at village level with Gini index of inequality of landholdings
Average distance of site from the village	Average distance of site from the village
%hhs attending meetings	%households attending meetings at village level
Square of %hhs attending meetings	Square of %households attending meetings at village level
%hhs with motorcycles	%households with motorcycles
Political and social networking	Only attended public meetings (political) Only belong to SHGs and other civic/caste/religious/trade associations (social) Belong to political and social Belong to neither