Social Capital and the Allocation of Development Projects

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Abstract

Previous research has argued that social capital increases the policy responsiveness of government. This paper extends these analyses to show how community-level social capital affects allocation decisions made in development projects. I argue that social capital facilitates both ex ante transfers of information and ex post sanctioning capacity, such that communities can better express their desires for certain public goods and services and can punish officials who fail to provide them. Using data from a development project in Indonesia, I show that, in general, communities with more social capital are more likely to be selected as project participants across all levels of deservingness (as defined by the project guidelines). Among the set of deserving communities, in particular, greater social capital corresponds to an increase in the probability of successfully obtaining new development resources. This result provides novel evidence about how social capital affects distributive politics and challenges conventional wisdom about the limitations of local pressure on the government in Indonesia.

KEY WORDS: social capital; lobbying; distribution; development; Indonesia
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In *Making Democracy Work*, Robert Putnam links the existence of social capital to improved government performance, which he conceptualizes as the level and innovativeness of service delivery and the efficiency of governing institutions and bureaucratic agencies (1993: chapter 3). But how exactly does social capital – “the norms and networks embedded in social structures that enable people to act collectively” (Woolcock 2010) – result in these desirable outcomes? As Carles Boix and Daniel Posner point out, one of the deficits of the social capital literature has been in “accounting for the mechanisms that link social capital with good performance in government” (Boix and Posner 1998: 686).

On the demand side, social capital can help citizens form stronger opinions about public goods provision and can facilitate citizens holding political elites accountable. Policy outcomes improve because social capital increases the level of political sophistication, improves the articulation of demands being made on government, facilitates the distribution of information about government performance and thereby reduces the collective action problems related to citizens holding governments accountable for providing for the public welfare. Boix and Posner say, “Knowing their constituents are monitoring and discussing their behavior, elected political elites will work harder to govern effectively” (Boix and Posner 1998: 690).

Emphasizing the demand side, previous authors have shown how social capital affects institutional efficiency (Putnam 1993), overall spending on public goods (Tavits 2006), electoral responsiveness to government performance (Jottier and Heyndels 2010) and lobbying activities (Chamlee-Wright and Storr 2011). In this paper, I show a strong association between social capital and the allocation of resources within a single development program administered by local...
governments in Indonesia. Whereas most previous studies have looked at aggregate outcomes that result from a variety of processes, my focus on the output of a single development project provides more direct evidence that social capital is affecting government behavior. In addition, whereas many previous studies have looked at outcomes in wealthy democracies, I use evidence from Indonesia, a country about which there exists widespread skepticism concerning the responsiveness of local government to civil society.

For many commentators, decentralization in Indonesia, rather than encouraging the deepening of democracy, instead has facilitated the creation of local oligarchs who stay in power through money politics, patronage networks and the occasional employment of organized gangs (Robison and Hadiz 2004; Aspinall 2010; Buehler 2010; Hadiz 2010). As compared to providing responsive government, these local elites are interested in taking advantage of the rent-seeking opportunities that come with positions of power. Where government is responsive, this results not from civil society’s demand-side activism but rather from supply-side provision by enlightened elites (von Luebke 2009).³

Indonesia, therefore, seems an unlikely environment in which to observe social capital influencing government decisions. Yet in line with previous work that shows the effectiveness of organized social sanctions in non-democratic settings (Tsai 2007), the results of a multilevel statistical analysis demonstrate a significant link between social capital and policy responsiveness. Categorizing Indonesian villages as more or less deserving according to the project’s stated targeting criteria, I find that deserving villages are more likely to receive project funding when they are located in areas with greater concentrations of social capital. I also find villages not meeting the targeting criteria are marginally more likely to receive project funding when they score

³ Rosser, Wilson and Sulistiyanto (2011) depict elites choosing public or private goods provision based on the dominant electoral strategy.
high on the social capital index. My conclusions are supported by qualitative evidence about the ways in which villages articulate their interests to higher levels of government. These findings provide evidence that social capital can affect distributive politics and facilitate government service delivery even in settings where democratic accountability mechanisms are alleged to be weak.

1 Social Capital and Government Responsiveness

Whether studying macroeconomic outcomes (Knack 2002), the performance of local development initiatives (Isham and Kähkönen 2002) or lobbying (Chamlee-Wright and Storr 2011), scholars of social capital emphasize how communities with large stocks of social capital will more easily be able to overcome collective action problems and accomplish community-oriented goals. Communities are more likely to obtain development resources from the government when they have ex ante information about the resources and an ex post capacity to sanction the government in the event that they do not receive the resources.

The local organizational networks that characterize and create social capital provide opportunities for community members to share information and develop credible sanction threats. Organizational density facilitates citizens gathering information about government resources, monitoring the distribution of those resources and, if necessary, sanctioning the government for the failure to distribute resources. In other words, local organizations help to create the coordination that allows a citizenry to articulate its needs and then credibly threaten punishment of the government if those needs go unmet.5

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4 This finding is consistent with the concerns of those who allege a dark, exclusionary side to social capital (Knack 2002; Edwards 2006; Chamlee-Wright and Storr 2011).

5 This is not to say that such networks always facilitate collective action. Local organizations may reproduce hierarchies that are demobilizing. See, for instance, the chapters by Jorge E. Uquillas and Martien Van Nieuwkoop; Jonathan Fox and John Gershman; and David Lewis and M. Shameen Siddiqi in Bebbington et al. (2006).
For instance, previous research has shown that individuals who are involved in social organizations are more likely to participate in community development planning activities (Alatas, Pritchett and Wetterberg 2003; see also Chamlee-Wright and Storr 2011). When these community members gather together, they can learn about pressing problems and available development programs. The knowledge that community members gain through their associational contact allows them to speak with a unified voice to the government.

Research also has shown how a rich associational life increases the ability of communities to sanction government officials ex post for poor performance. The social capital developed through organizational membership can help voters to coordinate around the use of electoral mechanisms to remove poorly performing politicians from office (Jottier and Heyndels 2010). Even when formal electoral accountability is not available, local associations may provide an informal accountability mechanism for awarding moral standing or sanction to government officials (Tsai 2007).

Social capital provides resources for overcoming collective action problems related to accessing government-controlled resources in at least three ways. First, social capital increases the availability of information about goods and services that communities can solicit from the government. Second, social capital increases the likelihood of communities coming together in order to request these government services. And finally, higher levels of social capital imply a higher probability of reward or sanction for government officials depending on their responsiveness to the community. If we observe a relationship between social capital and the distribution of government resources, it may be the case that communities were better informed about the availability of resources, that communities actively organized and applied pressure on government or that the government anticipated such organization in advance and chose its pattern of resource distribution accordingly. As Carol Graham and Judith Tendler describe, politicians and
government bureaucrats who control the allocation of development resources often must choose between the “truly needy” and the “politically vocal” (Graham 2000; Tendler 2000; Weitz-Shapiro 2006).

2 Village Selection in an Indonesian Water and Sanitation Project

The Second Water and Sanitation for Low Income Communities (WSLIC-2) project in Indonesia was a World Bank-funded anti-poverty project that aimed to finance construction of small-scale infrastructure in poor, rural villages with water-supply and sanitation problems. Decisions about village participation were made at the district level, the most important level of government in Indonesia after the national government since the 2001 “big bang” decentralization (Hofman and Kaiser 2004). In between the district and village levels, there is a subdistrict level of government that, as I discuss below, ostensibly became less relevant under decentralization. In between the district governments and the central government, there are provincial governments that retain some significant powers.

In the eight provinces participating in WSLIC-2, a provincial coordinating unit and other provincial agencies were given responsibility for designating participating districts. Once the participating districts were chosen, the project was advertised to all villages within those districts, including information about the project’s “objectives, expected outputs, rules and selection criteria” (World Bank 2002: 34). Villages then submitted one-page applications to the district-level project

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6 The project was the second in a series of three World Bank-funded projects in Indonesia aimed at encouraging positive health outcomes through improvements in water and sanitation systems and education. The projects operate in a community-driven development framework such that local villagers decide how they can most benefit from the project. One report describes WSSLIC-1 as “a pioneer in [community-driven development] projects” (World Bank 2006: 95).
management unit, which chose participating villages according to a set of seven criteria (World Bank 2002: 34): (1) current sources of water; (2) water-related disease morbidity; (3) poverty score; (4) percentage of population to be served; (5) presence/absence of alternative sources of financing; (6) amount of cost-sharing the village proposes to provide; and (7) location in a cluster of villages (subdistricts with at least five applying villages would be prioritized).

District Steering Committees, headed by the district development planning agency (*Bappeda*) and including members from district-level sectoral agencies and the district parliament, were charged to “oversee prioritization of community applications for participation in the project” (World Bank 2002: 10). Project villages were selected in 2002 and 2003. Table 1 describes the roles of the different levels of the Indonesian government in selecting participant villages for WSLIC-2.

### 2.1 Local-Level Organization in Pursuit of Development Projects in Indonesia

During Suharto’s New Order regime (1966-1998), the Indonesian government operated in a unified, hierarchical fashion from the national level down through the provincial, district, subdistrict and village levels. Although there was a process by which villages created development proposals that were relayed upward through the various levels of government, the reality was that development planning was from the top down with villages receiving their instructions about development initiatives from the subdistrict governments, which had received them from the district and provincial governments above them. Village heads were elected, but they were officially accountable to the higher levels of government and not the citizenry, and the elections were tightly controlled (Antlöv 2003; Bebbington et al. 2004; Hadiz 2010).
After the fall of Suharto, one of the 1999 decentralization laws created elected village councils and made the village heads accountable to these councils. Under these laws, villages and districts gained power. Villages now have “the right to raise funds” and no longer needed “to consult with or have approval from higher authorities to pass village regulations or budgets. Villages even have the right to reject projects from other levels of government if they are not accompanied by funds, personnel and infrastructure” (Antlöv 2003: 199).

That said, villages have little access to own-source revenues and so largely remain dependent on the higher levels of government to fund development projects. Village heads, therefore, find themselves in the position of needing to appeal to higher levels of government for funding and support. Ben Olken, for instance, describes a village head promising one neighborhood that he would “lobby the district government to bring an additional road project” if that neighborhood would support resources going to a different neighborhood more immediately (Olken 2010: 258).

The competition for development resources can be fierce. At the start of the World Bank-funded Kecamatan Development Project, the National Development Planning Agency (Bappenas) produced a ranked-list of 1,500 subdistricts based on poverty incidence statistics. Before the disbursement of money to these subdistricts began, however, various subdistricts lobbied Bappenas to obtain superior positions on the list (Wong 2003). One World Bank official estimated that as many as 10 percent of the subdistricts on the list were able to improve their placement through this lobbying effort (author’s interview; Jakarta; January 2007). In the context of the WSLIC-2 project, an impact evaluation study notes that a “side effect of not having made the WSLIC-2 selection was that it stimulated the concerned villages to contact their district authorities and NGOs to try and get

7 For more on decentralization in Indonesia, see Antlöv (2003); Alm, Martinez-Vazquez, and Indrawati (2004) and Smith (2008).
an alternative form of support to improve their [water and sanitation] conditions” (Sijbesma 2010: 27).

These appeals for funding depend on access to information and the ability to demonstrate the (political) importance of one’s village to higher-level officials. Social capital resources, therefore, serve to provide village heads with the “ammunition” that they need to make their case. In my field research, one village head described applying for WSLIC funding after having assembled information from different local businesses about how they would benefit. Another village head expressed his hope that connections with a prestigious local university would help the village to obtain more funds from the central government (author’s interviews; West Sumatra and West Java; January 2007).

2.2 The Persistence of Hierarchy between Villages and Subdistricts

According to the official selection procedures, subdistricts played little role in village selection for WSLIC-2 participation. As described above, however, subdistricts historically played an important role in channeling budgetary requests from villages to higher levels of government and, more importantly, in holding village heads accountable to the demands of higher levels of government. Under the decentralization laws, however, the subdistrict governments became “deconcentrated units of the local [i.e. district] government” without direct control over villages (Indonesian Embassy ND). The village head is accountable to the local population. One scholar described this change as “nothing less than a quiet revolution in the countryside, ... revising the old paradigm of villagers as objects of development to one in which villagers have the right to exercise their democratic authority over public matters” (Antlöv 2003: 200).
Despite the *de jure* status of subdistricts, village-level interviews that I did in several districts in Indonesia, reveal that subdistricts continue to play an important role in decisions about local development. Across interviews with 20 village heads, the theme of the subdistrict government as a key intermediary came up repeatedly. Village heads emphasized the role played by the subdistrict head in collecting lists of development priorities produced by the village in annual meetings and passing them along to the district head. As importantly, they described learning about development programs and sources of funding from subdistrict heads.

One village head in the Bogor district of West Java said that his village (and other villages) applied for funds from the district government by giving proposals to the subdistrict government to forward to the district; he said that he was not aware of the specifics of the decision-making process at the district level. This particular village had applied for WSLIC-2 funding and not received it. The village head said that he was not aware of the WSLIC-2 requirements and was not entirely sure what the district government wanted in an application.8

A village head in Padang Pariaman district of West Sumatera described the village heads (wali nagari in West Sumatera) communicating directly with the district-level development ministry, receiving information about available projects from that ministry. However, he said that a subdistrict-level officer was responsible for implementing any project that cost over 50 million rupiah (about $5,500). He used the legal language that describes the subdistrict officers as “the right hand of the district” and complained that village heads make proposals and send reports but do not get involved in the running of projects. He said that villages often do not know what is

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8 Perhaps predictably, villages that had WSLIC-2 or other World Bank-funded programs were much better informed about program criteria than villages without programs. A village head in Solok district in West Sumatera, for instance, said that the district had chosen his village for WSLIC-2 participation because of the village’s sub-standard sanitation facilities and described the district health ministry ranking villages based on their need for WSLIC-2 funding.
happening in projects because officials at the district level do not think that the village heads are important enough.

As the empirical results below suggest, although subdistricts were not formally included in the structure of WSLIC-2, subdistrict-level social capital is nonetheless related to recipient selection. Even after decentralization legally shifted power away from subdistricts upward to district governments and downward to village governments, subdistricts retained their relevance as loci of organization.

### 2.3 Additional Factors That Influence Community Lobbying

Social capital is not the only community-level characteristic that can support the articulation of needs to higher levels of government. I propose two other characteristics of villages that help communities obtain development resources: access to information and the quality of village leadership.

Lobbying for a program requires information about that program. Villages will be more successful when they are aware of their entitlements and opportunities. The powerful effect that awareness of entitlements has on resource transfers has been demonstrated in a well-known study showing that providing villages in Uganda with information about the amount of money that they should receive in education grants drastically increased the amount of funding that actually reached their village (Reinikaa and Svensson 2004). As described above, social capital is expected to increase the flow of information within a village, but there may also be more basic limitations on the amount of information to which a community has access, such as whether or not it has access to newspapers or is the site of a market.
In addition, the characteristics of the leadership within the village will affect the ability of the village to organize and successfully lobby the government. More skilled or connected leaders will be able to present a better case to higher authorities as to why their village should be included in a project. To some extent, village leadership characteristics may be correlated with social capital, but it is also possible for good village leadership to exist in low-social-capital environments (von Luebke 2009; Rosser et al. 2011).

3 Measuring Social Capital and Other Community Resources

To understand the relationship between social capital and WSLIC-2 inclusion, I use the Potensi Desa Sensus (PODES), a triennial census of all villages in Indonesia conducted by the Indonesian Central Bureau of Statistics. The PODES census collects data through interviews with village heads on topics ranging from the geography of the village to measures of infrastructure to the number of community organizations to disease incidence. I use the PODES survey conducted in 2002, which measures village characteristics at the time of WSLIC-2 selection in late 2002 and early 2003.

The list of villages participating in WSLIC-2 contains 2,282 observations. After correcting for spelling and formatting differences, I was able to match 1,864 of these to villages listed in PODES 2003. Of the 418 unmatched villages, 307 of them were in West Sumatera, where WSLIC-2 recorded village names using a traditional governance system that does not mirror the administrative divisions elsewhere in Indonesia. Therefore, it is not possible to include West Sumatera in the analysis. After excluding West Sumatera, 111 of 1,961 villages (six percent) remain unmatched.

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9 This problem was noted in the project’s impact evaluation (Sijbesma 2010: 21-22).
The set of counterfactual cases (i.e. those villages that did not participate in the project but were eligible for participation) is the set of all remaining villages in participating districts. These villages could have been chosen for WSLIC-2 (by virtue of being in participating districts) but were not. The complete dataset has 8,262 observations: 1,850 participants for which data is available and 6,412 non-participant comparison cases. These cases are grouped within 640 subdistricts. Some subdistricts have no participating villages, and some have all villages participating. The average subdistrict has just over one-fourth of its villages participating.

In order to understand how social capital, access to information and leadership matter after controlling for deservingness, I create a set of four indices at the village level and three indices at the subdistrict level. The first village-level index corresponds to the deservingness of the village according to the program criteria; the second to the amount of social capital in the village; the third and fourth to a village’s access to information and the quality of its leadership. At the subdistrict level, I create indices for deservingness, social capital and access to information. (There is no data available on the quality of subdistrict leadership.) The components of each index are listed in tables 2 and 3.

In the deservingness index, a village receives one point for each of six characteristics that correspond to the WSLIC-2 allocation criteria. I collapse together the two highest categories because of the small number of cases in those cells, resulting in an index that runs from 0 to 5. The measure of poverty used in constructing the deservingness index is itself a factor score based on a combination of eight demographic and infrastructural measures; PODES does not include consumption or income measures.

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10 The risk of having unmatched cases is that participants may end up included in the non-participant group. This will dilute any statistical relationship that exists between the explanatory variables and program selection, making it more difficult to find statistically significant results.
Viewing social capital from the perspective of social networks, I operationalize social capital using an index of associational density and measures proxying for the likelihood of trusting relationships. The index for the amount of social capital found in the village draws on previous research about collective action in Indonesia (Fritzen 2007; Li 2007; Wetterberg 2007; Chavis 2010). Villages receive one point for having (1) a rotating credit association (*aran*),\(^{11}\) (2) traditions of community self-help (*gotong royong*) (see Bowen 1986), (3) customary village institutions (*adat*),\(^{12}\) (4) a law organization, (5) a density of mosques per capita that is higher than the national median, (6) a density of non-Islamic religious institutions\(^{13}\) that is higher than the national median, (7) an ethnically-homogenous population, and (8) an absence of conflict in the past year. I collapse the two highest and two lowest categories because of the small number of values in those cells to create an index that runs from 1 to 6.

The access to information index proxies for the likelihood of a village hearing about the WSLIC-2 project through the media, commercial connections or postal communication. The village leadership index awards points for having an educated, male village head. The assumption underlying the awarding of a point for having a male village head is that female village heads are at a disadvantage in male-dominated Indonesian society; they will have fewer political connections at superior levels and a harder time coordinating community action.\(^{14}\)

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\(^{11}\) In *Making Democracy Work*, Putnam uses Geertz’s (1962) work on *aran* to portray them as the archetypal social capital-producing association.

\(^{12}\) *Adat* institutions are recognized within and protected by Indonesian law. Geertz (1983) situates *adat* within traditional Indonesia philosophical and legal thinking. A recent study finds that *adat* institutions improve the functioning of microfinance in Bali (Marshall et al. 2006).

\(^{13}\) Protestant and Catholic churches, Buddhist monasteries, Hindu temples and Confucian temples.

\(^{14}\) Ideally, I would like to have much more information about the quality of leadership. However, no such information is available for all of the cases under study. In their work on district heads, von Luebke (2009) and Rosser et al. (2011) provide richer understandings of leadership quality. Chavis (2010) finds no significant relationship between villages having a female head and the amount of funds received within the World Bank-funded Kecamatan Development Project.
To create the subdistrict level indices for deservingness, social capital and information, I aggregate values from the village level, since there is no source for unique data at the subdistrict level. The subdistrict-level deservingness index similarly corresponds to the official program criteria for the WSLIC-2 project, looking to see if the villages in the subdistrict are poor, rural and suffering from water supply and sanitation problems.\textsuperscript{15} The other two indices mirror the village-level indices, although using the country rather than the district as the reference group.

\textbf{4 Methodology for Examining Participant Selection}

To examine the village and subdistrict characteristics predicting the selection of WSLIC-2 villages, I use a multilevel regression model. I do so for two reasons. First, as described above, I believe that subdistrict governments play a role in channeling development projects to villages. Using a multilevel model allows me to simultaneously include variables at both the village and subdistrict levels of analysis. Second, because of one particular selection criterion — the desire to locate multiple participating villages in the same subdistrict — there is spatiopolitical correlation among observations in the data. The presence of a participating village in a subdistrict makes all of the other villages in that subdistrict more likely to be program participants. From the perspective of the World Bank and the central government, the logic behind this criterion is that consultants and contractors can operate more efficiently if the sites for which they are responsible are proximate to one another. From a statistical point of view, the criterion means that each individual village is not an independent observational unit but rather is linked to the other villages surrounding it. Those villages that neighbor participating villages in the same subdistrict are, according to the program

\textsuperscript{15} The subdistrict poverty index uses the same variables as the village poverty index but is calculated at the subdistrict level (e.g. using the percent of families in the subdistrict who have electricity in their homes).
criteria, more likely to be included in the project than villages surrounded by non-participants. The multilevel model allows me to confront this lack of observational independence.\footnote{I prefer the term spatiopolitical correlation to the simpler term spatial correlation because this is an instance of spatial correlation bounded within political units.}

A multilevel model can incorporate information from both the village and subdistrict levels into one unified statistical model (Gelman and Hill 2006). The key claim here is that being in a particular subdistrict is one reason for a village to be more or less likely to participate in the program: being in a specific subdistrict \( j \) shifts the intercept of the curve representing the probability of program participation for a given village \( i \) in \( j \). In addition to allowing the intercepts to vary by subdistrict, the multilevel model allows me to simultaneously include both subdistrict level and village-level variables, giving us information on what factors make both subdistrict \( j \) and village \( i \) within subdistrict \( j \) more or less likely to be in the program. The multilevel model looks like this:

\[
Pr(y_{ij} = 1) = \logit^{-1}(\alpha_{j[i]} + X_{Ei}^t \beta + X_{Oi}^t \delta)
\]

\[
\alpha_j = \gamma + Z_{Ej}^t \theta + Z_{Oj}^t \rho + \epsilon_j
\]

where \( X_E, X_O, \beta, \) and \( \delta \) are vectors of economic and organizational characteristics at the village level and the associated coefficients. \( Z_E, Z_O, \theta, \) and \( \rho \) are vectors of economic and organizational data at the subdistrict level and the associated coefficients; \( \gamma \) is a constant and \( \epsilon \) is a subdistrict-level normally distributed error term, \( \epsilon \sim N(0, \sigma_{sub}^2) \).
5 Need and Voice: How Social Capital Predicts Development Project Participation

In table 4, I present results from a series of four nested multilevel models. The first column shows coefficient estimate from a varying-intercept model (where a random intercept is estimated for each subdistrict) with the village-level measure of deservingness as the only predictor. Deservingness is a positive and statistically significant predictor of village selection into the program.

In the second column, I add the other village-level predictors — the indices for social capital, information and leadership. The social capital, information, and leadership indices all predict participation in the expected direction; the social capital and information indices are statistically significant. The model indicates that, controlling for their level of deservingness, villages with more social capital or better access to information are more likely to be project participants.

In the third column, I add village-level interactions between deservingness and the three indicators of voice. The interactions reveal whether or not certain types of villages can call more attention to their deservingness. Figure 1 displays the effects of the different voice variables as they vary over levels of deservingness. For villages that do not score high on the deservingness measure, social capital increases their probability of being accepted for project participation — as compared to an undeserving village with no social capital, an undeserving village with high social capital is nine percentage points more likely to be a program participant.\(^{17}\) Among the most deserving villages, however, village-level social capital has no effect on the likelihood of program

\(^{17}\) As a point of comparison, going from the median level of deservingness (two on the six-point scale) to a fairly high level of deservingness (four points) corresponds to a 15 percentage point increase in the probability of participation. All substantive changes are calculated by simulating 1,000 sets of coefficients, estimating the change in probability for a change in a given variable while holding all other variables at their medians and then taking the average change in probability while using the distribution of estimated changes to establish a confidence interval.
participation. At the village level, therefore, social capital positively affects the likelihood of program participation only among undeserving villages. Some undeserving villages are able to rely on their social capital resources to bring about program inclusion.

At the low end of the deservingness index, it appears that information can marginally increase the likelihood that a village will become a project participant — the mean change in probability is four percentage points — but the 95 percent uncertainty range includes negative values and zero. At the high end of the deservingness index, information similarly lacks a clearly identifiable effect on the likelihood of project participation. The quality of village leadership is estimated to have a large positive effect for deserving villages, but this effect is estimated with significant uncertainty.

In the fourth column of table 4, I add subdistrict-level intercept predictors to the model with village-level interactions. The coefficient estimates on the subdistrict-level variables reflect the increase or decrease in the probability of WSLIC-2 participation for a village located within a subdistrict with particular characteristics. These predictors serve to explain the size of the random intercepts that have been included in all previous models.

The overall level of need within a subdistrict is not a significant predictor of the selection of villages in that subdistrict. Therefore, a deserving village in an otherwise undeserving subdistrict does not see its chances of program inclusion harmed by its neighbors, while an undeserving village in an otherwise deserving subdistrict does not see its chances of program inclusion increase. A subdistrict’s score on the index of social capital, however, does positively and significantly predict the participation of a village in that subdistrict in WSLIC-2. Figure 2 shows the way in which the probability of participation changes for villages with either high or low social capital scores that are located in subdistricts with either high or low social capital scores. At the low end of the deservingness index, villages that score high on the social capital index and are located in
subdistricts that similarly score high on the social capital index are 10 percentage points more likely to be WSLIC-2 participants than villages that score low on the social capital and are located in subdistricts that score low on the social capital index; the 95 percent confidence interval around this estimate is entirely positive. At the high end of the deservingness index, this difference increases to 12 percentage points, although it is estimated with more uncertainty. As can be seen in the figure, at the high end of the deservingness index, the level of social capital at the village level makes a negligible difference — rather it is the level of social capital at the subdistrict level that accounts for the difference in predicted probabilities. Therefore, among the set of deserving villages, it is those villages located in high social capital subdistricts that are more likely to be included in WSLIC-2. A subdistrict’s level of access to information is not a significant predictor of participation in the project.

The subdistrict-level social capital result speaks to the continued relevance of political organization at the subdistrict level in Indonesia when it comes to obtaining resources from higher levels of government. At the low end of the deservingness index, being either a village with a high level of social capital or else a village located in a subdistrict with a high level of social capital increases the probability of that village being selected by the government for participation in WSLIC-2. At the high end of the deservingness index, it is only subdistrict social capital that increases this probability.

To summarize, I have used a series of multilevel regression models in this section both to account for the role of subdistricts in the process of selecting villages for participation in the WSLIC-2 project and also to account for the peculiarity of the data-generating process whereby subdistricts that have one participating village are officially encouraged to have additional participating villages. The index of official program criteria is a significant predictor at the village level but not at the subdistrict level. At both levels, the indices of social capital are significant,
positive predictors of WSLIC-2 participation, suggesting that better-organized villages in better-organized subdistricts are able to lobby district governments to receive funding from the project. Among the least deserving villages, social capital at either the village or subdistrict level can marginally increase the probability of program participation. Among the most deserving villages, social capital at the subdistrict level plays an important role in facilitating program inclusion.

In the data, there is only slight evidence for the effects of information and leadership. At both the village and the subdistrict levels, increased access to information corresponds to a marginal increase in the likelihood of selection into the WSLIC-2 project, but the size of the increase is not statistically distinguishable from zero. Similarly, at the high end of the deservingness index, there is prima facie evidence that better village leadership leads to an increased probability of selection, but the change in probability between high and low levels of leadership quality is estimated with significant uncertainty.

**Alternative Explanations for the Social Capital – Project Allocation Association**

I argue that the empirical results support a demand-side explanation in which social capital either facilitates requesting project participation or else establishes a credible threat of sanction for program omission. In this section, I briefly explore two alternative explanations for the association between social capital and WSLIC-2 participation.

First, the decision makers involved in selecting project beneficiaries may be choosing villages with higher social capital because of the expectation, in line with much of the social capital literature, that the project will perform better in such villages and lead to better development outcomes. There are two reasons why the empirical results do not support this hypothesis. On the
one hand, such thinking on the part of decision makers cannot explain the subdistrict-level finding because subdistricts do not play a role in project implementation: district governments would not be making decisions based on the implementing capacity of the subdistricts. On the other hand, at the village-level, the fact that social capital provides explanatory leverage among the least deserving villages and not among the most deserving villages suggests that the association at the village level is due to high-social-capital communities pressuring decision makers rather than decision makers looking for the best implementers.

Second, one might argue that the association between social capital and project selection is due to a greater likelihood of application among high-social-capital villages. Unfortunately, I do not have data on application rates. However, the application was essentially costless — a single-page proposal — and during my fieldwork, I found no evidence that eligible villages had failed to apply. Also, among the most deserving villages, the distinction in selection rates occurs between villages in high- and low-social-capital subdistricts and not between high- and low-social-capital villages. If social capital was predicting differential application rates, we would expect to see greater differences in selection at the village level and not at the subdistrict level; if it were simply the fact of needing to be organized enough to apply, village level social capital should be sufficient.

7 Conclusion: Social Capital as a Political Resource

At a macro-level, there is evidence that social capital leads to increased policy responsiveness on the part of government. I provide novel, micro-level evidence that this policy responsiveness to social capital extends to the allocation of development projects. I argue that communities with higher levels of social capital will have better ex ante information about projects, better ex post information about project distribution and a more credible threat of ex post
punishment in the event that the government fails to channel resources to the community. In order to provide evidence of this link between social capital and resource allocation, I have looked at the patterns of village selection in a development project in Indonesia that aimed to reach poor, rural communities with inadequate water and sanitation systems.

The data from the WSLIC-2 project show that social capital increases the probability of being selected for project participation, after controlling for the extent to which villages meet the official project criteria. Among undeserving villages, those villages with high levels of social capital were slightly more likely to be included in the list of participating villages. Among deserving villages, those villages located in subdistricts with high levels of social capital were more likely to be selected for project participation. These results contrast the growing conventional wisdom about Indonesia that local organizational capacity does not matter for government service delivery.

The significant results at the subdistrict level highlight the continued relevance of subdistricts as a unit of political organization within Indonesia. Although the de jure institutional power of subdistricts decreased in the wake of Indonesia’s 2001 decentralization, the de facto role that they play in channeling requests from villages to districts remains intact, as evidenced both by interview data and the statistical results. Given the massive legal changes that are part of Indonesia’s program of decentralization, this persistent informal power is notable.

As previous authors have argued, social capital can increase the likelihood of the government providing services to a particular community. I observe such an outcome in this case as well. However, the process that results in this increase in services appears most successful among the set of villages recognized as deserving by the program criteria. By and large, the allocation of WSLIC-2 funding was in line with its targeting: villages lacking social capital resources were losing out to other villages meeting the technical criteria, not to villages that were
completely undeserving. But the influence that social capital plays in allocating anti-poverty
funding should serve as a reminder to those interested in development that increasing the capacities
of local actors to articulate their needs and lobby on their own behalf is an important aspect of
helping governments to better serve their citizens.
References


### Tables and Figures

<table>
<thead>
<tr>
<th>Governing Level</th>
<th>Role</th>
</tr>
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<tbody>
<tr>
<td>National</td>
<td>Ministry of Health selected participating provinces</td>
</tr>
<tr>
<td>Province</td>
<td>Selected districts to participate</td>
</tr>
<tr>
<td>District</td>
<td>Made proposals to provincial government for inclusion</td>
</tr>
<tr>
<td></td>
<td>Selected villages to participate</td>
</tr>
<tr>
<td>Subdistrict</td>
<td>No official role</td>
</tr>
<tr>
<td></td>
<td>Clustering of participant villages in subdistricts</td>
</tr>
<tr>
<td></td>
<td>encouraged</td>
</tr>
<tr>
<td></td>
<td>Passed along information about the program to villages</td>
</tr>
<tr>
<td>Village</td>
<td>Made proposals to district government for inclusion</td>
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Table 1: Roles of Different Levels of Government in Participant Selection
<table>
<thead>
<tr>
<th>Index</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Factor Score</td>
<td>Percentage of Families in Poorest Welfare Category</td>
</tr>
<tr>
<td></td>
<td>Percentage of Families Working in Agriculture</td>
</tr>
<tr>
<td></td>
<td>Percentage of Families with Electricity</td>
</tr>
<tr>
<td></td>
<td>Percentage of Families with Permanent Housing</td>
</tr>
<tr>
<td></td>
<td>Quality of Main Road in Village</td>
</tr>
<tr>
<td></td>
<td>Year-Round Accessibility of Main Road</td>
</tr>
<tr>
<td></td>
<td>Presence of Landline Phone in Village Number</td>
</tr>
<tr>
<td></td>
<td>Number of Televisions per Family in Village</td>
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</tbody>
</table>

Deservingness
- Being Rural
- Water from Natural Source (e.g. rain, river)
- Only Communal or No Toilets
- Outbreak of Diarrhea in Past Year
- Greater Poverty Score than Median Village in District

Social Capital
- Rotating Credit Association (*Arisan*)
- Community Self-Help Tradition (*Gotong Royong*)
- Customary Village Institutions (*Adat*)
- Legal Organization
- More Mosques per Capita than Median Village in Country
- More Non-Islamic Religious Institutions per Capita than Median Village in Country
- Ethnically Homogenous Population
- Absence of Conflict in Past Year

Access to Information
- Access to Newspaper
- Closer to Market than Median Village in District
- Presence of a Market
- Closer to Post Office than Median Village in Country

Village Leadership
- Village Head with University Degree
- Male Village Head

Table 2: Components of Village-Level Indices. Poverty factor score is calculated using principal components analysis; all other indices are additive with one point awarded for each characteristic that is present.
<table>
<thead>
<tr>
<th>Index</th>
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<tbody>
<tr>
<td>Deservingness</td>
<td>More than Median Number of Rural Villages among Subdistricts</td>
</tr>
<tr>
<td></td>
<td>Modal Means of Villages Accessing Water is from Natural Source</td>
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<tr>
<td></td>
<td>Modal Sanitation Method of Villages is Communal or No Toilets</td>
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<td>Outbreak of Diarrhea in Any Village in Past Year</td>
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<td>One or More Deaths from Diarrhea in Past Year</td>
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<td>Greater Poverty Score than Median Subdistrict in District</td>
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<td>Social Capital</td>
<td>More Rotating Credit Associations (<em>Arisan</em>) than Median Subdistrict in Country</td>
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<td>All Villages Have a Community Self-Help Tradition (<em>Gotong Royong</em>)</td>
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<td>Absence of Conflict in Past Year</td>
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<tr>
<td>Access to Information</td>
<td>More than Half of Villages Have Access to Newspaper</td>
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<td>Closer to Market than Median Subdistrict in Country</td>
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<tr>
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<td>Closer to Post Office than Median Subdistrict in Country</td>
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Table 3: Components of Subdistrict-Level Indices. All indices are additive with one point awarded for each characteristic that is present.
### Village-Level Predictors

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### Village-Level Interactions

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### Subdistrict-Level Predictors

<table>
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</table>

| N                     | 8,066      | 7,923      | 7,923      | 7,923      |
| Subdistricts          | 638        | 638        | 638        | 638        |
| AIC                   | 7,253      | 7,120      | 7,099      | 7,096      |
| Percent Correctly     | 0.82       | 0.82       | 0.82       | 0.82       |
| Predicted             | (0.81, 0.83)| (0.82, 0.83)| (0.82, 0.83)| (0.82, 0.83)|
| Proportional Reduction in Error | 20.2 | 20.5 | 20.5 | 20.4 |

Table 4: Logistic Regression Models Predicting the Probability of Participation in WSLIC-2. * - p < 0.10; ** - p < 0.05; *** - p < 0.01. Standard errors in parentheses. All models include a subdistrict-level varying intercept and are estimated using the lmer function in R. The expected percent correctly predicted statistic and 95 percent confidence interval are calculated according to the procedure outlined in Herron (1999) using 1,000 simulated sets of coefficient estimates. The percent reduction in error statistic is calculated using the mean expected percent correctly predicted statistic.
Figure 1: Predicted Probabilities for Participation in WSLIC-2. Based on coefficient estimates from model (3) in table 4. All other variables held at their medians.
Figure 2: Predicted Participation Probabilities. Based on coefficient estimates from model (4) in table 4. The village-level social capital index takes on the values of 2 (low) and 5 (high); the subdistrict-level social capital index takes on the values of 1 (low) and 6 (high). All other variables held at their medians.