

Contributions in Heterogeneous Communities: Evidence from Indonesia

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Abstract

This paper investigates the determinants, including ethnic diversity and central government transfers of monetary and time contributions to community organizations using household-level data from Indonesia. Community organizations in developing countries can play a central role in providing public goods and services, redistributing income and organizing economic production among its members where formal markets are not well developed. We present a framework in which ethnic diversity affects contributions through three channels: (1) diversity of preferences (2) transaction costs, and (3) interhousehold preferences in the form of altruism towards one's ethnic group. Our empirical findings provide evidence that ethnic diversity has a negative and significant effect on contributions, and the prevalence of community organizations. In addition, households are more likely to contribute time when a larger share of their ethnic community receives benefits from the community organization. We find evidence that government spending crowds out private monetary contributions, with a less robust effect on time contributions.

1. Introduction

Community organizations can play a central role in the development process. Where markets and states face limitations, community-based institutions provide public goods and services, organize economic production, and income redistribution. Although there is a great deal of interest in the determinants of collective action in developing countries, very little is known about the transfer of resources to community-based institutions. In this paper, we investigate monetary and time contributions to community organizations using household-level data from Indonesia.

This paper makes three important contributions: First, this study advances existing knowledge on private transfer flows to community organizations in developing countries. This remains a relatively understudied area within the private transfer literature. Much of the existing work on income transfers in developing regions focuses on transfers among family members (Ravallion and Dearden, 1988; Cox and Jimenez, 1992; 1990). However, community-level institutions are of considerable importance in consumption smoothing and risk sharing in low-income environments (Alderman and Paxson, 1992).

Second, we investigate the effect of ethnic diversity on private transfers to community organizations. Many developing countries are composed of diverse ethnic, cultural and religious groups. With the trend towards a greater reliance on local institutions and sub-national governments to provide local goods and services, the challenge remains to better understand how ethnic diversity and other forms of heterogeneity affect contribution patterns. This paper joins a growing number of studies that examine the link between ethnic diversity and economic outcomes (Alesina, Baqir and Easterly, 1999; Alesina and LaFerrara; Collier, 2000; Easterly and Levine, 1997; Miguel, 2000). In addition, we explore a related question: How does ethnic diversity affect the prevalence of community organizations?

Finally, the results from this study can inform broad debates on the effect of government expenditure on private transfers to community-level institutions. Do government transfers crowd out private contributions? The developing country setting used in this paper offers a unique opportunity to revisit this question in an environment where public transfers tend to be limited in scope, and where few tax-related incentives for transfer behavior exist. Previous studies rely on data obtained mainly from developed countries (See Clotfelter, 1985; Kingma, 1989; Rose Ackerman, 1996; Weisbrod, 1988). There is very limited evidence on the relationship between government transfers and private resource flows in developing countries.¹

Why do households contribute to community organizations? Economic theory provides a framework for understanding transfer patterns at the community level. The existing literature emphasizes two classes of models that can explain contributions of money and time: altruism and exchange. With altruism, households care about other members of the community. Under exchange, households transfer resources because they benefit directly from their contributions, and enjoy the goods and services produced by community organizations. Actual motivations for giving may be quite complex. For example, “warm glow”

¹To our knowledge, this is the first study to examine crowding out issues for transfers to community organizations in a developing country context using household-level data. Wong et. al (1998) use organization-level data from Singapore to study transfers to community organizations. The authors find some evidence that government transfers crowd out private contributions.

motives (Andreoni, 1989, 1990), civic pride and the desire to enhance one’s standing within the community (Glazer and Konrad, 1996) may also affect the household’s decision to give to a community organization.

Within altruism and exchange-based models, community-level variables can influence the household’s transfer decision. We develop a model in which ethnic diversity can affect contributions to community organizations through three channels. The first channel can be summarized as the “diverse preferences” argument (Alesina et al, 1999). It may be difficult to define objectives towards the financing of local public goods where the community members have diverse preferences due to ethnic diversity, and other forms of heterogeneity. Second, ethnic diversity may increase the transaction costs of community-level production. If trust, social sanctions and reciprocity norms are cultivated at the group level, these are less likely to be effective in diverse environments. Ethnic diversity may also be related to the absence of social cohesion, and in some extreme cases, civil violence, which makes it difficult to organize contributions at the community-level. Finally, ethnic diversity can affect contributions if households belonging to the same ethnic community are altruistically-linked (Becker, 1981; Grimard, 1997; Luttmer, 2001).

Our model explores how ethnic diversity can have a negative impact on contributions. It is important to recognize that heterogeneity at the community level may also be positively associated with contributions. Within ethnically diverse settings, community organizations provide public goods when governments and markets fail to satisfy the heterogeneous needs of consumers. Weisbrod (1988) advances this view as a dominant explanation for differences in the size of the nonprofit sector across countries.²

The main empirical findings from Indonesia provide support for an exchange-based model of community transfers. Households transfer resources in a manner that reflects the benefits they receive from the community organization. The results suggest that community-specific variables are of considerable importance. We find that ethnic diversity has negative effect on both monetary and time contributions, as well as on the prevalence of community-based organizations. In addition, the data allow us to explore potential mechanisms through which ethnic diversity influences contributions. For monetary contributions, diverse preferences and transaction costs emerge as important explanations for the negative effect of ethnic diversity. However, results on time contributions are consistent with inter-household preferences. Households are more likely to contribute time when a larger share of their ethnic community receives benefits from the community organization. Results on government spending yield important insights. Government transfers appears to crowd-out private monetary contributions, with less convincing evidence on time contributions.

Indonesia provides a rich setting in which to explore transfers to community organizations. Many of the communities in this data set have developed important traditions of community participation. In addition, Indonesia’s population of close to 200 million exhibits tremendous cultural and ethnic diversity. There are relevant lessons for other large

²In 1982, private contributions to the non-profit sector were ten times higher in the United States than in Japan. These differences cannot be explained by per capita income differentials. Instead, it is likely that the nonprofit sector in the United States plays an important role in satisfying demand for collective goods, which the government may not be able to provide within heterogeneous environments. Diverse preferences lead to a wide range of opinions on what type of public goods to provide, and within democratic systems of government, the supply of public goods reflect the preferences of the median voter only. Weisbrod (1988:27)

countries with diverse ethnic and cultural groups, including the United States, Russia, India and Nigeria.

The rest of the paper is organized as follows: Section 2 provides a description of the setting. In Sections 3 and 4, we present the theoretical model and its implications. Section 5 discusses the data sources. Section 6 outlines the empirical framework. In Sections 7 and 8, we present the results and conclusions.

2. The Setting: Community Organizations in Indonesia

Indonesia's national motto, "Unity in Diversity" makes reference to its heterogeneous linguistic and ethnic composition. The country's official language is Bahasa Indonesia. However, more than 668 other languages and dialects are also spoken. The major languages spoken often belong to distinct ethnic groups. These languages include Javanese (45 percent of the population), Sudanese (14 percent), Madurese (7.5 percent), coastal Malays (7.5 percent), others (26 percent). In addition, about 2 million inhabitants also speak several Chinese dialects. An independent country, since August 17th 1945, Indonesia's ethnic groups inhabit diverse ecological environments. The country is made up of over 13,000 islands, ranging in size, population density and resource endowments.

An early observer notes the importance of ethnicity in the Indonesian context: "Regardless of the political settlement effected in Indonesia in the near future, the social and ethnic differences of its population will continue to constitute a major problem in the political and economic development of the area" (Van Der Kroef, 1950:450). Until recently, rates of regional migration in Indonesia were relatively low (Hugo, 1982). Geographical barriers make transportation between regions very difficult. In addition, land markets are not well-developed in many areas. Since the early 1990s, however, there has been a rising trend in mobility.³ Investments in road networks and other transport infrastructure have improved the ease of movement across regions. Consequently, ethnic groups with distinct languages, customs and traditions (*adat*) have moved towards greater economic and social interaction.

The scope of government involvement in communities has also grown since independence. The "Oil Boom" of the 1970's induced large increases in central government revenue. Under the INPRES Desa (Village Development Program), the central government transferred over 20 percent of its development budget to communities for the construction of schools, health clinics, roads, irrigation and public works. Official government literature during this period emphasizes *gotong royong*, or community participation as a central part of a national development strategy (Bowen, 1986). Communities, in turn, were expected to provide volunteer labor, building materials and money for use with central government transfers.

One controversial aspect of government policy during this period was the promotion of a uniform system of community organization. This system allows us to study patterns of contributions because organizations are comparable across regions. In our data, households may contribute time, money or materials to an irrigation association (*subuk*), a neighborhood security arrangement, rice co-operatives and neighborhood health posts (*posyandu*)

³The government has also been involved in relocating families through its Transmigration Program from the highly populated islands of Java, Bali, and Madura to less populated islands. Between 1969 to 1989, some 730,000 families were relocated under the Transmigration program.

- all these groups can be classified as community-level organizations. A notable example, *posyandu* relies on salaried government staff and volunteer workers to deliver key health services to the community (Frankenberg and Thomas, 2001).

It is also important to note that there is tremendous variation in the effectiveness and functioning of organizations across communities. One explanation for this variation is that different ethnic groups have evolved various systems of organizing community life. Bowen (1986) and Warren (1993) argue that historical traditions of community organization among various ethnic groups in Indonesia affect time and monetary contributions towards the provision of community-level services. In addition, household variables, the distribution of benefits across social and economic groups, and the quality of community leadership emerge as important factors that affect contributions.

3. Model

In this section, we model the household's decision to contribute to a community organization. The model has three main features: First, it allows both self-interested and inter-household preferences to affect the household's contribution decision. Second, it provides a framework to analyze the impact of diversity on contributions. Third, it enables us to investigate the effects of government involvement on private contributions, at the community-level.

Consider a household i that makes a transfer, t_i to a community organization. We assume that there are N households in the village, such that $i \in \{1, \dots, N\}$. Community organizations provide services that can be enjoyed by all households.⁴ The services received by household i are modelled as a local public good.

The utility to household i , U_i is given by

$$U_i = U_{i_S} + U_{i_A} \quad (3.1)$$

where U_{i_S} is the utility from self-interest and U_{i_A} is the utility from altruism towards others.

The utility of household i from self interest is given by

$$U_{i_S} = S^\alpha (1 - l_i) + c_i^\beta \quad (3.2)$$

where S denotes the amount of services obtained from the community organization, l_i is the preference distance between household i 's most desired type of services and actual services received, and c_i is private consumption. We assume that utility is concave in services, and in the consumption good such that $\alpha, \beta \in (0, 1)$.⁵ The framework for the diversity of preferences here draws upon the model presented in Alesina et. al (1999).

Household i may also care about the utility of others. Such interpersonal effects can manifest themselves as altruism, including the utility of others in the household's objective function. The utility of household i from altruism is given by

$$U_{i_A} = \sum_{j \neq i} w_{ij} (X_i, X_j) U_{j_S} \quad (3.3)$$

⁴Neighborhood security, neighborhood improvement are examples of such services. Community organizations may also provide excludable services such as health care and access to credit.

⁵In addition, we assume that income of the median voter is not too large so that at equilibrium, she will not be the sole contributor towards the public good.

where $w_{ij}(X_i, X_j) \geq 0$ denotes the weight that household i places on the utility (from self-interest) of household j and U_{jS} is household j 's utility from self-interest.

The consumption of the private good, c_i is equal to income, y_i less transfers to the community organization, t_i :

$$c_i = y_i - t_i \quad (3.4)$$

The timing is as follows: (1) Households make their contributions to the community organization, and (2) The community organization produces services.

We assume that the community organization produces the type of services that are most preferred by the median voter. This assumption is reasonable in our environment because leaders of community organizations decide on the type of services provided. Organization leaders are selected by community members, and this selection process is likely to reflect the median voter's preferences.⁶

The services produced by the community organization depend on total amount of contributions in the community, government involvement, and costs of production. We model the production of services as follows:

$$S = \begin{cases} f\left(\sum_{j=1}^N t_j, G\right) & \text{if } \theta < \sum_{j=1}^N t_j \\ 0 & \text{otherwise} \end{cases} \quad (3.5)$$

where t_j denotes the contribution of household j to the organization, G denotes the level of government involvement through monetary transfers and the provision of infrastructure, and θ represents the transaction costs of organization formation at the community-level. We assume that services are increasing in the level of household contributions and government transfers ($f_1 > 0, f_2 > 0$). In addition, the production function is assumed to be concave in household transfers.

The presence of transaction costs, θ in the production of community-level services allow us to explore the formation and continued existence of community organizations. Low levels of trust, the absence of a village co-operation, ethnic conflict and communication difficulties arising from ethno-linguistic diversity in a given community may impose high transaction costs.

We now solve the model using backward induction. For any positive amount of services, S , the type of services produced by the community organization is determined by the median voter. Household i chooses its level of contributions based on this assumption and solves the following problem:

$$\max_{t_i} U_i = S^\alpha (1 - \widehat{l}_i) + (y_i - t_i)^\beta + \sum_{j \neq i} w_{ij}(X_i, X_j) \left[S^\alpha (1 - \widehat{l}_j) + (y_j - t_j)^\beta \right] \quad (3.6)$$

where \widehat{l}_i is the distance of the household i from the ideal type of the median voter. The household's first order condition with respect to t_i is given by

$$\left[\alpha S^{\alpha-1} f_1 (1 - \widehat{l}_i) - \beta (y_i - t_i)^{\beta-1} \right] + \sum_{j \neq i} w_{ij}(X_i, X_j) \alpha S^{\alpha-1} f_1 (1 - \widehat{l}_j) = 0 \quad (3.7)$$

⁶One potential criticism of this assumption is that "one person-one vote" rule may not apply where contributions are concerned. It is possible that households who contribute larger amounts may be more influential in determining the types of services.

The first term between brackets reflects direct self-interest, while the second term reflects interpersonal effects.

4. Implications of the Model

4.1. The Effects of Ethnic Diversity on Giving

Ethnic diversity can affect contributions through the diversity of preferences, transaction costs of organizing and interpersonal considerations, in the form of altruism towards one's own ethnic community.

Diverse Preferences: Comparative statics of the household would imply

$$\text{sign} \frac{\partial t_i}{\partial \widehat{l}_i} = \text{sign} \left(-\alpha S^{\alpha-1} f_1 \right) \quad (4.1)$$

Hence $\frac{\partial t_i}{\partial \widehat{l}_i} < 0$. A possible source for the polarization of preferences is ethnic (language) composition of the community. As the ethnic diversity of the community increases, a larger fraction of people will have high \widehat{l}_i . Thus, when the preferences are polarized, a larger fraction of people will find the type of services offered by the community organization undesirable. This has a negative effect on the probability and level of the transfers to the community organization.

Transaction Costs: With high transaction costs in a community, the formation of community-level organizations becomes more difficult. Community-level production depends on trust and communication among groups. Ethnically diverse communities may have low levels of trust and reciprocity norms, if these attributes are cultivated within ethnic groups. Furthermore, it may be more costly to produce services in the presence of communication barriers arising from ethno-linguistic diversity. High transaction costs will have a negative effect on the probability of giving and organization existence.

Interhousehold Preferences: The extent to which altruistic preferences lead to variations in the level of support for community services depends on differences across households in the correlation between the weight that household i places on the utility of household j and the marginal benefit of i 's contribution to j . In particular, support for community services and hence the level of contributions is higher among individuals for whom this correlation is larger. Ethnic diversity may influence contributions if the weight that household i places on the utility of household j is higher when j belongs to i 's ethnic group. The marginal benefit of i 's contribution to household j is positive if j receives community services. Thus, we expect that household i will increase its contributions as the number of similar households who benefit from the services of the organizations increase. For time contributions, interpersonal effects may affect the transfer decision if households prefer interactions with others who are similar to themselves in terms of income and ethnicity as modelled by Alesina and LaFerrara (2000).

Hence, both the probability and level of transfers that a household makes will increase as the number of similar households in the community increases. Altruism towards similar households may also result in lower levels of contributions in ethnically diverse communities, where the household's ethnic group is less likely to benefit from the household's contribution.

4.2. The Effects of transfers from central government

The comparative statics of the household imply

$$\text{sign} \frac{\partial t_i}{\partial G} = \text{sign} \left(\alpha (\alpha - 1) S^{\alpha-2} f_1 f_2 + \alpha S^{\alpha-1} f_{12} \right) \quad (4.2)$$

If household transfers and government expenditure are substitutes in the production of community services ($f_{12} < 0$), then government involvement will crowd out contributions, $\frac{\partial t_i}{\partial G} < 0$. If household contributions and government involvement are complements ($f_{12} > 0$), then the sign of $\frac{\partial t_i}{\partial G}$ is ambiguous.

5. Data

We test the implications of our model using data from Indonesia. The data is based on the second wave of the Indonesia Family Life Surveys (IFLS2), conducted by RAND and the University of Indonesia in 1997/98, and represents 83 percent of the Indonesia population.⁷ The second wave is composed of about 7500 households. In addition, we use a separate Community and Facility Survey, which measures infrastructure, availability of services and other community characteristics for about 314 communities where households reside. Table 1 provides an overview of the household and community variables used in our analysis.

The IFLS2 data is particularly well-suited for the study of transfers to community organizations. To our knowledge, there are no comparable data sets (from developed or developing countries) that provide household-level evidence on transfers to community organizations and benefits received from a representative national sample of households. Table 2 presents the transfer patterns to particular organizations. In our data, households can contribute cash, materials and time to a given community organization. Table 2 presents the ten major types of community organizations in our sample. These organizations are largely economic in orientation. In this way, our focus differs from other studies that have examined participation in social, religious and political groups.⁸

Over 40 percent of households contributed money or materials to a community organization. The mean total monetary contribution in the survey year for households is about 21150 rupiah, about 3 percent of total annual household expenditure (standard deviation=93435 rupiah). Time contributions are widespread in our sample - about 80 percent of households contributed time to an organization in the community. It is important to note that surveys in developed countries have found that households are more likely to contribute money to community organizations (rather than time contributions, as we have

⁷See Frankenberg and Thomas (1999) for a detailed description of the IFLS surveys. The first wave of the survey (IFLS1), which was conducted in 1993/94 is not fully appropriate for our study of transfers to community organizations for two reasons. First, the first wave does not contain information on the ethno-linguistic identity of the household. Second, IFLS does not provide any information on the types of community organizations that receive transfers from households.

⁸Alesina and LaFarrera (2000) and LaFarrera (2001) examine participation in social and religious groups. Although these may be of considerable importance in our sample, the IFLS data do not provide information on religious and social contributions.

found). Table 2 presents summary statistics on benefits received from the community organization. About 30 percent of households report that they received benefits from community organizations.

The IFLS2 data allow us to investigate the extent to which giving and receipt patterns vary across households. From the onset, it is important to note that it may be difficult to measure all the benefits that households receive from organizations in an accurate manner Clotfelter (1992). Benefits may not be tangible goods and services that can be observed by the researcher (such as membership rights and a sense of belonging in the community), and may be realized over a long-term horizon.

5.1. Ethnicity Variables

Following our theoretical model, we set out to examine the impact of ethnicity on the household’s decision to contribute to the community organization.⁹ To capture ethnic diversity at the community level, we construct an Ethnolinguistic Diversity Index (EDI):

$$EDI_k = 1 - \sum_i (\text{share of ethnolinguistic group } i \text{ in community } k)^2 \quad (5.1)$$

The Ethnolinguistic Diversity index is constructed using household level data.¹⁰ This index of ethnic diversity captures the probability that two randomly selected households belong to different ethnic groups. This measure of ethnic diversity has been used widely in the existing literature (Alesina et. al, 1999; Easterly and Levine, 1997; Miguel, 2000). When this index is close to zero, it indicates that most households belong to the same ethnic group. In contrast, when the index approaches 1, it means that households in a given community belong to many different ethnic groups. The ethnic diversity index is used in our analysis to measure the effects of diverse preferences towards community services, and transactions costs of community-level production on contributions.¹¹

The share of village population from household i ’s ethno-linguistic group that receives benefits from community organizations is an important variable in our analysis. This variable allows us to test whether inter-household preferences in the form of altruism towards one’s own ethnic group are relevant in our environment. Although the share of ethnic group i with benefits reflects the distribution of benefits in a given community, it is essentially a household-specific variable in the sense that its value will vary across households within the same community. This variable is constructed as follows:

⁹It would also be interesting to study the effect of religious heterogeneity on contributions. Unfortunately, the IFLS instruments contain only limited information on religion.

¹⁰The IFLS2 data contains direct questions on the main language spoken at home. Appendix A details the linguistic groups in our data. We used this variable to construct various ethno-linguistic categories. More detailed information on ethnic affiliation is not available for Indonesia, as questions on ethnicity have been excluded from the national census.

¹¹We check the reliability of our household-based measure of ethnic diversity against limited data on ethnic composition available in the Community survey. The community-based ethnicity variable is highly and statistically significantly correlated with our household-based measure (correlation coefficient=0.67). This community-based measure of ethnicity relies on information obtained from village leaders on the population share of the three largest ethnic groups in the community.

$$\text{Share of the ethnic group } i \text{ with benefits} = \frac{\# \text{ of households from group } i \text{ with benefits}}{\text{Total number of households in community } k} \quad (5.2)$$

In addition, we consider the share of household i 's ethnic group in total population, and the population share of the largest ethnic group in a particular community (a measure of ethnic dominance) as alternative measures of ethnic composition.

5.2. Other Community Variables

Community characteristics used in our analysis include government involvement in the community, the supply of community services, village infrastructure and share of households in village which receive benefits. Our measure of government involvement is per capita expenditure (measured in rupiah) from the central government. This data is available at the municipality (kabupaten) level and was obtained from the *Village Government Financial Statistics 1998*, a report published by the Indonesian Central Bureau of Statistics (*Badan Pusat Statistik or BPS*).

The supply of community services is defined as the number of social activities and services that exist in a village. The supply of community services is constructed using the Community-Facility Survey. These services are mostly non-economic in nature, and differ from the community organizations in our sample of households. To account for regional variation, we construct province dummies.

Province dummies reflect ethno-linguistic variation and capture the level of urbanization, population density and other differences across regions. For most of the sample, we observe high rates of giving where ethnic diversity is low. Table 3 summarizes some of this information. For example, the highest rate of giving is observed in Yogyakarta, (about 74 percent of households report making a monetary contribution to a community organization). Yogyakarta, a province where Javanese is the main language spoken also has a relatively low ethnic diversity score (0.15). In contrast, North Sumatra and South Sumatra represent greater ethno-linguistic variation, and also display low levels of giving to community organizations. Jakarta (the capital city of Indonesia) on the other hand has high levels of giving behavior, although it represents tremendous ethno-linguistic variation. About 60 percent of households report making a transfer to a community organization in Jakarta. Our data on the availability of community services also indicates that Jakarta differs in important ways from the rest of Indonesia. For this reason, we exclude Jakarta from our empirical analysis.

5.3. Household Variables

The existing literature on private transfers emphasizes the role of household variables. We include variables that capture the socio-economic circumstances of the household including age, years of schooling, marital status, religion (Muslim=1), household size, number of children, per capita household expenditure and an indicator variable for receipt of benefits (received benefits from community organization=1).

5.4. Organization Variables

We also include organization indicators in organization-level regressions to control for unobserved organization-specific attributes (such as leadership and years of existence). In addition, households provide reports on whether a given organization occurred in the community or not. This occurrence variable admittedly captures not just organization existence, but also households' knowledge of its existence.

6. Empirical Specification and Methods

6.1. Contributions to Community Organizations

This section presents an empirical model of the household's decision to contribute money, materials and time to a specific organization in its community. Let i index households, j index community organizations, and k index communities. We assume that the "latent variable" measuring the net expected utility to household i , from contributing to a community organization j in community k , can be written as:

$$Y_{ijk}^* = \alpha + \beta H_i + \gamma V_k + \phi O_j + \varepsilon_{ijk} \quad (6.1)$$

where H_i represents a vector of household characteristics including head's age, sex, marital status, religion, years of schooling, household size, number of children in the household and per capita household expenditure; V_k is a vector of community characteristics (ethnic diversity, transfers from central government as well as other community characteristics). O_j denotes organization j 's characteristics, and ε_{ijk} is the error term.

We do not observe the "latent" variable Y_{ijk}^* but only the choice made by the household, which takes value 1 if household contributes to the community organization (i.e. Y_{ijk}^* is positive), and 0 otherwise.

$$\begin{aligned} P_{ijk} &= 1 \text{ if } Y_{ijk}^* > 0 \\ &= 0 \text{ if } Y_{ijk}^* \leq 0 \end{aligned} \quad (6.2)$$

We have data on the transfers made to community organizations, but it is important to recognize that transfers realized do not represent Y_{ijk}^* . Economic theory suggests that the consumer makes a marginal benefit-marginal cost calculation when deciding on the level of transfers, and hence Y_{ijk}^* represents the difference between marginal benefits and marginal costs.

In our empirical specifications, we include a rich set of household, community and organization variables. However, there are important sources of unobserved heterogeneity across households. For example, when we observe that a household receives benefits from the community organization, this may proxy for unmeasured household attributes such as civic pride and social networks, and would lead to a spurious link between benefits received and contributions to community organizations. To address this possible problem with endogeneity, we instrument for household's receipt status in some specifications.

It may also be difficult to fully capture all the community variables that affect monetary and time contributions. Village characteristics such as civic traditions, quality of leadership and costs of producing services, which may be unobserved can also affect transfer patterns.

Unobserved variables may be correlated with measured community characteristics, leading to bias in our estimated coefficients. The direction of the bias will depend on the correlation between observed and the omitted variables, as well as the true impact of observed variables on contributions.

In order to address such problems with unobserved heterogeneity at the village and household level, we model the error term, ε_{ijk} in equation 6.1 to include a community-specific error term v_k , a household-specific error term h_i , as well as a random error term, e_{ijk}

$$\varepsilon_{ijk} = v_k + h_i + e_{ijk} \tag{6.3}$$

In our empirical analysis, we deal with unobserved heterogeneity by adopting a random-effects specification. The random-effects specification provides consistent and efficient estimates, given that the community effect, or the household effect in the error term is uncorrelated with the regressors. Our second approach involves a community fixed-effects specification. The fixed-effect estimation controls for unobserved community characteristics by using within-community variation. This eliminates all village-specific variables and permits a closer examination of household attributes.

6.2. Existence of Community Organizations

Our model suggests that in the presence of large transaction costs (θ high), an organization is unlikely to be formed in a village. The empirical specification below allows us to analyze the determinants of a given organization's existence in a community:

$$D_{jk} = \alpha + \beta V_k + \gamma O_j + u_{jk} \tag{6.4}$$

where

$$\begin{aligned} D_{jk} &= 1 \text{ if organization } j \text{ exists in community } k \\ &= 0 \text{ otherwise} \end{aligned} \tag{6.5}$$

where α represents the constant term, V_k captures community characteristics that affect the demand for community organizations, O_j denotes organization characteristics, and u_{jk} is the error term. Central government transfers may target certain communities based on some observed, and unobserved characteristics (Pitt, Rosenzweig and Gibbons, 1993). For example, where government transfers are directed towards communities with low levels of community production, our estimates of the effect of government involvement will be biased downward. To deal with the potential endogeneity of government transfers, we adopt a two stage least squares specification where we instrument for government transfers per capita. Valid instruments are variables that are correlated with government spending, but uncorrelated with the factors that affect community-level production.

7. Results

7.1. Aggregate Regressions

The results presented in this section capture the probability that the household contributes to **at least one** organization, as a function of household and community characteristics. In section 7.3, we examine the household decision to contribute by organization type, which allows us to address unobserved heterogeneity across households and organizations.

7.1.1. Contributions of Money and Materials to Community Organizations

Table 4 presents reduced form logit estimates. The dependent variable is equal to one if the household contributes money or materials to at least one organization in the community.

From our results, a clear picture of the household-level determinants of monetary contributions emerges. Higher income households (measured by per capita expenditure) are more likely to contribute to community organizations (column 1). However, in contrast to studies from developed countries, a household’s economic position has a relatively small impact on the probability of giving. A ten percent increase in household’s per capita expenditure in rupiah increases the probability of giving by about 0.6 percent. Educational attainment is positively associated with the incidence of a monetary transfer to the community organization and statistically significant. Male headship and household size are also positively associated with monetary contributions. The presence of young children (under 14) in the household has a negative and statistically significant impact on the probability of giving. We also find that urban households are significantly more likely to contribute money (starting at the mean, the probability of giving is about 6 percentage points higher for urban households). Age does not have a statistically significant effect on monetary contributions. Marginal effects are shown in Table 6.¹²

The household’s receipt of benefits from the community organization is found to have a positive and statistically significant impact on giving. We argue that this result provides support for an exchange based model of transfer behavior, with households contributing when they receive benefits from the community organization. This effect is substantial - a change in a household’s receipt status (as reported by the household) increases the probability of giving by about 40 percent.

How does ethnic diversity affect monetary contributions? Consistent with our model, the ethnic diversity index has a negative and statistically significant effect on the probability of giving (Table 4, column 1). A move from complete ethnic homogeneity to complete heterogeneity in a community, (which represents an increase from 0 to 1 in the ethnic diversity index) decreases the probability of giving by 11 percentage points. We find the results on ethnic diversity to be sizeable, when compared to other significant determinants of contributions. Starting at the mean, a ten percent increase in the ethnic diversity index decreases the probability of giving by about 0.4 percentage points.

Results on the ethnic diversity index are robust across specifications. In particular, the coefficient on the ethnic diversity index remains negative and statistically significant when we include community random-effects (column 2). In column 3, we explore the possibility

¹²Marginal effects are evaluated at the sample means for continuous variables, and reflect a change from 0 to 1 for discrete variables.

that the household's report on the receipt of benefits may be correlated with unobserved community attributes such as leadership and traditions of community co-operation. To address the potential endogeneity of the household's receipt status, we adopt a two-stage least squares specification. Our instrument for receipt status is the number of family-related sources from which the household reported receiving economic support. We argue that this is a valid instrument for the receipt status of the household because it is likely to be correlated with receiving benefits from the community organization, but uncorrelated with unmeasured community attributes that affect contributions. According to our first-stage regression results (adjusted R-squared = 0.07), the number of family-related sources of economic support is positively associated with receiving benefits from the community organization in the survey year. When the predicted value of receipt status is included in our regressions, the coefficient on the ethnic diversity index remains negative and statistically significant (column 3).

The results presented above suggest that households have a lower probability of contributing to community organizations within ethnically diverse environments. However, the negative effect of ethnic diversity on monetary contributions can be explained by the high transaction costs of community level production and the diverse preferences for public goods in heterogeneous communities. It may not be possible to distinguish between these two potential explanations in our data.

Theory also suggests that ethnic diversity can affect contributions through interhousehold preferences. We examine closely the impact of the share of the household's ethnic community that receives benefits from the community organization on contributions. Across specifications (columns 4-7), we do not find evidence that the share of the household's own ethnic group receiving benefits significantly affects monetary contributions.¹³

We now turn to discuss other community characteristics that can affect the probability of giving. Results on the effect on government transfers provide some direction towards understanding the role of the public expenditure in low-income settings.¹⁴ From our results, the probability that a household contributes money or materials to the community organization, is negatively and significantly associated with transfers per capita from the central government. This lends support to a crowding-out model of government spending. Starting from the mean, a ten percent increase in government spending per capita decreases the probability of giving by 0.9 percentage points. To further demonstrate the impact of government spending, an increase from the minimum to maximum value of government spending per capita in our sample reduces the probability of giving by 20 percentage points.¹⁵ However, the coefficient on government expenditure declines in magnitude, and level of statistical significance when we include the share of households receiving benefits

¹³We also examine two additional measures of ethnicity: the size of the household's ethnic community, and the size of the largest ethnic group in the community (ethnic dominance). Both variables are positively associated with monetary contributions, but not statistically significant. The inclusion of community-level measures of migration prevalence do not affect our results on ethnicity.

¹⁴Local government expenditure in Indonesia depends heavily on transfers from the center (about 67 percent of local government spending). There are two main types of central government transfers: (i) Block grants (INPRES)-which fund specific development expenditures on roads, primary schools, public health centers and reforestation (ii) transfers for local government personnel expenses

¹⁵The maximum level of central government spending in our sample is 19.13 rupiah per capita, while the minimum level is 2.457 rupiah per capita.

from the community organizations in our regressions. In our sample, we find that government transfers (per capita) tend to be higher where reported benefits (measured at the community-level) are lower. Thus, central government spending may be directed towards communities with low levels of community-level production.¹⁶

One might argue that ethnic diversity reflects other types of heterogeneity, such as income inequality within a community. The existing literature suggests that income or wealth inequality can affect incentives to contribute to the community organization (LaFerrara, 2001). To rule out this interpretation of our results, we control for income heterogeneity at the community-level using the gini coefficient index.¹⁷ We find that income inequality is negatively associated with the probability of giving and statistically significant. The effect of income inequality on contributions is robust across all specifications.

Community resources affect household preferences, as well the nature of services provided by the community organization and therefore, may influence the household's decision to contribute. We find that average community income is positively associated with monetary contributions and statistically significant. In particular, a 10 percent increase in average community expenditure increases the likelihood of monetary contributions by about 2 percentage points. Log population is negatively associated with contributions at the community-level, but not statistically significant. The supply of community programs has a positive, but insignificant effect on monetary contributions.

Estimation includes province dummies to capture regional economic and environmental factors, as well as pre-existing traditions of community organization. Province dummies also control for some of the variation in ethnic diversity across villages. When we exclude province dummies from our estimation procedure (not shown) the coefficient on the ethnic diversity index has a larger negative effect on the probability of giving. Results also show that the coefficient on ethnic diversity is more negative in urban environments.

7.1.2. Time Transfers to Community Organizations

Table 5 presents general reduced form logit estimates with dependent variable equal to one if the household contributes time to **at least one** organization in the community. We note that at the aggregate level, there is less variation in the dependent variable (time), as about 80% of households report time contributions.

We find some common patterns on the effects of household attributes across monetary and time contributions. The household's receipt status, per capita household expenditure, male headship, household size, head's marital status and religion (Muslim=1) are positively associated with the incidence of a time transfer, while the presence of young children (less than 14 years old) in the household has a negative and significant impact.

There are also noteworthy differences across the determinants of monetary and time contributions. Age squared (of the household head) has a negative and statistically significant for time contributions, but was not shown to have a significant effect on the probability of

¹⁶The reduction in the level of significance of the coefficient on government transfers may be attributed to multicollinearity (there is a negative and significant correlation between government transfers and share of the community receiving benefits), rather than the endogeneity of government spending to the individual transfer decision.

¹⁷Our gini coefficient index was constructed using expenditure data at the kecamatan (district) level.

monetary contributions. In addition, educational attainment has a negative, but insignificant effect on likelihood of time contributions (while years of schooling was shown to have a positive impact on monetary contributions). The marginal effects are shown in Table 6.

Turning our attention to community characteristics, we find that the coefficient on the ethnic diversity index is negative, but statistically insignificant for time contributions (columns 1-3). However, the ethnic composition of the community appears to affect time contributions through interhousehold preferences. We find that the share of the household's ethnic community with benefits has a positive and significant effect on time contributions. Starting at the mean, a ten percent increase in this variable leads to a 0.5 percentage point increase in the probability that a household will contribute time to the community organization. This result appears to be quite robust: When we control for unobserved heterogeneity at the village level, using a community random-effects specification (column 5) and community-fixed effects specification (column 6), and the instrumental variable approach (column 7), the coefficient on share of the household's ethnic community receiving benefits is still positive and statistically significant. Thus, we find that the size of the household's ethnic community with benefits **does** have an important effect on time contributions (although this variable was not shown to have a statistically significant effect on monetary contributions).

Government spending per capita appears to have a negative and statistically significant effect on time contributions (columns 1- 7) which lends support to the crowding-out hypothesis. However, the magnitude of this effect is small relative to our findings for monetary contributions. A ten percent increase in government spending is found to reduce the probability of giving time by about 0.2 percent points. Furthermore, the magnitude and level of significance of this "crowding-out" effect appears to decline when we introduce measures of benefits received at the community-level due to reasons stated in the previous section. Income inequality does not appear to have a significant effect on time transfer patterns, while it had a large negative and significant effect on the likelihood of monetary transfers. Consistent with our results on monetary contributions, average community expenditure has a positive and significant effect on time contributions. However, community resources may be less influential for time contributions (a 10 percent increase in average community expenditure per capita increases the likelihood of time contributions by about .07 percentage points). The availability of community programs remains positive and statistically significant, although it was not significant in monetary regressions. This result is not surprising since the presence of complementary inputs may be of greater relevance for time contributions.

When we omit the province dummy variables from our analysis, the ethnic diversity index becomes statistically significant. The coefficient on the ethnic diversity index is more negative in urban areas.¹⁸ Thus, for both time and monetary contributions the effect of ethnic diversity index appears to be of considerable importance in urban areas.

7.2. Transfer amounts

In this section, we present results with the household's total monetary transfer (in rupiah), and the total time contribution (in hours) to community organizations as the dependent

¹⁸Results though not shown here are available upon request.

variables. It is important to recognize that households' reports on transfer levels may be more prone to measurement error, when compared to measures of whether households gave to the community organization or not. With this caveat in mind, we present results from tobit maximum likelihood estimation and median regressions in table 7. Results on household variables appear comparable to earlier results shown in tables 4 and 5.

In the tobit specification (table 7, column 1), where we investigate the levels of monetary contributions, the signs on the community-level variables are consistent with our earlier findings. However, these community-specific variables exhibit reduced levels of statistical significance. Ethnic diversity is negatively associated with monetary contributions, but not statistically significant. Income inequality has a negative, but statistically insignificant effect on monetary contributions. Community population and average expenditure are not shown to have a statistically significant effect on the amount transferred. Government involvement in the community (measured by per capita transfers) remains negative, although statistically insignificant. We find that the presence of community activities does have a positive and statistically significant effect on the total amount contributed.

In the median regression (column 2) we find that ethnic diversity index and income inequality index both have a negative and significant effect on the level of money transfers. Average expenditure is shown to have a positive and significant effect.¹⁹

Results for the total time contributions are discussed below. In both the Tobit specification and the median regression (columns 4 and 5), ethnic diversity is shown to have a negative and statistically significant impact on levels of time transferred. Government spending is negatively associated with time contributions, and significant in the tobit specification (although not significant in the median regression). The number of community programs is positively associated with the amount of time transferred and significant. However, community population, income inequality and average community expenditure are not statistically significant in explaining the level of time transferred to the community organizations.

7.3. Panel regressions

In this section, we examine the probability that a household contributes to a specific community organization using a random-effects probit specification. The results presented here represent an improvement on our earlier estimates because we are better able to deal with unobserved heterogeneity across households, communities, and organizations. Since we have multiple observations for each household, we construct a panel such that the dependent variable is 1 if a household in a given village contributes to a specific type of organization, and 0 otherwise. This enables us to exploit the detailed information on contribution patterns available in the data. Household and community variables are the same measures used in the general framework. In addition, we introduce controls for organization characteristics (including dummies for organization type). There are ten types of community organizations in our sample

Tables 8a and 8b present results for two different samples. Sample 1 includes all obser-

¹⁹The measures of fit for the transfer levels suggest that the tobit model does not perform well. The median regression does better and we find that quantile regressions (at higher than the median), which reduce the impact of outliers tend to further improve the fit of the transfer level regressions.

vations in our data. Sample 2 limits the sample to communities where the organizations in question occurred during the survey year. With sample 2, our goal is to analyze the determinants of contributions to a specific organization given that this organization exists in the community.²⁰

Table 8a presents the determinants of monetary contributions with household random-effects and community random-effects specifications. We discuss results for both samples. Results on household-specific variables are similar to those in the general regressions. Marginal effects for sample 2 are presented in Table 8c.

Some important insights emerge when we examine community-specific variables. Ethnic diversity retains a negative and significant association with monetary contributions in the household random-effects specification. However, the ethnic diversity index, as well as other community-specific variables decline in their levels of statistical significance when the random village-effects specification is used (columns 3 and 7). The coefficient on the ethnic diversity index is significant at 11 percent for sample 2 (column 7), but its significance is lower for sample 1 (column 3). While the coefficient on the share of households from the household's own ethnic group is positive, it is not found to be a significant determinant of monetary contributions.

The effect of government transfers on contributions deserves close attention. For monetary contributions, the coefficient on government transfers has a negative and statistically significant effect on giving in the random household-effects specification for sample 2 (column 7). However, the coefficient on government spending is not significant in sample 1 regressions.²¹ Again, its level of significance is reduced when we include the share of households with benefits in our regressions. As we have argued earlier, government transfers may be directed towards communities where the provision of local public goods and services is low. We also find that households are more likely to contribute money where average village income is relatively high (although this effect is small in magnitude), income is more equally distributed and the number of community programs is high.

Turning our attention to time contributions, in Table 8b, results on household variables are similar to those presented in Table 5. However, the coefficient on per capita household expenditure is no longer significant, which can be attributed to higher opportunity cost of time with rising income.

Our results on time contributions also highlight the importance of ethnic diversity. We find that ethnic diversity has a negative effect on time contributions. The coefficient on the ethnic diversity index is statistically significant in the household random-effects specification, but declines in statistical significance when we introduce community random-effects (significant at 11 percent in column 7). We also find that the share of the household's ethnic community receiving benefits has a positive and significant effect on time contributions. Consistent with aggregate results, this coefficient remains positive and significant across random household-effects and community-effects specifications for both samples.

²⁰We do not have information on organization existence from the Community-Facility surveys. Thus, we assume that if at least one household head in our sample is aware of an organization's existence than this organization exists in this village during the survey period.

²¹To further explore the role of the government, we have also constructed a subjective index of government support for organizations in our sample. It is interesting to note that the coefficient on government involvement (measured at the organization level) is negative. These results are available upon request.

Government transfers are not found to have a significant effect on time contributions in our panel data analysis, while they had a negative and significant impact in the general framework. Results at the organization-level may be more convincing because they overcome aggregation problems present in the general framework. Thus, we find that central government transfers, while important for monetary contributions may be less relevant for time contributions. This result provides some evidence that government spending and households' time contributions may be more complementary in nature. It is also interesting to note that average community income is not a significant determinant of time contributions.

In summary, results from our panel analysis confirm theoretical predictions. Ethnic diversity appears to be the only community variable that remains significant for both monetary and time contributions. Our findings also suggest that ethnic diversity may affect monetary and time contributions through different channels. Households are more likely to contribute time when the share of recipients from their own ethnic group rises, while this variable was not shown to have a significant monetary contributions. Thus, results on time contributions provide more convincing evidence for a model of interhousehold preferences.

7.4. Existence of Community Organizations

Table 9 presents results on the prevalence of community organizations at the community-level. Theory suggests that ethnic diversity can also affect the existence of community organizations. We construct a measure of prevalence of community organizations from household reports on whether or not a specific organization exists in the community. Using multiple observations on each community, we adopt a random-effects specification. In columns 1 and 2, the dependent variable is the mean household report on the existence of organizations at the community-level. Column 3 shows results from a probit specification, with occurrence as a dichotomous variable (occur is equal to 1, if community organization exists and zero, otherwise).

From our results, ethnic diversity index does have a negative, and statistically significant effect on the supply of organizations. This negative result persists across all specifications (columns 1-3). The robustness of this result may appear surprising, given that others (notably, Weisbrod, 1988) have argued that ethnic diversity may exert a positive influence on the existence of community organizations. In Weisbrod's view, community organizations supply public goods in heterogenous communities as a response to market and state failure. However, the prevalence of community organizations may also depend on emergence of organization leaders or "social entrepreneurs" (James, 1987), who create community organizations to meet diverse needs of ethnic, religious and income groups in the community. We note that within more restrictive political environments, the incentives for, and the scope of community-level activity may be reduced.

Other community-specific variables appear to have a less robust effect on the prevalence of community organizations. Government involvement in the community (government transfers per capita) has a negative, but statistically insignificant effect on the prevalence of a given organization. As government programs may not be randomly allocated across communities in Indonesia, we instrument for government transfers using two variables: the incidence of mass immunization in the community since 1980 ($immunize=1$) and the village

electricity index (which measures the years of electricity supply in the village). When we instrument for government transfers, the coefficient on government spending remains negative, although only statistically significant at the 11 percent level (column 2). Average community expenditure (per capita) and average years of education are positively associated with the prevalence of community organizations.

8. Conclusion

This paper represents an important contribution to existing knowledge on monetary and time contributions in low-income environments. Our theoretical model provides a role for community-level variables. In particular, ethnic diversity and government involvement can affect the household's transfer decision. We test the implications of our model using the second wave of the Indonesia Family Life Surveys (IFLS2).

The results in this paper reinforce the need for careful study of community-level determinants of private contributions. Community organizations rely on monetary, as well as time contributions. We find that ethnic diversity has negative effect on both monetary and time contributions, as well as on the prevalence of community-based organizations. Our results are also suggestive of potential mechanisms through which ethnic diversity can influence contributions. For monetary contributions, diverse preferences and transaction costs emerge as important explanations for the negative effect of ethnic diversity. However, results on time contributions provide support for interhousehold preferences. Households are more likely to contribute time when a larger share of their ethnic community receives benefits from the community organization. Our results on the effect of central government transfers provide some interesting insights. Empirical results support a crowding out model for monetary contributions, with less convincing evidence on time contributions. Further research may be needed to investigate what role governments can play in supporting community institutions across various settings.

Beyond providing public goods and services, and organizing redistribution, community organizations may be linked to social capital formation and economic growth (Putnam, 1993; Knack and Keefer, 1997). Thus, the results in this paper provide micro-level evidence on household and community variables that affect the prevalence and functioning of community organizations, which may be related to understanding trust, civic engagement and welfare outcomes in low-income environments.

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TABLE 1
Summary Statistics
Indonesia Family Life Surveys (IFLS2)

Variable	Full Sample		Urban		Rural		
	N	Mean	N	Mean	N	Mean	
Panel A: HOUSEHOLDS (N=7510)							
Give	HH contributed money/materials to Community Organization?	7510	0.44 (0.50)	3447	0.52 (0.50)	4063	0.37 (0.48)
Time	HH contributed time to comm org?	7510	0.81 (0.39)	3447	0.81 (0.39)	4063	0.81 (0.39)
Receive	HH received service, money, materials, other from commmunity organization?	7510	0.30 (0.46)	3447	0.33 (0.47)	4063	0.27 (0.44)
Total Amount Contributed (in Rupiah) to Community Organizations in survey year		7510	21150.91 (93435.09)	3447	30206.93 (109952.70)	4063	13501.69 (75940.06)
Total Amount of Time Spent (in hours)		7510	346.50 (1356.66)	3447	379.58 (1550.32)	4063	318.56 (1167.80)
Head's Age		7492	47.35 (14.28)	3438	46.92 (13.99)	4054	47.72 (14.51)
Head's Age Squared		7492	2446.14 (1442.79)	3438	2397.32 (1401.62)	4054	2487.54 (1475.71)
Head's Years of Schooling		7387	6.25 (5.26)	3388	8.10 (5.59)	3999	4.67 (4.40)
Head's Marital Status (Married=1)		7510	0.81 (0.39)	3447	0.80 (0.40)	4063	0.82 (0.38)
Muslim (=1)		7510	0.88 (0.33)	3447	0.87 (0.34)	4063	0.88 (0.32)
Household Size		7510	5.20 (2.44)	3447	5.41 (2.59)	4063	5.03 (2.29)
Number of Children <14years		7510	0.88 (1.02)	3447	0.82 (0.99)	4063	0.94 (1.05)
Per Capita Household Expenditure (in Rupiah)		6896	206303.60 (313780.80)	2962	283887.40 (362359.60)	3934	147888.90 (256531.80)
Urban(=1)		7510	0.46 (0.50)				
Share of Ethnic Community receiving benefits?		6675	0.26 (0.19)	2986	0.27 (0.20)	3689	0.26 (0.17)
Share of Community receiving benefits?		7510	0.30 (0.18)	3447	0.33 (0.18)	4063	0.27 (0.17)
% Share of Household's Ethnic Community		6965	0.84 (0.26)	3114	0.74 (0.30)	3851	0.92 (0.19)
Panel B: COMMUNITIES (N=313)							
Log Population Size		306	8.72 (1.04)	178	9.18 (0.97)	128	8.08 (0.75)
Average Expenditure (In Rupiah)		312	229630.50 (150092.30)	180	294072.20 (163056.00)	131	140653.60 (59433.40)
Ethnic Diversity Index		313	0.29 (0.36)	181	0.43 (0.39)	131	0.10 (0.21)

Standard Deviations are shown in parentheses.

TABLE 1 (Continued)
Summary Statistics
Indonesia Family Life Surveys (IFLS2)

Variable	Full Sample		Urban		Rural	
	N	Mean	N	Mean	N	Mean
Panel B: COMMUNITIES (N=313)						
Ethnic Dominance (Share of Largest Ethnic Group)	303	84.15 (19.20)	172	76.59 (22.60)	130	90.52 (22.60)
Gini Coefficient	313	0.54 (0.04)	181	0.54 (0.05)	131	0.54 (0.04)
Average Years of Schooling	313	6.41 (2.99)	181	7.89 (2.85)	131	4.34 (1.67)
Received Underdeveloped Village Grant?	314	0.21 (0.41)	181	0.14 (0.35)	131	0.29 (0.46)
Number of Community Programs	298	14.05 (4.22)	171	14.58 (4.46)	127	13.35 (3.77)
Number of Community Health Posts (<i>Posyandu</i>)	304	7.93 (6.40)	177	10.05 (7.14)	127	4.98 (3.48)
Central Government Expenditure Per Capita (in Rupiah)	313	2.65 (2.39)	181	1.93 (1.68)	131	3.66 (2.83)
Community Electricity Index	305	4.13 (1.79)	177	5.13 (1.61)	128	2.76 (0.87)
Mass Immunization since 1980 (immunize=1)	310	0.38 (0.48)	181	0.38 (0.49)	128	0.37 (0.49)
Panel C: ORGANIZATIONS (N=10)						
Level of Government Involvement(1=low; 5=high)	10	3.55 (1.82)	10	3.53 (1.62)	10	3.58 (1.60)
Occur	10	0.20 (0.40)	10	0.21 (1.96)	10	0.41 (0.40)

Standard Deviations are shown in parentheses.

TABLE 2
Contributions to Community Organizations by Type

N=7510 households

Type of Organization	% of HH that report occurrence	% of HH that contribute Money or Materials	Average Transfer (Money or Materials) (in Rupiah)	% of HH that contribute Time	Average Time Transfer (in Hours)
A Community Meeting	0.46 (0.50)	0.18 (0.39)	4530.15 (47517.36)	0.46 (0.50)	22.30 (107.49)
B Co-operative	0.12 (0.32)	0.03 (0.17)	1133.14 (20861.26)	0.06 (0.24)	2.88 (57.47)
C Volunteer Labor	0.46 (0.50)	0.15 (0.35)	3040.59 (27591.72)	0.54 (0.50)	52.55 (217.96)
D Neighborhood Improvement	0.25 (0.43)	0.16 (0.37)	5880.73 (33917.32)	0.27 (0.44)	26.38 (232.17)
E Neighborhood Security	0.35 (0.48)	0.08 (0.28)	2019.77 (13687.59)	0.34 (0.47)	97.40 (405.88)
F Drinking Water	0.04 (0.20)	0.02 (0.14)	1272.05 (14886.94)	0.03 (0.16)	46.27 (652.76)
G Washing Water	0.04 (0.19)	0.01 (0.09)	565.82 (16617.64)	0.02 (0.15)	45.00 (707.94)
H Garbage Collection	0.06 (0.25)	0.06 (0.24)	1545.14 (10631.35)	0.02 (0.15)	11.88 (287.88)
I Women's Groups	0.07 (0.25)	0.07 (0.25)	991.56 (11423.09)	0.16 (0.37)	8.15 (66.61)
J Community Health Posts	0.10 (0.30)	0.05 (0.21)	351.30 (4818.09)	0.28 (0.45)	10.06 (55.34)

**Benefits Received From Community Organizations
(by Class of Benefits received)**

Class of Benefit Received	N	Mean	Std Dev
Did HH receive any class of benefits? (1=Yes, 0=No)	7510	0.30	0.46
1. Received Service from Organization	7510	0.13	0.34
2. Received Materials	7510	0.02	0.15
3. Received Money	7510	0.08	0.27
4. Received Other	7510	0.11	0.31
5. Received Information	7510	0.31	0.46
6. Received Infrastructure	7510	0.34	0.47

TABLE 3
Province Level Variation in Give, Receive and Ethnic
 Indonesia Family Life Surveys (IFLS2)

N=7510 households

Province Name	N	Give		Receive		Ethnic Diversity Index	
		Mean	Std Dev.	Mean	Std. Dev.	Mean	Std. Dev.
North Sumatra	528	0.20	0.40	0.20	0.40	0.47	0.38
West Sumatra	369	0.43	0.50	0.32	0.47	0.18	0.28
South Sumatra	359	0.36	0.48	0.18	0.38	0.44	0.30
Lampung	284	0.21	0.41	0.20	0.40	0.36	0.38
Jakarta	642	0.60	0.49	0.31	0.46	0.94	0.05
West Java	1241	0.50	0.50	0.30	0.46	0.35	0.37
Central Java	979	0.55	0.50	0.32	0.47	0.11	0.27
Yogyakarta	483	0.74	0.44	0.39	0.49	0.15	0.27
East Java	1103	0.39	0.49	0.27	0.44	0.14	0.26
Bali	358	0.21	0.41	0.46	0.50	0.22	0.35
W. Nusa Tenggara (NTB)	442	0.42	0.49	0.30	0.46	0.20	0.30
South Kalimantan	334	0.42	0.49	0.27	0.45	0.27	0.31
South Sulawesi	388	0.30	0.46	0.32	0.47	0.22	0.28

TABLE 4
Determinants of Contributions to Community Organizations

Dependent Variable: Monetary Contributions

Logit Specification

Did household contribute money or materials to any community organization?

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Random	Random	IV	Random	Random	Fixed-	IV
	Effects	Effects		Effects	Effects	Effects	
Household Variables							
Head's Age	-0.01 (0.02)	0.00 (0.02)	0.01 (0.02)	-0.01 (0.02)	0.00 (0.02)	0.00 (0.02)	0.01 (0.02)
Head's Age Squared	0.00 (0.00)						
Sex(Male=1)	0.21 (0.14)	0.19 (0.15)	0.33 (0.13)	0.21 (0.14)	0.20 (0.15)	0.17 (0.15)	0.33 (0.13)
Head's Years of Schooling	0.03 (0.01)						
Head's Marital Status	0.20 (0.14)	0.31 (0.15)	0.32 (0.13)	0.19 (0.14)	0.30 (0.15)	0.35 (0.15)	0.31 (0.13)
Muslim (=1)	0.19 (0.15)	0.20 (0.19)	0.34 (0.14)	0.13 (0.15)	0.16 (0.19)	0.21 (0.22)	0.27 (0.15)
Household Size	0.11 (0.02)	0.14 (0.02)	0.12 (0.02)	0.11 (0.02)	0.13 (0.02)	0.14 (0.02)	0.12 (0.02)
Number of Children <14years	-0.14 (0.04)	-0.16 (0.04)	-0.14 (0.04)	-0.14 (0.04)	-0.16 (0.04)	-0.15 (0.04)	-0.14 (0.04)
PerCapita HH Exp (X 10 ⁶)	0.63 (0.16)	0.70 (0.17)	0.73 (0.00)	0.65 (0.16)	0.71 (0.17)	0.69 (0.17)	0.75 (0.16)
Urban(=1)	0.27 (0.09)	0.32 (0.17)	0.20 (0.08)	0.19 (0.09)	0.24 (0.16)		0.10 (0.09)
Received Benefit from Comm Org?	1.57 (0.07)	1.55 (0.08)	1.95 (0.27)	1.49 (0.08)	1.52 (0.08)	1.45 (0.08)	2.01 (0.27)
Community-Specific Variables							
Log Population Size	0.00 (0.05)	-0.02 (0.10)	-0.06 (0.05)	0.03 (0.06)	0.02 (0.10)		0.00 (0.05)
Govt. Spending (per capita)	-0.05 (0.02)	-0.06 (0.04)	-0.06 (0.02)	-0.02 (0.02)	-0.03 (0.03)		-0.03 (0.02)
Average Expenditure(X 10 ⁶)	1.70 (0.44)	2.04 (0.74)	2.15 (0.00)	1.10 (0.45)	1.32 (0.74)		1.16 (0.43)
Gini Coefficient	-3.33 (0.85)	-4.05 (1.58)	-3.37 (0.80)	-2.99 (0.85)	-3.68 (1.56)		-2.85 (0.82)
No of Community Programs	0.01 (0.01)	0.01 (0.02)	0.02 (0.01)	0.01 (0.01)	0.01 (0.02)		0.02 (0.01)
Ethnic Diversity Index	-0.47 (0.16)	-0.47 (0.30)	-0.59 (0.16)				
Share of Ethnic Community receiving benefits ?				0.28 (0.47)	0.09 (0.61)	-0.31 (0.70)	0.53 (0.45)
Share of Community receiving benefits?				0.95 (0.49)	1.30 (0.69)		1.59 (0.47)
Number of observations	5195	5195	5195	5195	5195	5025	5195
Pseudo R ²	0.20		0.14	0.20			0.15
Log likelihood	-2836.8	-2711.9	-3053.4	-2824.2	-2707.1	-2078.3	-3004.6

Standard errors are shown in parentheses. All regressions include province dummies. We exclude Jakarta from our analysis. In addition, we restrict our sample to include only IFLS communities where village population >10. In the instrumental variable (IV) specifications, shown in columns 3 and 7, we instrument for the household's self-reported receipt status. Random and fixed-effects specifications are at the community-level.

TABLE 5
Determinants of Contributions to Community Organizations

Dependent Variable: Time contributions

Logit Specification

Did household contribute time to any community organization?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables		Random- Effects	IV		Random Effects	Fixed- Effects	IV
Household Variables							
Head's Age	0.02 (0.02)	0.03 (0.02)	0.03 (0.02)	0.02 (0.02)	0.03 (0.02)	0.04 (0.02)	0.03 (0.02)
Head's Age Squared	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Sex(Male=1)	0.89 (0.18)	0.90 (0.19)	0.94 (0.16)	0.89 (0.18)	0.91 (0.19)	0.88 (0.20)	0.97 (0.17)
Head's Years of Schooling	-0.01 (0.01)	0.00 (0.02)	0.01 (0.01)	0.00 (0.01)	0.00 (0.02)	0.01 (0.02)	0.01 (0.01)
Head's Marital Status (Married=1)	0.58 (0.17)	0.71 (0.19)	0.71 (0.16)	0.59 (0.18)	0.70 (0.19)	0.69 (0.20)	0.72 (0.17)
Muslim (=1)	0.39 (0.18)	0.23 (0.23)	0.69 (0.17)	0.33 (0.18)	0.18 (0.23)	-0.16 (0.29)	0.51 (0.17)
Household Size	0.26 (0.03)	0.29 (0.03)	0.30 (0.03)	0.27 (0.03)	0.29 (0.03)	0.28 (0.03)	0.30 (0.03)
Number of Children <14years	-0.18 (0.06)	-0.19 (0.06)	-0.23 (0.06)	-0.18 (0.06)	-0.19 (0.06)	-0.17 (0.07)	-0.24 (0.06)
PerCapita HH Exp (X10 ⁶)	0.56 (0.23)	0.62 (0.00)	0.80 (0.23)	0.63 (0.00)	0.66 (0.00)	0.55 (0.00)	0.87 (0.00)
Urban(=1)	-0.02 (0.13)	-0.06 (0.20)	-0.06 (0.12)	-0.04 (0.13)	-0.08 (0.19)		-0.17 (0.12)
Received Benefit from Comm Org?	2.39 (0.11)	2.44 (0.12)	2.82 (0.38)	2.29 (0.11)	2.38 (0.12)	1.45 (0.08)	2.92 (0.39)
Community-Specific Variables							
Log Population Size	-0.06 (0.08)	-0.11 (0.12)	-0.15 (0.07)	-0.05 (0.08)	-0.09 (0.12)		-0.10 (0.07)
Govt. Spending (per capita)	-0.08 (0.02)	-0.08 (0.04)	-0.08 (0.02)	-0.08 (0.02)	-0.07 (0.04)		-0.06 (0.02)
Average Expenditure (X10 ⁶)	0.56 (0.00)	0.93 (0.00)	1.39 (0.00)	0.16 (0.00)	0.35 (0.00)		0.33 (0.00)
Gini Coefficient	-1.67 (1.15)	-1.79 (1.79)	-1.58 (1.04)	-1.61 (1.16)	-1.66 (1.76)		-1.44 (1.08)
No of Community Programs	0.05 (0.01)	0.05 (0.02)	0.06 (0.01)	0.05 (0.01)	0.05 (0.02)		0.05 (0.01)
Ethnic Diversity Index	-0.16 (0.23)	-0.25 (0.36)	-0.43 (0.21)				
Share of Ethnic Community receiving benefits ?				2.42 (0.65)	2.33 (0.78)	2.32 (1.06)	2.88 (0.61)
Share of Comm receiving Benefits?				-0.76 (0.66)	-0.39 (0.85)		0.33 (0.61)
Number of observations	5195	5195	5195	5195	5195	5025	5195
Pseudo R ²	0.37	0.31	0.26	0.38			0.29
Log likelihood	-1480.38	-1629.24	-1748.7	-1464.62	-1418.89	-2078.29	-1690.25

Standard errors are shown in parentheses. All regressions include province dummies. We exclude Jakarta from our analysis. In addition, we restrict our sample to include only IFLS communities where village population >10.

In the instrumental variable (IV) specifications, shown in columns 3 and 7, we instrument for the household's self-reported receipt status. Random and fixed-effects specifications are at the community-level.

TABLE 6
Determinants of Contributions to Community Organizations
Marginal Effect of Changes in independent variables

Variable	<i>Dependent Variable: Monetary Contribution</i>		<i>Dependent Variable: Time</i>	
	(1)	(2)	(3)	(4)
Did household contribute to any community organization? Logit Specification				
Household Variables				
Head's Age	-0.0035	-0.0032	0.0015	0.0015
Head's Age Squared	0.00003	0.00002	-0.00003 **	-0.00003 **
Sex(Male=1)	0.0505	0.0510	0.0586 ***	0.0570 ***
Head's Years of Schooling	0.0068 ***	0.0068 ***	-0.0004	-0.0002
Head's Marital Status (Married=1)	0.0476	0.0463	0.0381 ***	0.0379 ***
Muslim (=1)	0.0461 ***	0.0322	0.0255 **	0.0212 *
Household Size	0.0277 ***	0.0275 ***	0.0173 ***	0.0173 ***
Number of Children <14years	-0.0331 ***	-0.0341 ***	-0.0120 ***	-0.0117 ***
PerCapita HH Exp(X 10 ⁶)	0.1510 ***	0.1550 ***	0.0369 **	0.0402 **
Urban(=1)	0.0641 ***	0.0458 **	-0.0015	-0.0024
Received Benefit from Comm Org?	0.3784 ***	0.3587 ***	0.1581 ***	0.1468 ***
Community-Specific Variables				
Log Population Size	-0.0003	0.0082	-0.0042	-0.0031
Government Spending (per capita)	-0.0114 **	-0.0059	-0.0054 ***	-0.0051 ***
Per Capita Average Expenditure (X 10 ⁶)	0.4100 ***	0.2640 **	0.0367	0.0104 ***
Gini Coefficient	-0.8023 ***	-0.7188 ***	-0.1100	-0.1034
No of Community Programs	0.0025	0.0021	0.0031 ***	0.0030 ***
Ethnic Diversity Index	-0.1139 ***		-0.0103	
Share of Ethnic Community receiving benefits ?		0.0671		0.1552 ***
Share of Community receiving benefits?		0.2293 **		-0.0487
Number of observations	5195	5195	5195	5195
Pseudo R ²	0.20	0.20	0.38	0.38
Log likelihood	-2836.82	-28240.24	-14800.38	-14640.62

Marginal Effects are evaluated at the sample means for continuous variables. Standard errors are shown in parentheses. All regressions include province dummies, excluding Jakarta. In addition, we restrict our sample to IFLS communities where village population > 10. * denotes significance at the 10 percent level of significance, ** at the 5 percent level and, *** at the 1 percent level.

In the instrumental variable (IV) specifications, shown in columns 3 and 7, we instrument for the household's self-reported receipt status. Random and fixed-effects specifications are at the community-level.

TABLE 7

Determinants of Transfers to Community Organizations*Dependent Variable: Amount Contributed*

<i>Tobit Specification</i>	Total Amount Transferred (in Rupiah)			Total Time Spent (in hours)		
	mean=21150.91 std. dev.=93435.09			mean=346.50 std. Dev=1356.66		
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Tobit	Median Regression	Tobit	Tobit	Median Regression	Tobit
<i>Household Variables</i>						
Head's Age	-89.66 (1153.64)	-18.39 (15.05)	-47.46 (1153.24)	38.98 *** (11.82)	2.49 *** (0.72)	39.08 *** (11.84)
Head's Age Squared	-1.07 (11.10)	0.19 (0.15)	-1.86 (11.09)	-0.45 *** (0.11)	-0.03 *** (0.01)	-0.45 *** (0.11)
Sex(Male=1)	23141.66 ** (9622.48)	205.45 *** (83.80)	23398.73 ** (9603.73)	280.98 *** (97.04)	28.21 *** (5.97)	281.11 *** (97.12)
Head's Years of Schooling	1926.61 *** (598.91)	27.27 *** (8.56)	1895.39 *** (599.02)	-4.31 (6.16)	0.70 * (0.39)	-4.47 (6.18)
Head's Marital Status (Married=1)	-418.54 (9942.48)	-56.22 (143.76)	-612.94 (9925.33)	164.56 * (100.01)	-0.96 (6.14)	161.89 * (100.10)
Muslim (=1)	20058.79 ** (10154.33)	200.30 (144.40)	20039.04 ** (10110.90)	214.84 ** (101.77)	5.78 (6.14)	190.10 * (100.83)
Household Size	6018.09 *** (1160.37)	91.06 *** (17.55)	6036.01 *** (1158.00)	75.92 *** (11.96)	4.22 *** (0.75)	75.56 *** (11.96)
Number of Children <14years	-6538.66 ** (2656.27)	-80.44 ** (40.10)	-6661.31 ** (2652.68)	-86.41 *** (26.88)	-3.02 * (1.71)	-87.42 *** (26.90)
Per Capita HH Exp (X 10 ⁶)	72084.20 *** (8761.90)	2947.60 *** (146.00)	72526.80 (8748.40)	35.60 (97.70)	4.72 (6.15)	36.60 (97.80)
Urban(=1)	10317.14 * (6205.51)	321.18 *** (93.44)	7379.08 (6185.41)	-62.99 (62.86)	6.39 (3.98)	-81.18 (62.60)
Received Benefit from Comm Org?	94920.35 *** (5588.14)	1295.36 *** (75.39)	88803.68 *** (5673.72)	781.91 *** (51.86)	53.33 *** (3.21)	776.91 *** (53.13)
<i>Community-Specific Variables</i>						
Log Population Size	3088.36 (3842.52)	9.42 (57.12)	5204.59 (3854.30)	30.36 (38.90)	5.25 ** (2.43)	34.90 (39.13)
Govt. Spending (per capita)	-2001.77 (1346.07)	-6.25 (18.49)	-1436.37 (1305.79)	-50.96 *** (13.40)	-0.67 (0.79)	-43.62 *** (12.93)
Average Expenditure (X 10 ⁶)	22694.20 (27429.00)	2756.40 *** (436.10)	10220.10 (27819.20)	146.30 (291.40)	-19.50 (18.50)	37.70 (296.10)
Gini Coefficient	-68070.26 (57759.43)	-3312.86 *** (884.10)	-45438.61 (57936.14)	63.37 (614.34)	-42.18 (37.61)	120.57 (616.81)
No of Community Programs	1166.17 * (703.06)	-5.75 (10.51)	842.96 (701.39)	31.50 *** (7.13)	1.50 *** (0.45)	32.31 *** (7.13)
Ethnic Diversity Index	-4291.03 (11622.09)	-895.51 *** (169.60)		-203.79 * (114.59)	-36.23 *** (7.19)	
Share of Ethnic Community that received benefits ?			-1140.70 (31890.15)			105.98 (331.38)
Share of Community receiving Benefits?			79979.19 ** (33640.08)			19.95 (348.02)
Number of observations	5195	5195	5195	5195	5195	5195
Log likelihood	-30733.45		-30719.14	-37020.51		-37021.72
Pseudo R ²	0.02	0.01	0.02	0.01	0.05	0.01

Standard errors are shown in parentheses. All regressions include province dummies. We exclude Jakarta from our analysis. In addition, we restrict our sample to include only IFLS communities where village population >10.

* denotes significance at the 10 percent level of significance, ** at the 5 percent level and, *** at the 1 percent level

TABLE 8A
**Determinants of Monetary and In-Kind Contributions
to Community Organizations**

Random-Effects Probit

Did household contribute money or materials to a given community organization?

Dependent Variable	<i>Sample 1</i>				<i>Sample 2</i>			
	Random-effects (Household)		Random-effects (Community)		Random-effects (Household)		Random-effects (Community)	
<i>Household Variables</i>								
Head's Age	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Head's Age Squared	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Head's Years of Schooling	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)
Head's Marital Status (Married=1)	0.05 (0.04)	0.05 (0.04)	0.07 (0.03)	0.07 (0.03)	0.13 (0.04)	0.13 (0.04)	0.15 (0.03)	0.14 (0.03)
Muslim (=1)	0.05 (0.06)	0.04 (0.06)	0.06 (0.05)	0.03 (0.05)	0.07 (0.06)	0.07 (0.06)	0.06 (0.06)	0.06 (0.05)
Household Size	0.07 (0.01)	0.07 (0.01)	0.06 (0.01)	0.06 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)	0.05 (0.01)
Number of Children <14years	-0.07 (0.02)	-0.07 (0.02)	-0.06 (0.01)	-0.06 (0.01)	-0.06 (0.02)	-0.06 (0.02)	-0.05 (0.01)	-0.05 (0.01)
PerCapita HH Exp in Rupiah (X 10 ⁶)	0.20 (0.05)	0.21 (0.05)	0.19 (0.04)	0.19 (0.04)	0.25 (0.05)	0.25 (0.05)	0.22 (0.04)	0.22 (0.04)
Urban(=1)	0.19 (0.04)	0.17 (0.04)	0.18 (0.06)	0.16 (0.05)	0.16 (0.04)	0.14 (0.04)	0.16 (0.08)	0.13 (0.06)
Received Benefit from Comm Org?	0.60 (0.03)	0.56 (0.03)	0.47 (0.03)	0.46 (0.03)	0.72 (0.03)	0.68 (0.03)	0.58 (0.03)	0.57 (0.03)
<i>Organization-specific Variables</i>								
Occur	1.03 (0.03)	1.02 (0.03)	0.92 (0.02)	0.92 (0.02)				
<i>Community-specific Variables</i>								
Log Population Size	-0.01 (0.02)	0.00 (0.02)	0.01 (0.04)	-0.02 (0.04)	-0.01 (0.02)	0.00 (0.02)	0.02 (0.04)	-0.01 (0.04)
Government Spending (per capita)	-0.014 (0.008)	-0.008 (0.008)	-0.008 (0.012)	-0.011 (0.011)	-0.017 (0.008)	-0.010 (0.008)	-0.017 (0.012)	-0.014 (0.011)
Average Expenditure (in Rupiah) (X 10 ⁶)	0.71 (0.16)	0.48 (0.16)	0.78 (0.21)	0.52 (0.24)	0.55 (0.15)	0.30 (0.16)	0.54 (0.22)	0.37 (0.24)
Gini Coefficient	-1.16 (0.34)	-1.03 (0.34)	-1.20 (0.51)	-1.25 (0.55)	-1.47 (0.33)	-1.32 (0.33)	-1.30 (0.53)	-1.44 (0.64)
No of Community Programs	0.01 (0.00)	0.01 (0.00)	0.01 (0.01)	0.00 (0.01)	0.01 (0.00)	0.01 (0.00)	0.01 (0.01)	0.01 (0.01)
Ethnic Diversity Index	-0.16 (0.16)		-0.13 (0.11)		-0.15 (0.07)		-0.16 (0.11)	
Share of Ethnic Community receiving benefits		0.20 (0.19)		0.14 (0.17)		0.06 (0.18)		0.02 (0.18)
Share of Community receiving Benefits?		0.30 (0.20)		0.41 (0.21)		0.46 (0.20)		0.51 (0.22)
Number of observations	49870	49870	49870	49870	34789	34789	34789	34789
Log Likelihood	-9987.6	-9973.6	-9931.3	-9927.6	-9989.1	-9972.7	-9921.2	-9914.9

Standard errors are shown in parentheses.

All regressions include province dummies, excluding Jakarta. In addition, we restrict our sample to IFLS communities where village population > 10. We also include organization-level dummies.

TABLE 8B
**Determinants of Time Contributions
to Community Organizations (IFLS2)**

Random-effects Probit

Did household contribute time to a given community organization?

Dependent Variable <i>Time Contributions</i>	<i>Sample 1</i>				<i>Sample 2</i>			
	Random-effects (Household)		Random-effects (Community)		Random-effects (Household)		Random-effects (Community)	
<i>Household Variables</i>								
Head's Age	0.00 (0.01)	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)	0.02 (0.01)	0.02 (0.01)	0.02 (0.00)	0.02 (0.00)
Head's Age Squared	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Head's Years of Schooling	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)
Head's Marital Status (Married=1)	0.32 (0.03)	0.32 (0.03)	0.28 (0.03)	0.28 (0.03)	0.39 (0.03)	0.39 (0.03)	0.36 (0.02)	0.36 (0.02)
Muslim (=1)	0.18 (0.05)	0.18 (0.05)	0.18 (0.05)	0.18 (0.05)	0.16 (0.05)	0.16 (0.04)	0.17 (0.04)	0.16 (0.05)
Household Size	0.11 (0.01)	0.11 (0.01)	0.10 (0.00)	0.10 (0.00)	0.07 (0.01)	0.07 (0.01)	0.07 (0.00)	0.07 (0.00)
Number of Children <14years	-0.09 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.08 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.05 (0.01)
PerCapita HH Exp in Rupiah (X 10 ⁶)	0.03 (0.04)	0.03 (0.04)	0.03 (0.03)	0.03 (0.03)	0.07 (0.04)	0.07 (0.04)	0.07 (0.03)	0.07 (0.03)
Urban(=1)	-0.01 (0.03)	-0.03 (0.03)	-0.02 (0.04)	-0.03 (0.04)	0.00 (0.03)	-0.02 (0.03)	-0.02 (0.04)	-0.04 (0.04)
Received Benefit from Comm Org [†]	0.61 (0.02)	0.58 (0.03)	0.55 (0.02)	0.54 (0.02)	0.74 (0.02)	0.70 (0.02)	0.66 (0.02)	0.64 (0.02)
<i>Organization-specific Variables</i>								
Occur	1.68 (0.02)	1.67 (0.02)	1.55 (0.02)	1.55 (0.02)				
<i>Community-specific Variables</i>								
Log Population Size	-0.04 (0.02)	-0.02 (0.02)	-0.03 (0.03)	-0.02 (0.03)	-0.03 (0.02)	-0.01 (0.02)	-0.02 (0.03)	0.00 (0.03)
Government Spending (per capita)	0.001 (0.006)	0.005 (0.006)	-0.001 (0.009)	0.003 (0.008)	-0.003 (0.006)	0.002 (0.006)	-0.003 (0.009)	0.000 (0.009)
Average Expenditure (in Rupiah) (X 10 ⁶)	0.10 (0.13)	-0.11 (0.13)	0.11 (0.17)	-0.09 (0.18)	0.04 (0.12)	-0.19 (0.12)	0.06 (0.18)	-0.15 (0.18)
Gini Coefficient	0.01 (0.29)	0.09 (0.29)	0.09 (0.41)	0.13 (0.40)	-0.22 (0.27)	-0.11 (0.27)	-0.21 (0.42)	-0.09 (0.41)
No of Community Programs	0.02 (0.00)	0.02 (0.00)	0.02 (0.00)	0.02 (0.00)	0.02 (0.00)	0.01 (0.00)	0.02 (0.00)	0.02 (0.00)
Ethnic Diversity Index	-0.13 (0.05)		-0.11 (0.08)		-0.14 (0.05)		-0.13 (0.08)	
Share of Ethnic Community receiving benefits		0.59 (0.15)		0.70 (0.15)		0.50 (0.15)		0.59 (0.15)
Share of Community receiving benefits?		-0.05 (0.16)		-0.17 (0.17)		0.05 (0.15)		-0.04 (0.17)
Number of observations	49940	49870	49940	49870	34837	34789	34837	34789
Log Likelihood	-14558.8	-14505.8	-14577.2	-14532.4	-16397.1	-16341.1	-16341.2	-16300.5

Standard errors are shown in parentheses.

All regressions include province dummies, excluding Jakarta. In addition, we restrict our sample to IFLS communities where village population > 10. We also include organization-level dummies.

TABLE 8C

Determinants of Contributions to Community Organizations
Marginal Effect of Changes in independent variables

Did household contribute to a given community organization?

*Dependent Variable: Monetary
Contribution*

Dependent Variable: Time

Community Random-Effects Probit Specification

Variable	(1)	(2)	(3)	(4)
<i>Household Variables</i>				
Head's Age	0.000	0.000	0.006 ***	0.006 ***
Head's Age Squared	0.000	0.000	0.000 ***	0.000 ***
Sex (Male=1)				
Head's Years of Schooling	0.001 ***	0.001 ***	0.003 ***	0.003 ***
Head's Marital Status (Married=1)	0.018 ***	0.018 ***	0.110 ***	0.111 ***
Muslim (=1)	0.008	0.007	0.051 ***	0.049 ***
Household Size	0.006 ***	0.006 ***	0.021 ***	0.021 ***
Number of Children <14years	-0.006 ***	-0.006 ***	-0.016 ***	-0.016 ***
PerCapita HH Exp (X 10 ⁶)	0.028 ***	0.028 ***	0.022 **	0.023 **
Urban(=1)	0.020 **	0.016 **	-0.005	-0.012
Received Benefit from Comm Org?	0.072 ***	0.070 ***	0.201 ***	0.197 ***
<i>Community-Specific Variables</i>				
Log Population Size	0.002	-0.001	-0.006	-0.001
Government Spending (per capita)	-0.002	-0.002	-0.001	0.000
Per Capita Average Expenditure (X 10 ⁶)	0.068 ***	0.046	0.019	-0.045
Gini Coefficient	-0.163 ***	-0.177 **	-0.063	-0.026
No of Community Programs	0.001	0.001	0.006 ***	0.005 ***
Ethnic Diversity Index	-0.020		-0.040 &	
Share of Ethnic Community receiving benefits ?		0.002		0.181 ***
Share of Community receiving Benefits?		0.062 **		-0.012
Number of observations	34789	34789	34837	34789
Log likelihood	-9921.23	-9914.87	-16341.18	-16300.53

Marginal Effects are evaluated at the sample means for continuous variables. Standard errors are shown in parentheses. All regressions include province dummies, excluding Jakarta. In addition, we restrict our sample to IFLS communities where village population > 10. * denotes significance at the 10 percent level of significance, ** at the 5 percent level, *** at the 1 percent level, & denotes significance at the 11 percent level. Results shown here are based only on communities where organizations are in existence (Sample 2)

TABLE 9

**Understanding the Prevalence
of Community Organizations**

Dependent Variable: occur

Variable	(1)	(2)	(3)	
	OLS	IV	Probit	
			Marginal	Coefficient
			Effect	
<i>Community-Specific Variables</i>				
Ethnic	-0.05 *	-0.11 ***	-0.08	-0.23 *
	(0.02)	(0.05)		(0.12)
Average Expenditure in Rupiah (X 10 ⁶)	0.09 *	0.05	0.17	0.48 *
	(0.05)	(0.06)		(0.29)
Government Spending (per capita)	-0.003	-0.03	-0.003	-0.01
	(0.002)	(0.02)		(0.01)
Average Years of Schooling	0.01 ***	0.01 ***	0.01	0.02
	(0.003)	(0.003)		(0.015)
Gini Coefficient	-0.11	-0.04	0.33	0.95
	(0.11)	(0.14)		(0.61)
Number of obs =	2700	2690		2700
Adjusted R-squared	0.06			
Wald chi2-Statistic =	159.83	139.16		76.43
RANDOM EFFECTS (community-level)	YES	YES		YES

Marginal Effects are calculated at the mean. Standard errors are shown in parentheses. All regressions include province dummies.

We exclude Jakarta from our analysis. In addition, we restrict our sample to IFLS communities where village population > 10.

* denotes significance at the 10 percent level of significance, ** at the 5 percent level and, *** at the 1 percent level

Results also includes controls for log population and urbanization. Constant term is not shown.

In the instrumental variable specification (column 2), we instrument for government spending.

Appendix A

Ethno-Linguistic Groups in the Indonesia Family Life Surveys 1997/98 (IFLS2)

Main Language Spoken at Home	Percentage of Sample
1 Bahasa Indonesia	13
2 Javanese	40.19
3 Sundanese	11.2
4 Balinese	4.12
5 Batak	2.86
6 Bugis	3.39
7 Chinese	0.75
8 Maduranese	3.48
9 Sasak	3.54
10 Minang	4.89
11 Banjar	3.55
12 Bima	1.46
13 Makassar	0.97
14 Nias	0.36
15 Palembang	0.95
16 Sumbawa	0.79
17 Toraja	0.51
18 Lahat	0.46
19 Oth SumSel	1.87
20 Betawi	0.37
21 Lampung	0.41
22 Other	0.89