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## **What to Expect from Development NGOs: Location Decisions and Impact in Rural Bangladesh**

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### **Introduction**

Non-governmental organizations (NGOs) are politically independent, flexible, innovative, and efficient vehicles for the delivery of basic services and for poverty alleviation; or they are self-promoting and unsustainable providers of whatever development activities government and donors prefer. NGOs in some circles are authentic representatives for the poor and the disenfranchised, but others cannot help but notice how dependent most NGOs in developing countries are on foreign donors. On the one hand Grameen Bank has achieved a self-sustaining credit program for poor rural women in Bangladesh that has achieved repayment rates consistently over 90% (Khanker, Khaliy and Khan 1996); on the other are stories of opportunism and corruption, including that of a Pakistani wit who said that while dowries once consisted of cash and livestock, now they include cash, livestock, and an NGO. (Smillie and Hailey 2001)

There are two main reasons why perceptions of NGOs differ so. Most obviously, the term NGOs embraces a myriad of different types of organizations. They vary in size and scope, religious orientation, their use of volunteers or professionals, and their relationships to governments and donors. The same NGO, moreover, can evolve substantially over its lifetime. Characterizations of the life of a typical NGO generally describe an evolution from volunteerism, political activity, “conscientization,” and small-scale pilots toward professional staff, expansion in size and scale, report-writing and evaluation, contracting with donors and government, and involvement in profit-generating activities. (Sorryamorthy 2001, Wood 1997) At different points in time, the same NGO can appear to be both original and foreign-directed, selfless and self-promoting, haphazard and efficient, giving credence to various charges of hypocrisy or “selling out.”

The second reason that judgments of NGOs tend to be polarized is that NGOs are usually defined in relation to what they are not. Unlike government, NGOs are supposed to be innovative and to respond flexibly to their clients; unlike firms, NGOs are supposed to prioritize the poor and to serve public, rather than private, purposes. They are perceived as more cost efficient than

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governments and as part of civil society, hence agents of democratization (Korten 1990 and Clark 1991) The problem with these negative definitions is that the same economic, social, and political pressures that influence public sector and firm behavior eventually affect NGOs. Particularly as they scale up, NGOs inevitably share characteristics of the very entities in opposition to which they are defined. Most of the well-known NGOs started as emergency relief agencies but in the 1960s and 70s "discovered" development (Eade (2000)). When the causes of poverty and vulnerability started to be perceived as structural, NGOs identified development as the key to disaster prevention. Hence they started programs that go from "building latrines and sinking tubewells through to supporting union education programs and human rights work" Eade (2000).

Some of the prominent NGOs in Bangladesh arose during the Liberation struggle in the early 1970s, when self-interest was set aside for national reconstruction, and gained further prominence in relief efforts following disastrous floods in 1988 and the cyclone in 1991, times when human needs were obvious and not significantly contested. But after the emergency receded, the NGOs resumed conducting the day-to-day task of helping to articulate and respond to community demands in the traditional Bangladeshi manner – by prioritizing personal relationships, bestowing largesse in the form of access or favors, playing the role of “officer” to rural folk. (White 1999) It would have been surprising had NGOs been able to escape the patron-client model that also limits the capacity of government both to represent and serve citizens’ needs. To take another example, Sahaya Sadanam, a rural development NGO in India, began as a popular community development association led by a rustic villager with strong Gandhian ideals. As it grew in size and complexity, the founder brought on first his wife, then his daughters, a brother, and a son-in-law, to help run the organization because he spent more time away fund-raising. Villagers believed that both the family’s and the NGO’s expenditures grew lavish, and the NGO resisted an attempt by a local Marxist party to unionize its staff. (Sooryamorthy 2001) Although outrageous to some of those directly involved, from a distance it is not surprising that pressure to employ kin, which afflicts many if not most firms in India, would also affect this private entity. The incongruity stems from the belief that NGOs are supposed to serve public, and never private, objectives.

Although a theoretical literature on NGOs has emerged, it does not help to clarify their behavior, largely because analysts assume different objective functions for NGOs. Among the possibilities offered are maximizing budgets, maximizing quality and quantity, maximizing the use of preferred inputs (such as medical supplies or handicapped persons), maximizing a combination of commercial and public benefits, maximizing profits, and maximizing social welfare. (Steinberg 1993, cited in Galaskiewicz and Bielfeld 2001) Empirical tests have found evidence for the hypotheses that some not-for-profit entities are subject to pressures to increase resources as much as possible, but comparisons between for-profit and not-for-profit hospitals have found that variation between is much smaller than variation within the for-profit and not-for-profit classes. (Cutler 2001, Galaskiewicz and Bielfeld 2001)

This paper utilizes data from community and household questionnaires in Bangladesh to identify the determinants of NGO location decisions and, in particular, to test three alternative explanations. The HIES does not collect information regarding the hiring decisions of NGOs or their relationship to their clients, so an assessment using these data of staff motivation is not possible, only an analysis of NGOs as unitary organizations. But the data do allow answers to

questions such as these: are NGOs in Bangladesh more likely to be located in poorer communities (suggesting an altruistic motivation), are NGO programs more likely to be established where local political leaders reside (suggesting susceptibility to political influence), and are NGO programs more likely to be established in communities that have fewer NGOs to begin with (suggesting a motive to expand geographic coverage)? A further analysis assesses the extent to which, assuming that NGO program placement is endogenously determined in the manner established, the number of new NGO programs in a community has a significant impact on the change in community-level poverty rates within five years. Because the questionnaires disaggregate NGOs by name and sector, the relative impact of different NGOs on poverty can be compared.

Our analysis suggests that NGOs that established new programs in rural Bangladesh between 1995 and 2000 did not target those programs on poor communities. One possible interpretation is that altruism alone did not motivate NGO location decisions, whether among named NGOs, small NGOs, or NGOs of any sector. Education NGOs, in establishing new programs between 1995 and 2000, were not targeting on communities with high mean illiteracy rates, nor were skills NGOs. Similarly, mean household size at the community level was not significant in explaining the location decisions of health and family planning NGOs. Political influence does not seem affect NGO location either whereas accessibility does. This latter result holds particularly for large NGO, a possible explanation being the fact the big NGOs staff and supply their programs from around the country, whereas small NGOs generally set up shop wherever the founder resides. Caritas NGO programs established between 1995 and 2000 were associated with declines in community-level poverty rates, but other NGO programs were not.

## **The Country Context**

Bangladesh makes a good case study because NGOs are unusually concentrated and influential in that country<sup>2</sup>. Their influence in Bangladesh dates to the civil war that led to the nation's independence, in which one million people died and ten million others were displaced, as well as to the disastrous cyclones of 1972, which overwhelmed the capacities of the newly established government in Dhaka. The international agencies and Northern NGOs that offered the government assistance also funded a number of local voluntary organizations that sprung up to help in the reconstruction effort. As conditions became more stable, many of these NGOs expanded their activities to include poverty alleviation more broadly, as well as "consciousness raising," (Hashemi 1996) and not only disaster relief. Donors continued to send resources because the needs were obvious, the absence of ideological or federal divisions in government reduced potential rivals, and a religiously and ethnically homogenous society was receptive. (Smillie and Hailey 2001) These initial conditions set the stage for the rapid expansion of Bangladeshi NGOs in the coming years.

The relationship between the government of Bangladesh and NGOs became confrontational in the early 1990s, when elements of the new government suspected NGOs of having been too close to the former government of General Ershad, and of corruption and excessive involvement in politics. The government established an agency to regulate and monitor NGOs, the NGO Affairs Board (NAB), and required NGOs that receive foreign funding to

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<sup>2</sup> As of March 1997 the number of foreign funded NGOs registered with the NAB was 1,151.

register with it. The NAB then issued a report accusing many of the leading Bangladeshi NGOs of securing foreign funds without the permission of government, claimed NGOs maintained illegal bank accounts, and spent unusually large amounts on staff salaries and luxuries like air-conditioned cars. The NGOs issued a rejoinder to the report, and the NAB backed off its threat to revoke the operating license of the coordinating body of NGOs, the Association of Development Agencies of Bangladesh (ADAB). (Hashemi 1996) Since that time, NGO-government relations have become more collegial. Now NGOs in Bangladesh relate to the government directly through the NAB, whereas earlier as many as 40 government signatures had been required to set up an NGO, the process often took six months. (Fisher 1998)

Foreign donors account for an estimated 80-95% of the financing of indigenous NGOs in Bangladesh. In 1992 estimates were that NGOs in Bangladesh received 8% of total foreign aid to the country, and the largest eight NGOs took in half of that amount. (Holloway 1998) Some of the more prominent NGOs, such as BRAC and Proshika, have negotiated \$50 million assistance packages with foreign donors. (Hulme and Edwards 1997) NGOs of varying types, including community organizations, membership organizations, the private voluntary development groups, and religious institutions, are involved in a sizeable fraction of development activity in the country. In education, for instance, non-government schools educate 40% of enrolled students at the primary level and 97% at the secondary level. (World Bank 1998) The credit activities of Grameen Bank alone reach over 2 million borrowers, and NGOs as a whole account for 65% of all rural credit in the country. (Holcombe 1995, World Bank 1996) The achievements of some of the NGOs are also striking, particularly in comparison to the government. BRAC, for instance, reportedly had attendance rates of 90% in its non-formal primary schools while the government attendance rate was 15% (Holloway 1998)

## **Related literature**

Although the question motivating this analysis – what determines NGO program placement in developing countries, and what effect do NGO programs have on community-level poverty rates – remains unexplored in the literature, a number of papers examine closely related issues.

Several papers have addressed the problem of endogenous program location in impact evaluation. Rosenzweig and Wolpin (1986) use data from a survey of 240 households in the Laguna Province in the Philippines to evaluate the effect of public health and family planning services on health outcomes (child height and weight). They show that simple cross sectional analyses underestimate the impact of public programs because program allocation follows a compensatory rule in which more disadvantaged *barrios* receive health promoting programs earlier than others. Similarly, Pitt, Rosenzweig, and Gibbons (1993) use Indonesian household-level, cross-sectional census data merged with comprehensive *kecamatan* (sub district) –level information on programs at two points in time to identify program effects on human capital indicators and the determinants of program location. They again show that the non-random distribution of programs biases cross-sectional evaluations of impact, and they find a trend toward convergence in program density; that is, areas better endowed with a program received fewer new programs of that type. The paper whose subject is most closely related to the present analysis is that of Ravallion and Wodon (2000), who use data from the earlier round (1991-1992)

of the Bangladesh Household Expenditure Survey (HES) and data on bank branch locations. They argue that the geographic placement of banks should be influenced by the potential gain from switching to more profitable nonfarm activities in rural areas, estimate the potential gains from such switching, and find that Grameen chooses bank locations so that more of those gains are realized by the poor, whereas other banks are located in areas in which the gains favor groups other than the poor.

The literature evaluating the impact of NGO programs on poverty at the household level in Bangladesh has focused largely on micro credit programs. Pitt and Khandker (1998) estimate the impact of participation in micro credit programs in Bangladesh on labor supply, schooling, household expenditure, and assets. They use a “quasi-experimental” survey design to correct for the bias due to unobserved heterogeneity at the individual and village- level, using fixed-effect estimation in a limited information maximum likelihood framework. They find that credit is a significant determinant of many of the outcome considered and that credit provided to women is more likely to have influence on these behavior than that provided to men. However, Morduch (1998), using the same data and a difference-in-difference estimation, which corrects for the fact that the unobservable characteristics responsible for program placement might be specific to populations within larger communities (and noting the use of fixed effects can exacerbate the biases), finds a smaller impact from access to credit. Households with access to credit do not have higher consumption levels or more schooling, though the variance in their consumption and employment are lower. Morduch (1999a, 1999b, 2000) elsewhere notes that micro finance programs have required large subsidies, and that the hopes for the basic mechanism of micro credit, group-lending contracts with joint liability, have exceeded what the evidence shows it can achieve. The evidence for the effect of micro credit on reducing vulnerability to shocks and empowering women appears stronger than the evidence that it mitigates poverty (Hussain 1998, Zaman 2001). However, using data from two villages in Northern Bangladesh, Amin, Rai and Topa (2002) find that microcredit programs are successful at reaching the poor but less so with the vulnerable. In particular they do not succeed in reaching the vulnerable poor, the group mostly in danger of destitution.

Galasso and Ravallion (2000) analyze a targeting performance of a decentralized welfare program, Bangladesh’s Food-for-Education program. They find that at the community level and community targeting from the center. They find that the performance differed a lot between villages. There is a tendency for the nonpoor to obtain a higher per capita allocation in less poor villages. Also they find that inequality affects the allocation and to higher inequality in land distribution corresponds higher appropriation by the nonpoor. They find little sign of the center targeting poor villages.

To summarize, the extant evidence that NGOs in Bangladesh reduce poverty is weak or mixed, though micro credit programs do appear have an impact on vulnerability to shocks and empowerment, and the determinants of NGO program location remain unexplored, though there is evidence that the location of development programs is compensatory in some places but not in others. This paper looks at the determinants of NGO program location, and the effect of NGOs in Bangladesh on community-level poverty rates.

## Data and methods

The data used in the analysis are taken from the Bangladesh Bureau of Statistics Household Expenditure Survey of 1995-96 and the Household Expenditure and Income Survey of 2000 (HIES). In rural areas, that accounted for 80 percent of the population in 1998, the HIES included both household and community questionnaires, and it is the latter which inquired about the number and types of NGOs in the sampled rural communities. A total of 252 communities were sampled in each survey. For 248 of them we have observations in both surveys, which allows for the creation of a panel data set. Missing values for the selected variables reduced the sample size about 20% in each of the regressions estimated. There were weak correlations between missing values and the variables of interest, suggesting that the missing values are not biasing the estimation results (Tables 11 and 11b). Up to three NGO programs could be listed in the 1995-96 survey, and up to ten in the 2000 survey. Although the difference in the number of allowable listings might bias the analysis, only 26 communities (10%) in 1995-96 used all three allowed slots for NGO programs, suggesting that the problem is not large.

The 1995-96 questionnaire also asked if the NGO program in question belonged to one of four major NGOs (Grameen Bank, BRAC, Proshika, and Caritas), and the 2000 questionnaire also inquired about a fifth specific NGO, Asha. In order to analyze the behavioral characteristics of distinct types of NGOs, if an NGO program was named as one of the four identified in the 1995-96 questionnaire, it was called a “Big NGO” program; otherwise it was a “Small NGO” program. (Asha programs were considered neither big nor small). Both questionnaires also asked for the type of activity conducted in each NGO program, with choices that included credit, education, skills training, family planning, tree planting, water and sanitation, and other. There were small differences between the two questionnaires regarding the language used to characterize these activities, but they did not appear to be substantial enough to lead the same NGO program to be characterized differently in the two surveys.

A variable for the number of government programs was constructed by simply adding extant government programs, from a list of ten, reported in each community. A measure of the remoteness of the community was constructed by adding the reported travel times from the community to both the thana and district headquarters. Community-level estimates for consumption, education, employment, demographic composition, and literacy were constructed by matching the household and community questionnaires. Household data, along with regional and temporal deflators, were used to construct a headcount measure of poverty, the poverty gap, and the squared poverty gap. In constructing the poverty indicators we mainly used the lower poverty line that indicates the very poor. We also checked our results with indicators derived from the upper poverty line and highlight the main difference. A measure of local political influence was constructed by adding one point to a score if a member, the secretary, or the chair of the local thana council resided in the community, resulting in a score for political influence that ranged from 0 to 3. The number of households in the community, taken from the community questionnaire, was a more reliable estimate of community size than the reported population.

Consistent with the time-series approach, the estimation below used, as the left-hand-side variable, not the number of NGO programs but the *change* in the number of NGO programs between 1995-96 and 2000. The right-hand-side variables, characteristics of the community in which new NGO programs are established, were *levels* from 1995-96. In that manner, the

regression can be interpreted as estimating the expected effect of community characteristics, in 1995-96, on the net change in the number of NGO programs of a given type in the community five years later.<sup>3</sup> The model specification is linear. Although one could easily derive more complex relationships among right-hand-side variables on the basis of a hypothesized relationship among NGO objectives, theory offers no reason to prefer one non-linear specification to another. (Identifying the terms in the NGO objective function is precisely the motivation for this analysis). The choice of estimating equation is therefore arbitrary, and linear relationships among the right-hand-side variables make for the easiest presentation. The model, estimated using robust OLS, then, is:

$$N_{ij(t+1)} - N_{ijt} = \beta_0 + \beta_1 N_{ijt} + \beta_2 W_{it} + \beta_3 X_{it} + \beta_4 Y_{it} + \beta_5 Z_{ijt} + \varepsilon_{it},$$

where N is the number of NGO programs of type j in community i at time t, W is a set of community characteristics at time t (remoteness, number of households, number of government programs), X is a set of measures of poverty or need in the community (log of per capita consumption, scaled number of poor households), Y is a measure of community political influence, and Z is a pair of measures of NGO program concentration and program concentration of NGOs of that type in the region.

The model tests three alternative accounts of NGO behavior. First, each NGO might be purely altruistic, in the sense that it locates new programs where needs are greatest. In that case, one would expect to find positive and significant coefficients on the consumption and poverty variables. Second, NGOs might locate where local political leaders lobby them to do so. In a democratic context, it is assumed that bringing NGOs to the community will help a leader win votes, and that council members and officers will be particularly effective in their home communities. This account of NGO behavior would be consistent with a significant and positive coefficient on the political influence variable. Third, NGOs might be interested in expanding their own influence, in the sense that they want to reach as many people as possible. In that case, they will locate new programs in regions where they were not located in the previous time period, but they will not be sensitive to the number of other NGOs in the communities in which they locate. That account would be consistent with a significant and negative coefficient on the number of NGO programs in the community in the previous time period, and an insignificant coefficient on the variable for the number of programs being operated in the community by other NGOs in the previous time period. Finally, if NGOs are efficiently maximizing any of these objectives, one would expect to find a significant and negative coefficient on the remoteness variable. This is more likely to be true for the class of large NGOs that operate programs throughout the country than it is for small NGOs, which generally set up a program in the community in which the founders reside, instead of choosing communities in order to maximize their objectives.

Having identified the determinants of NGO program location, the second stage of the analysis examines the effect of new NGO programs on poverty and inequality. Changes in poverty and inequality at the village-level are taken as left-hand-side variables and regressed on the change in the number of NGO programs, as well as a set of other determinants, such as

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<sup>3</sup> Another approach might look at the entry and exit of NGO programs separately, on the assumption that different factors motivate each. That analysis is being conducted separately.

changes in electrification, literacy, per capita income, and the number of government programs. In order to control for the endogeneity of NGO program location, the change in the number of NGO programs of a given type in a community is simultaneously estimated as a function of the number of NGO programs of the same type in the community in the previous time period. The analysis described above will show that these are strongly correlated. Besides it seems reasonable to assume that it is uncorrelated to the error term. The resulting system of simultaneous equations estimated, then, is:

$$H_{i(t+1)} - H_{it} = \gamma_0 + \gamma_1 D + \gamma_3 (V_{ij(t+1)} - V_{ijt}) + \gamma_4 (N_{ij(t+1)} - N_{ijt}) + v_{it}$$

$$N_{ij(t+1)} - N_{ijt} = \gamma_5 + \gamma_6 N_{ijt} + u_{it}, \quad j = 1 \dots n,$$

where H is the community-level outcome indicator in village i at time t (poverty or inequality), D is a set of eight regional dummy variables, V is a set of community-level factors related to poverty (log of per capita consumption, electrification, literacy rate), N is the number of NGO programs of type j in community i at time t, and n depends on the level of disaggregation being considered (so that, for example, seven different equations are estimated when NGOs are disaggregated by name, one each for the change in the number of government programs; small NGO programs; Grameen, BRAC, Proshika, and Caritas programs; and one more for the estimate of the change in the poverty or inequality indicator).

## Findings

Both the intensity and coverage of development NGOs increased sharply in the late 1990s. Table 1 shows that whereas 48% of rural Bangladeshi communities had an NGO program in 1995-96, 91% did so in 2000. For big NGOs, the coverage rate more than doubled, going from 39% to 84%; for small NGOs it nearly tripled, going from 18% to 48%. The intensity of NGO programs within communities also increased from 0.9 programs per community in 1995-96 to 2.8 in 2000. The share of those programs that big NGOs operated declined from 71% to 63%: although big NGOs continued to predominate the sector, small NGOs grew faster over the period. As Table 1 shows, these increases in coverage and intensity were visible across organizations and sectors of activity. In particular credit and education programs drastically increased their presence across and within communities. BRAC and Grameen were the NGOs with the widest scale of operations: in 2000 each covered more than half the rural communities in the country, and BRAC was approaching an average of nearly one program per rural community.

Tables 3a, 3b and 3c show mean NGO programs in the five geographic divisions. You can locate the divisions on the map at page 18. Barisal witnessed the largest increase in both the average number and presence of NGO programs between 1995-6 and 2000, while Chittagong experienced the smallest increase in both. In Khulna the average number of NGO programs increased much more than the presence of NGO programs, which suggests that in that region NGO programs were placed in areas with pre-existing programs, rather than going to cover communities which did not have any.

Tables 4a and 4b characterize the type of activities that NGOs were performing in the two sampled years. In 1995 BRAC was engaged primarily in education programs and only



secondarily in credit and health/family planning, but by 2000 the number of BRAC credit programs had increased sevenfold and was almost equal to the number of its education programs, which themselves had more than doubled. The increases in other NGO programs also were concentrated in the credit sector. Meanwhile, the number of BRAC health/family planning programs (only) doubled and represented a little more than ten percent of all BRAC programs. BRAC and small NGOs were responsible for almost all of the increase in NGO education programs. Interestingly, the share of programs managed by small NGOs increased in every sector, suggesting growing diversification in the kinds of NGO providers.

Despite the sharp increase in the intensity and coverage of NGO programs over this period, community coverage rates per poor household were highly uneven. Table 2 shows that although mean coverage rates were 1.9 and 4.6 programs per 1,000 poor households in 1995 and 2000, respectively, the same rates in communities with coverage rates per poor household in the top decile were 11.05 in 1995 and 20.25 in 2000. In other words, some communities had many more NGOs, per poor household, than others. On the face of it, that suggests that NGOs do not base location decisions exclusively on the number of unserved poor, in which case coverage rates per poor household would be the same across communities. It is possible, of course, that NGOs do not have information about the number of other NGOs in the communities, or that only some NGOs target on poverty, while others focus on, say, literacy rates, contraceptive availability, or some other indicator of local need. By comparison, however, NGOs as a whole target the poor about as well as government: in 2000, each village had an average of 8.3 government programs per 1000 poor households, but the range was wide, with a maximum of 60.8 government programs per 1000 poor.

The examination of the objective function of NGOs tests the targeting question directly. Tables 5-7 present results of similar specifications for NGOs by size, brand, and type of activity. Tables 8a through 8d present results of the regressions estimating the effects of the presence of NGOs on community-level poverty and inequality. Five main findings emerge from these results.

*Finding 1: Poverty rates, per capita consumption, and other measures of need did not influence NGO location decisions.*

In the twenty-four regressions presented in Tables 5 - 7, there are forty-eight coefficients on the variables for the number of poor households per community, the poverty gap, and real per capita expenditure. Only four of these are significant. Coefficients on real expenditure per capita were significant and negative in one of the estimations for education NGOs and in both estimations for water and sanitation NGOs; the coefficient on the poverty gap was significant and positive in one estimation for BRAC; and none of the coefficients on the number of poor households was significant. In all four of these estimations, however, the coefficients on expenditure and poverty become insignificant after two high leverage observations are dropped.

All of the estimations include the log of real per capita expenditures, taken from the household survey data, in order to see if NGOs might be targeting average community income, if not poverty per se. That turns out not to be the case. It is possible, however, that collinearity between per capita consumption and either of the poverty measures is obscuring the effect of the variables on NGOs' location choices. To check this, specifications without the real per capita consumption

variable were estimated (not shown). There was no change in the significance levels of the variables for number of poor households and poverty gap. In addition, tests found only two instances in which the coefficients real per capita consumption and the poverty variables were jointly significant (one estimation each for education and water and sanitation NGOs), and both were the cases in which the significance level of real per capita consumption rose above 5% after two influential observations were dropped.

In the estimations shown in the tables, the poverty rates and per capita consumption variables have no effect on NGO location decisions, controlling for remoteness. It is possible, however, that poor communities are also located farther from thana and district headquarters, with the result that the inclusion of the remoteness variable is hiding the significance of the poverty variables. To test this, the remoteness variable was dropped and all equations in Tables 5 - 7 were re-estimated (not shown). The coefficients and standard errors on the variables for the number of poor, poverty gap, and per capita consumption were largely unchanged; and there were no changes in significance at the 5 percent level.

In summary, then, NGOs that established new programs in rural Bangladesh between 1995 and 2000 did not target those programs on poor communities. The interpretation here is that altruism alone did not motivate NGO location decisions, whether among named NGOs, small NGOs, or NGOs of any sector. This is not to suggest that beneficence plays no role in NGO activities. There are countless individuals in Bangladesh, as in other countries, for whom volunteerism and personal sacrifice, a special concern for the poor irrespective of where programs are located, and the appeal of a higher calling are why they work in NGOs. Those values are also important, however, to many outside the sector, including many in Bangladeshi government. The point being made here is that NGOs, *as organizations*, are not so permeated with altruism that it is apparent in their location decisions. It is possible, of course, that the targeting of human needs other than poverty, such as social exclusion, guides their location choices; and those cannot be easily captured. To get at this problem in a simple (and admittedly incomplete) way, three simple tests of alternative targets were conducted with the available data (not shown). Education NGOs, in establishing new programs between 1995 and 2000, were not targeting on communities with high mean illiteracy rates, nor were skills NGOs, in the sense that the coefficient on the variable for literacy levels in 1995 was not significant when estimating numbers of new NGO education and skills programs in the year 2000. Similarly, mean household size at the community level was not significant in explaining the location decisions of health and family planning NGOs.

*Finding 2: Communities with local political influence were neither more nor less likely to get new NGO programs.*

The absolute magnitude of the coefficient on the political influence variable was small in every regression (less than 0.2), inconsistent in sign, and never significant. This result suggests that the members, secretaries, and chairpersons of union councils are not interested in attracting NGOs to or repelling them from their villages, that they are ineffective at doing so, that NGOs are not influenced by local politicians, or some combination of the above. Some local politicians might seek to bring NGOs to their communities because it seen as constituent service, but others might prefer to keep NGOs away because non-governmental organizations, particularly those

involved in “consciousness raising” and those that are politically connected, constitute separate sources of legitimacy and political brokerage that challenge the power of elected officials. It is possible that some local politicians effectively attract NGOs and others effectively keep them away, with the aggregate result that no impact is visible, as the present data show. The result might also suggest that local politicians do not have the political or financial resources to influence NGO location decisions. NGOs in Bangladesh, particularly the big named ones, are primarily financed by external donors, and it might be more important for them as organizations to appear to be expanding coverage, for instance, than to please union council members. It is more surprising, however, that there is no evidence that political power influences the location decision of small NGOs.

*Finding 3: Big NGOs, and BRAC in particular, as well as credit NGOs, were likely to establish new programs in more accessible communities; but small NGOs were not.*

For all NGOs, taking the union of the two 95% confidence intervals in Table 5, there were between  $-0.05$  to  $-0.37$  fewer NGO programs established for every 100 minutes of combined travel time from the community to the thana and district headquarters. A community that was a combined eight hours away from the two headquarters sites (the average combined travel time was four hours and eleven minutes), then, had between 0.24 to 1.78 fewer NGOs established between 1995 and 2000 than a community that was simultaneously located in the thana and district headquarters, other things being equal. The magnitudes of the coefficients on the remoteness variable in the big NGO, BRAC, and credit NGO estimations were also significant, negative in sign, and similar in magnitude.

As a group, big NGO programs were sensitive to remoteness but small NGOs were not. The probable explanation for this is that big NGOs staff and supply their programs from around the country, whereas small NGOs generally set up shop wherever the founder resides. The coefficient on remoteness was negative for all of the big NGOs, but it was only significant (and was two to three times larger in magnitude) for BRAC. Even in the 1995 cross-section, BRAC NGO programs were located in more accessible communities than those of other three big NGOs. The reason for this might well be that BRAC provides health care and other services that require physical inputs more often than the other big NGOs, and that these are more easily shipped to more accessible cities. Similarly, credit NGOs were less likely to be established in remote communities, but skills training, health and family planning, education, water and sanitation, and other NGOs were not sensitive to village remoteness. The attraction of relatively more centrally located communities to credit NGOs is likely explained by the necessity of locating their operations near commercial banks (in order to make deposits and withdrawals), and/or by their need for information regarding their clients’ product markets.

*Finding 4: NGOs of all types dispersed spatially, were generally not sensitive to the presence of other NGOs’ or government programs, and tended to locate in geographic regions with high NGO concentrations.*

By far the strongest predictor of where new NGO programs were established in 2000 was the number of similar NGOs in 1995. The coefficient on the number of NGO programs established was significant at the 1 percent level and relatively large in magnitude – the marginal

effect of each NGO program extant in a community in 1995 was to reduce new NGO programs in that community in 2000 by 1.00 program. Moreover, related coefficients for every category of NGO size, name, and sector were all significant at the 1 percent level, negative in sign, and similar in magnitude, ranging from  $-0.57$  for Proshika programs to  $-1.32$  for skills programs. The absolute value of the coefficient for small NGO programs was larger than that for big NGO programs. Consistent with that, the absolute values of the coefficients for brand NGOs in 2000 were smaller than those for NGO sectors, which includes both big and small NGOs. Coefficients on the number of extant NGO programs of other kinds, on the “cross effects,” in other words, were not significant.<sup>4</sup> (The number of small NGO programs in a community in 1995, for example, did not affect the number of big NGO programs established between 1995 and 2000; and likewise the number of education programs in 1995 did not affect the number of new credit programs). With respect to the influence of government programs on NGO program location, coefficients on the number of government programs in existence in 1995 generally were not significant in the estimates of new NGO programs. The only exception were that new Caritas programs were positively related to the number of government programs in 1995, though the magnitude of the effect was small, and the finding did not appear robust.<sup>5</sup>

The interpretation of this effect involves six parts: for the categories of sector, size, and brand, an account of why the number of NGO programs in existence in 1995 reduced the number of NGOs of that same kind established between 1995 and 2000; and, for the same three categories, an account of why new NGO programs established were by and large not sensitive to the number of NGOs of other kinds present in 1995. The significant and negative “own sector” effect might well be the result of unwritten rules among the big NGOs (particularly Grameen, BRAC, and Proshika) in which they do not locate, say, a credit NGO in a community if one of the other big NGOs already has a credit NGO located there. The idea is not to duplicate efforts. This unwritten rule does not apply across sectors. Given that big NGOs dominate activity in all of the sectors, the coefficients on “own sector” NGOs predictably are negative while those for “cross sector” NGOs are not significant. The significant and negative “own brand” effect, combined with the lack of significance for the “cross brand” effect and the lack of significance of the coefficient on the number government programs, suggests that, other things being equal, big NGOs established new programs in communities in which they were not active, and did not care whether the other big NGOs or the government already had programs in the communities (unless those programs were in the same sector as their proposed programs). This behavior is consistent with a model of big NGOs in which they seek to cover as many communities as possible, perhaps to show donors how active they are, or to raise their own profile or influence in the country, rather than doing what might be less costly – expanding their existing base programs into new sectors in the same communities. The significant and negative “own size” effect,

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<sup>4</sup> Of the 68 “cross effects” coefficients in the 22 regressions, eight were significant: in Table 7 the change in the number of BRAC and Proshika programs established was negatively related to the number of Caritas programs in existence, and in Table 8 the change in the number of credit programs was negatively related to the number of skills programs and to the number of water and sanitation programs. These all appear to be spurious correlations: deleting the one or two largest outliers, based on a high value for Cook’s distance, led these coefficients to lose significance while the magnitudes and significance levels of the other variables remained unchanged.

<sup>5</sup> Deleting the three largest outliers, based on Cook’s distance, led the coefficient on the number of government programs to lose significance in the model with headcount poverty, but it remained significant in the model with poverty gap. In both cases, the magnitude of the effect remained near small, about 0.04.

combined with the lack of significance of the “cross size” effect, could, for big NGOs, be a direct consequence of the “own brand” effect: given that the tendency of each big NGO is to establish programs in communities in which it does not already operate, and is not positively or negatively related to the number of programs other big NGOs operate, big NGOs as a group will appear to prefer new communities. For small NGOs, the explanation is not clear. Perhaps the reason is that small NGOs tend to engage in consciousness raising and other quasi-political activities, and that it is difficult for more than one such NGO, irrespective of sector, to gain the attention of a community, and that, as a result, the existence of small NGOs in a community is a deterrent to the establishment of others.

The coefficient on NGO concentration at the level of geographic regions was significant and positive in most regressions. Regions in which the NGO concentration per community was higher in 1995 tended to have more new NGO programs established in them between 1995 and 2000. This might be evidence for a kind of network effect for NGOs – higher concentrations of other NGOs nearby might have spillover effects in terms of information and staff that lead to lower set-up costs for new programs. But there was no evidence of network effects when district, thana, and sub-regional concentrations were included in the model. It is possible, then, that the regional NGO concentration variable is merely working as a dummy variable for geographic region, since there are only two points in the time in the survey data. Still, it is noteworthy that those regions with high community-level NGO concentrations in 1995 also had more NGOs established in them between 1995 and 2000.

*Finding 5: Caritas NGO programs established between 1995 and 2000 were associated with declines in community-level poverty rates, but other NGO programs were not.*

Tables 8a, 8b and 8c show the results of regressions that estimate the determinants of changes in community-level head count poverty, the poverty gap, and inequality. Four different regressions were estimated for each indicator. We look at the effect of the change in the total number of NGOs on poverty and inequality; at the effect of the change in the number of government programs, small NGOs, and big NGOs taken separately; at the effect separated out by government programs and NGO brand; and at the effect separated out by NGO type. For each specification we run three type of regressions: (1) uses three-stage least squares, instruments the change in the number of NGO and/or government programs on the number of such programs in the community in 1995 (which Tables 3-5 showed is significantly and negatively related to new program location), and includes controls for change in log of per capita consumption, change in village electrification, change in literacy rates, remoteness, and geographic region dummies; (2) uses three-stage least squares with the same instruments, but only includes controls for remoteness and the geographic region dummies; and (3) uses ordinary least squares and with controls for remoteness and the geographic region dummies.

The tables reveal that the change in the number of big NGOs was significantly and negatively related to headcount poverty and the poverty gap, but that the change in small NGOs was not. All of the effect of big NGOs, however, was attributable to the change in the number of Caritas NGOs. The coefficient for the effect of Caritas programs was significant at 5 percent level in all three specifications for change in headcount poverty and all three specifications for change in the poverty gap. The fact that it was significant even when controlling for the change

in log of real per capita consumption, which is, unsurprisingly, by the far the strongest determinant of the change in the poverty rates, suggests a strong association between Caritas NGOs and poverty reduction. Adding a variable for baseline poverty rate in 1995 does not change the significance level of the coefficients on the Caritas variable, except for the first specification in the case of poverty gap, and the second in the case of head count, though it does lower the magnitude of the effect<sup>6</sup>. (check this, not clear) Each new Caritas program was associated, using the estimate from the 3SLS specification with controls and a 95% confidence interval, with a  $-1.90$  to  $-26.39$  change in the percentage of the community living below the poverty line. Changes in the number of other NGO brands had no effect in these estimations. This is not meant to imply that their work is not poverty-reducing: all that can be concluded here is that locating new NGO programs did not have a short-term effect on poverty rates in the communities in which those programs were located. Table 6 also shows that none of the NGO programs had any effect on short-term changes in community-level inequality.

What if we considered the poor rather than the very poor as we have done so far? Most of the analysis goes through. As far as location determinants we have that in the regressions for the change in number of education and skill training program the coefficient on the poverty gap increases its significance.

With respect to the effects of change in number of programs on poverty indicators we have the main differences can be seen by looking at table 8d. Looking at the first three columns of this table we can see that the change in number of NGO programs between 1995 and 2000 has a negative and significant coefficient even controlling for income. In particular Big NGOs have a larger and more significant negative coefficient. This seems to suggest that NGOs as whole have are associated to reduction in poverty rates, especially when we do not restrict our attention to the very poor. Caritas remains the NGO with the higher and most significant coefficient.

What explains the effect of the Caritas NGOs? It is not that they were located in richer communities: Table 4 shows that the change in new Caritas programs was not significantly associated with baseline poverty rates or baseline per capita consumption. Caritas programs tend to do less work in credit relative to the other brand NGOs, concentrating instead on education, capacity development, and health, and focusing their efforts on a few communities, rather than spreading their focus in a larger number of communities. Perhaps its choice of sectors explains the effectiveness of Caritas programs, or perhaps their concentration on fewer villages allows them to inject more resources into the programs that they do establish. More work is required to explain the effect.

## Conclusions

Economic theory has a simple, coherent account of firm behavior (profit maximization), and public choice theory and institutional economics have described a coherent, if more contested, set of stories regarding decision making and resource allocation in the public sector. An account of the behavior of non-profit organizations, such as development NGOs, however, remains underdeveloped, largely because there have been few empirical tests of the range of

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<sup>6</sup> In the first specification of the head count regression the coefficient goes from  $-14.14$  to  $-11.17$ , in the second specification for the poverty gap it goes from  $-4$  to  $-2.80$ .

objective functions that theory has offered for them. This paper tests three possible explanations – altruism, local politics, and the expansion of organizational influence – for one aspect of NGO behavior, program location, and finds the strongest evidence for the expansion of influence account. NGOs in Bangladesh expanded their programs to new communities between 1995 and 2000 irrespective of whether other NGOs already have programs there in operation. In other words, controlling for the remoteness of the community, development NGOs in Bangladesh separately sought to expand their coverage to the extent they could.

This paper also found that among the various kinds of NGOs in Bangladesh, Caritas programs were associated with a significant decline in average community poverty rates, controlling for changes in per capita consumption. Why Caritas programs managed to reduce poverty in the short term might be related to its choice of villages or sectors, or the NGO's decision to focus its efforts on a small number of villages. It should be noted, however, that the effect of the Caritas NGOs might also be related to the activities of, or synergies with, other NGOs: in 2000 ninety percent of the villages in which Caritas was operating might also had another large NGO program.

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**Table 1. NGOs in Rural Bangladesh, 1995-96 and 2000**

	Communities with NGO Program		NGO Programs per Community	
	1995	2000	1995	2000
All NGOs	0.48 (0.50)	0.91 (0.28)	0.92 (1.10)	2.84 (1.81)
Big NGOs	0.39 (0.49)	0.84 (0.37)	0.65 (0.93)	1.79 (1.30)
Small NGOs	0.18 (0.38)	0.48 (0.50)	0.19 (0.44)	0.68 (1.00)
Grameen	0.19 (0.39)	0.50 (0.50)	0.22 (0.47)	0.55 (0.59)
BRAC	0.24 (0.43)	0.66 (0.47)	0.31 (0.58)	0.89 (0.84)
Proshika	0.04 (0.21)	0.22 (0.41)	0.07 (0.36)	0.25 (0.55)
Caritas	0.03 (0.18)	0.09 (0.28)	0.04 (0.25)	0.10 (0.34)
Credit	0.22 (0.42)	0.81 (0.39)	0.26 (0.52)	1.66 (1.35)
Education	0.22 (0.41)	0.44 (0.50)	0.22 (0.41)	0.52 (0.71)
Skills	0.05 (0.22)	0.07 (0.26)	0.07 (0.36)	0.09 (0.36)
Family Planning	0.13 (0.34)	0.29 (0.46)	0.13 (0.34)	0.31 (0.53)
Water and Sanitation	0.03 (0.16)	0.07 (0.25)	0.03 (0.16)	0.07 (0.29)

**Table 2: Number of NGO and Government Programs, per 1,000 Poor People in a Village, Bangladesh, 1995 and 2000**

	1995		2000			
	Mean	Max	Mean in Top Decile	Mean	Max	Mean in Top Decile
NGO programs	1.87	53.98	11.05	4.56	58.83	20.25
Big NGO	1.40	53.98	9.17	3.12	44.12	15.15
Small NGO	0.34	9.22	2.96	0.96	14.71	5.77
Government	3.21	53.00	16.70	8.31	60.79	34.67

**Table 3a: Average presence and number of NGO programs by division**

	Number of NGOs		Presence of NGOs	
	1995-96	2000	1995-96	2000
Barisal	0.78 (1.02)	2.78 (1.36)	0.43 (0.50)	0.99 (0.12)
Chittagonj	0.64 (0.92)	1.81 (1.42)	0.41 (0.50)	0.76 (0.43)
Dhaka	1.20 (1.29)	2.93 (1.44)	0.56 (0.51)	0.96 (0.19)
Khulna	1.10 (1.13)	3.62 (2.28)	0.54 (0.50)	0.92 (0.27)
Rajshahi	1.20 (1.28)	3.25 (1.57)	0.53 (0.51)	1.00 (0.00)

Note: Standard Errors in parenthesis

**Table 3b: Average Number of programs by NGO type in the 5 Divisions**

	Grameen		BRAC		Caritas		Proshika	
	1995-96	2000	1995-96	2000	1995-96	2000	1995-96	2000
Barisal	0.14 (0.35)	0.51 (0.53)	0.37 (0.60)	0.93 (0.87)	0.02 (0.13)	0.09 (0.33)	0.08 (0.33)	0.41 (0.70)
Chittagong	0.18 (0.51)	0.33 (0.51)	0.18 (0.43)	0.55 (0.63)	0.07 (0.32)	0.07 (0.26)	0.00 (0.00)	0.14 (0.35)
Dhaka	0.20 (0.41)	0.68 (0.77)	0.52 (0.71)	0.86 (0.76)	0.00 (0.00)	0.11 (0.31)	0.12 (0.33)	0.18 (0.48)
Khulna	0.32 (0.50)	0.65 (0.54)	0.38 (0.63)	1.20 (0.92)	0.08 (0.33)	0.15 (0.44)	0.02 (0.13)	0.23 (0.55)
Rajshahi	0.32 (0.58)	0.71 (0.69)	0.05 (0.23)	0.79 (0.83)	0.00 (0.00)	0.04 (0.20)	0.37 (0.96)	0.25 (0.44)

Note: Standard Errors in parenthesis

**Table 3c: Average Number of programs by type of activity in the 5 Divisions**

	Credit		Education		Family Planning		Skill training	
	1995-96	2000	1995-96	2000	1995-96	2000	1995-96	2000
Barisal	0.16 (0.37)	1.72 (1.13)	0.29 (0.46)	0.51 (0.68)	0.10 (0.30)	0.25 (0.44)	0.08 (0.41)	0.10 (0.31)
Chittagong	0.14 (0.40)	0.98 (1.02)	0.11 (0.31)	0.28 (0.49)	0.18 (0.39)	0.31 (0.50)	0.00 (0.00)	0.05 (0.22)
Dhaka	0.24 (0.52)	1.79 (1.07)	0.36 (0.49)	0.61 (0.57)	0.16 (0.37)	0.14 (0.36)	0.20 (0.65)	0.04 (0.19)
Khulna	0.46 (0.67)	2.05 (1.70)	0.21 (0.41)	0.74 (0.88)	0.10 (0.30)	0.42 (0.63)	0.06 (0.25)	0.14 (0.55)
Rajshahi	0.35 (0.59)	1.96 (1.30)	0.16 (0.37)	0.38 (0.65)	0.21 (0.42)	0.46 (0.59)	0.15 (0.49)	0.04 (0.20)

**Table 4a: NGO and type of activity performed, 1995-1996 sample**

	Grameen	BRAC	Proshika	Caritas	Other (Small)	missing	Total
Credit	33	12	2	1	11	1	60
Skill training	2	2	2	1	1	9	17
Education	4	36	2	1	3	3	49
Heath/Family planning	2	11	1	2	13	1	30
water supply	1	3	0	1	1	0	6
tree plantation	2	1	4	3	7	3	20
others	4	4	6	1	8	1	24
missing	2	2	1	0	1		6
							0
	50	71	18	10	45		212

**Table 4b: NGO and type of activity performed, 2000 sample**

	Grameen	BRAC	Proshika	Caritas	ASHA	Other (Small)	Missing	Total
Credit	119	87	33	11	66	89	1	405
Skill training	1	11	3	1	0	4	1	21
Education	4	86	6	4	4	22	0	126
Heath/Family planning	3	24	9	7	7	27	1	78
water supply	2	2	1	0	1	11	1	18
tree plantation	1	6	7	1	3	10	1	29
Missing	3	1	3	0	2	4		13
	133	217	62	24	83	167		691

**Table 5. Determinants of New NGO Programs in Rural Bangladesh by dimension**

	Dependent Variable: change in number of:					
	NGO Programs		Big NGOs		Small NGOs	
Number of Government Programs	0.02 (0.09)	0.01 (0.09)	-0.05 (0.06)	-0.06 (0.06)		
Number of NGO Programs	-1.01 *** (0.11)	-1 *** (0.11)				
Number of Big NGO Programs			-0.82 *** (0.10)	-0.81 *** (0.10)	-0.09 (0.09)	-0.09 (0.09)
Number of Small NGO Programs			0.17 (0.19)	0.16 (0.19)	-1.18 *** (0.15)	-1.19 *** (0.15)
Number of Households	0.19 (0.27)	0.12 (0.16)	-0.07 (0.19)	0.01 (0.11)	-0.02 (0.18)	-0.98 (0.11)
Number of Poor Households	-0.64 (1.41)		0.29 (0.92)		-0.59 (0.78)	
Poverty Gap		3.64 (3.07)		2.77 (2.05)		1.86 (1.63)
Real Per Capita Expenditure (Log)	-0.68 (0.60)	0.19 (0.71)	-0.27 (0.40)	0.25 (0.53)	-0.57 (0.33)	-0.08 (0.33)
Political Influence	0.13 (0.15)	0.13 (0.15)	0.1 (0.12)	0.1 (0.12)	0.08 (0.07)	0.07 (0.08)
Cost	-0.22 *** (0.08)	-0.21 ** (0.08)	-0.16 *** (0.05)	-0.15 *** (0.05)	0 (0.06)	0 (0.06)
Regional NGO Concentration	2.3 *** (0.36)	2.28 *** (0.36)	0.53 (0.97)	0.6 (0.97)	0.26 (0.27)	0.24 (0.29)
Regional Small NGO Concentration					3.88 *** (1.35)	3.95 *** (1.37)
Regional Big NGO Concentration			0.77 (1.30)	0.64 (1.31)		
Constant	5.39 (3.88)	-0.43 (4.74)	2.73 (2.56)	-0.76 (3.49)	3.4 (2.16)	0.13 (2.25)
<b>N</b>	211	211	210	210	212	212
<b>R<sup>2</sup></b>	0.347	0.352	0.305	0.311	0.317	0.32

Note: \*\*\* denotes significance at the 1% level and \*\* at the 5% level.

**Table 6. Determinants of changes in number of NGO Programs in Rural Bangladesh between 1995-96 and 2000**

	<b>Grameen</b>	<b>BRAC</b>	<b>Proshika</b>	<b>Caritas</b>
# of Government Programs	0.01 (0.03)	-0.07 (0.04)	0 (0.03)	0.04 ** (0.02)
# of Grameen Programs	-0.72 ** (0.09) *	-0.04 (0.14)	0.05 (0.14)	-0.01 (0.03)
# of BRAC Programs	-0.03 (0.07)	-0.82 ** (0.11) ↓	-0.02 (0.08)	-0.05 (0.03)
# of Proshika Programs	0.14 (0.11)	0.01 (0.11)	-0.56 ** (0.24)	0.02 (0.09)
# of Caritas Programs	0.05 (0.13)	-0.35 ** (0.10) ↓	-0.27 ** (0.08) ↓	-0.77 ** (0.15) ↓
# of Households	-0.02 (0.06)	-0.01 (0.09)	0.06 (0.07)	-0.04 (0.03)
Poverty Gap	-0.41 (0.98)	3.04 (1.51)	0.37 (0.75)	0.21 (0.49)
Real Per Capita Expenditure (Log)	0.03 (0.25)	0.31 (0.34)	0.14 (0.21)	-0.11 (0.11)
Political Influence	-0.01 (0.05)	0.03 (0.07)	0.03 (0.06)	0.04 (0.03)
Cost	-0.04 (0.03)	-0.11 ** (0.04) ↓	-0.02 (0.02)	-0.01 (0.01)
Regional NGO Concentration	0.2 (0.24)	0.73 ** (0.19) *	0.18 (0.12)	0.01 (0.08)
Regional Grameen Concentration	-0.23 (0.79)			
Regional BRAC Concentration		-0.19 (0.47)		
Regional Proshika Concentration			0.24 (0.47)	
Regional Caritas Concentration				-0.32 (0.34)
Constant	0.31 (1.67)	-1.62 (2.24)	-0.86 (1.35)	0.77 (0.75)
N	210	210	210	210
R <sup>2</sup>	0.2789	0.3393	0.1566	0.2835

Note: \*\*\* means significant at the 1% level, \*\* at the 5% and \* at the 10% Standard errors in parenthesis

**Table 7. Determinants of New NGO Programs in Rural Bangladesh, 1995-96 to 2000**

	Dependent Variable									
	Credit		Education		Skills		Family Planning		Water & Sanitation	
Number of Government Programs	0.04 (0.07)	0.03 (0.07)	-0.04 (0.04)	-0.04 (0.04)	0.00 (0.02)	0.01 (0.02)	0.02 (0.03)	0.03 (0.03)	0.01 (0.02)	0.01 (0.02)
Number of Credit Programs	-1.15 ** (0.19)	-1.13 ** (0.19)	0.04 (0.10)	0.05 (0.09)	-0.03 (0.04)	-0.03 (0.04)	0.10 (0.09)	0.10 (0.09)	-0.03 (0.04)	-0.03 (0.04)
Number of Education Programs	0.29 (0.25)	0.27 (0.25)	-0.70 ** (0.15)	-0.70 ** (0.15)	-0.07 (0.04)	-0.07 (0.04)	-0.13 (0.08)	-0.12 (0.08)	0.04 (0.05)	0.03 (0.05)
Number of Skills Programs	-0.48 ** (0.18)	-0.46 ** (0.18)	0.00 (0.12)	0.04 (0.12)	-1.06 ** (0.03)	-1.07 ** (0.03)	-0.08 (0.08)	-0.09 (0.08)	0.00 (0.06)	0.00 (0.06)
Number of Family Planning Programs	-0.21 (0.27)	-0.18 (0.27)	0.16 (0.20)	0.17 (0.20)	-0.06 (0.05)	-0.06 (0.05)	-0.87 ** (0.11)	-0.87 ** (0.11)	0.05 (0.07)	0.06 (0.07)
Number of Water/Sanitation NGOs	-0.75 ** (0.36)	-0.76 ** (0.38)	-0.41 (0.23)	-0.40 (0.22)	0.14 (0.16)	0.14 (0.16)	0.21 (0.18)	0.22 (0.19)	-0.97 ** (0.15)	-0.97 ** (0.15)
Number of Households	0.15 (0.21)	0.10 (0.12)	-0.18 (0.15)	0.00 (0.15)	0.01 (0.04)	-0.04 (0.03)	0.03 (0.11)	0.04 (0.07)	0.01 (0.07)	-0.03 (0.04)
Number of Poor Households	-0.34 (1.11)		0.91 (0.62)		-0.25 (0.20)		0.03 (0.49)		0.01 (0.07)	
Poverty Gap		1.87 (2.89)		2.57 (1.19)		0.87 (0.42)		0.56 (0.74)		0.01 (0.44)
Real Per Capita Expenditure (Log)	0.52 (0.41)	0.95 (0.52)	0.01 (0.24)	0.38 (0.32)	-0.25 (0.14)	-0.39 ** (0.14)	-0.28 (0.15)	-0.39 (0.19)	-0.10 (0.10)	-0.06 (0.11)
Political Influence	-0.14 (0.12)	-0.14 (0.12)	0.09 (0.06)	0.09 (0.06)	0.03 (0.03)	0.03 (0.03)	0.11 (0.06)	0.11 (0.06)	0.04 (0.03)	0.04 (0.03)
Cost	-0.11 (0.06)	-0.10 (0.06)	-0.09 (0.05)	-0.08 (0.05)	-0.02 (0.01)	-0.02 (0.01)	0.02 (0.03)	0.02 (0.03)	0.01 (0.02)	0.02 (0.02)
Regional NGO Concentration	1.07 ** (0.35)	1.08 ** (0.35)	0.39 (0.17)	0.3293 (0.17)	0.12 (0.08)	0.14 (0.08)	0.101 (0.14)	0.114 (0.14)	0.078 (0.08)	0.084 (0.08)
Regional Credit NGO Concentration	1.78 (1.06)	1.69 (1.04)							-	-
Regional Education NGO Concentration			-0.17 (0.67)	-0.10 (0.66)					-	-
Regional Skills NGO Concentration					-0.61 (0.32)	-0.67 (0.33)			-	-
Regional Family Planning NGO Concentration							0.21 (0.72)	0.16 (0.74)	-	-
Regional Water NGO Concentration									0.12 (1.26)	0.08 (1.34)
N	210	210	210.00	210	210	210	210	210	210	210
R <sup>2</sup>	0.242	0.244	0.201	0.212	0.375	0.374	0.480	0.314	0.236	0.233



**Table 8a: Effects of changes in number of NGO programs**

	Change in Poverty Head Count											
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)
Δ NGO	-0.83 (0.94)	-2.41 (1.55)	-1.48 (0.88)									
Δ Government				-0.28 (1.14)	-0.16 (1.87)	-0.38 (0.84)	-0.14 (1.12)	-0.13 (1.83)	-0.43 (0.84)	-0.93 (1.17)	-1.13 (1.94)	-0.54 (0.83)
Δ Small NGOs				-0.36 (1.81)	-1.51 (2.94)	-2.05 (1.26)	-0.33 (1.86)	-0.78 (3.02)	-2.19 (1.25)			
Δ Big NGOs				-1.34 (1.35)	-4.4 ** (2.18)	-2.78 *** (1.25)						
Δ Grameen							-0.13 (3.31)	0.16 (5.39)	-1.43 (2.69)			
Δ BRAC							-0.55 (2.30)	-6.14 * (3.71)	-1.73 (1.65)			
Δ Proshika							-0.14 (5.07)	1.26 (8.23)	-2.31 (2.41)			
Δ Caritas							-14.14 ** (6.25)	-20.49 ** (9.89)	-10.6 ** (4.98)			
Δ Credit										-4.27 ** (1.90)	-5.26 * (2.98)	-0.65 (1.24)
Δ Education										3.58 (3.70)	2.44 (6.14)	-2.32 (1.97)
Δ Skills										2.07 (3.67)	2.89 (6.05)	-0.61 (3.19)
Δ Family Planning										1.63 (3.81)	0.66 (6.11)	-1.83 (2.69)
Δ Water and										4.52 (6.21)	-0.47 (12.00)	-2.41 (4.91)
Δ Real per capita expenditure	-71.00 *** (3.85)			-69.19 *** (4.00)			-68.76 *** (4.10)			-69.75 *** (3.98)		
Δ electrification	-2.50 (2.39)			-2.35 (2.44)			-2.27 (2.65)			-2.11 (2.47)		
Δ Literacy	0.07 (0.08)			0.06 (0.08)			0.04 (0.09)			0.02 (0.09)		
Distance to Dhaka and District	1.02 (0.77)	-0.77 (1.27)	-0.83 (1.31)	0.86 (0.80)	-0.72 (1.29)	-0.82 (1.27)	0.79 (0.79)	-0.59 (1.27)	-0.75 (1.28)	1.15 (0.86)	-0.42 (1.39)	-1.06 (1.30)
N	213	213	213	209	209	209	209	209	209	209	209	209

(a) Three-stage least square with regional dummies and a constant

(b) Robust standard errors using Huber-White estimator of variance. Regression include regional dummies.

\* indicates a 10% confidence, \*\* 5% and \*\*\* 1%.

**Table 8b: Effects of changes in number of NGO programs**

	Change in Poverty Gap											
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)
Δ NGO	-0.42 (0.35)	-0.85 * (0.49)	-0.53 (0.29)									
Δ Government				0.00 (0.42)	0.35 (0.58)	-0.16 (0.23)	-0.09 (0.40)	-0.03 (0.55)	-0.18 (0.23)	-0.19 (0.43)	-0.24 (0.60)	-0.17 (0.23)
Δ Small NGOs				0.29 (0.67)	0 (0.91)	-0.41 (0.42)	0.32 (0.66)	0.18 (0.90)	-0.46 (0.41)			
Δ Big NGOs				-0.85 * (0.50)	-1.69 ** (0.68)	-1.00 ** (0.39)						
Δ Grameen							-0.93 (1.22)	-0.81 (1.68)	-0.35 (0.77)			
Δ BRAC							0.25 (0.85)	-1.26 (1.13)	-0.77 (0.51)			
Δ Proshika							-1.86 (1.87)	-1.73 (2.52)	-0.34 (0.78)			
Δ Caritas							-2.65 ** (1.04)	-4.00 ** (1.41)	-4.16 ** (1.63)			
Δ Credit										-1.38 ** (0.69)	-1.62 * (0.92)	-0.33 (0.40)
Δ Education										2.56 * (1.41)	2.38 (1.95)	0.79 (0.66)
Δ Skills										-1.52 (1.35)	-1.36 (1.87)	-0.63 (1.03)
Δ Family Planning										-1.67 (1.38)	-2.05 (1.88)	-0.62 (0.80)
Δ Water and										0.9 (2.28)	0.49 (3.70)	0.96 (1.41)
Δ Real per capita expenditure	-19.19 ** (1.45)			-18 ** (0.90)			-17.94 ** (1.45)			-18.55 ** (1.46)		
Δ electrification	-1.801 ** (0.90)			-1.628 * (0.90)			-1.757 * (0.98)			-1.424 (0.91)		
Δ Literacy	-0.003 (0.03)			-0.006 (0.03)			-0.01 (0.03)			-0.016 (0.03)		
Distance to Dhaka and District	-0.422 (0.35)	-0.769 (1.27)	-0.20 (0.37)	0.244 (0.30)	-0.181 (0.40)	-0.22 (0.37)	0.2106 (0.29)	-0.176 (0.39)	-0.18 (0.37)	0.244 (0.32)	-0.188 (0.43)	-0.34 (0.38)
N	213	213	213	209	209	209	209	209	209	209	209	209

(a) Three-stage least square with regional dummies and a constant

(b) Robust standard errors using Huber-White estimator of variance. Regression include regional dummies.

\* indicates a 10% confidence, \*\* 5% and \*\*\* 1%.

**Table 8c: Effects of changes in number of NGO programs**

	Change in Inequality											
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)
Δ NGO	-0.9 *	-0.71	-0.17									
	(0.47)	(0.49)	(0.28)									
Δ Government				0.64	0.62	0.41	0.61	0.62	0.41	0.44	0.52	0.38
				(0.57)	(0.60)	(0.28)	(0.54)	(0.57)	(0.28)	(0.58)	(0.61)	-0.28
Δ Small NGOs				0.04	0.16	-0.43	0.01	0.05	-0.32			
				(0.90)	(0.95)	(0.44)	-0.88	-0.93	(0.41)			
Δ Big NGOs				-1.44 **	-1.05	-0.41						
				(0.67)	(0.70)	(0.48)						
Δ Grameen							-1.3	-1.35	-1.43			
							(1.64)	(1.73)	(0.91)			
Δ BRAC							-0.16	0.52	-0.24			
							(1.13)	(1.18)	(0.59)			
Δ Proshika							-3.51	-3.79	1.45			
							(2.58)	(2.75)	(1.13)			
Δ Caritas							-2.32 *	-1.41	-1.58			
							(1.40)	(1.46)	(2.05)			
Δ Credit										-1.69 *	-1.38	-0.65
										(0.92)	(0.93)	(0.41)
Δ Education										-0.41	-0.51	0.07
										(1.81)	(1.93)	(0.68)
Δ Skills										-0.54	-0.57	-1.35
										(1.81)	(1.91)	(0.92)
Δ Family Planning										-3.3 *	-3.46 *	-1.4
										(1.86)	(1.93)	(0.90)
Δ Water and										0.85	0.66	-1.05
										(3.80)	(3.77)	(1.39)
Δ Real per capita expenditure	9.243			10.043 **			9.7 **			9.4567 **		
	-1.921			(1.98)			(1.95)			(1.96)		
Δ electrification	0.492			0.825			0.602			0.876		
	-1.192			(1.21)			(1.31)			(1.22)		
Δ Literacy	-0.042			-0.046			-0.044			-0.051		
	-0.039			(0.04)			(0.04)			(0.05)		
Distance to Dhaka and District	-0.01	0.25	0.21	-0.13	0.15	0.11	-0.23	0.00	0.15	-0.09	0.14	0.03
	(0.38)	(0.40)	(0.31)	(0.40)	(0.42)	(0.32)	(0.39)	(0.41)	(0.32)	(0.42)	(0.44)	(0.33)
N	213	213	213	209	209	209	209	209	209	209	209	209

(a) Three-stage least square with regional dummies and a constant

(b) Robust standard errors using Huber-White estimator of variance. Regression include regional dummies.

\* indicates a 10% confidence, \*\* 5% and \*\*\* 1%.

**Table 8d: Effects of changes in number of NGO programs**

	Change in Poverty Gap using upper poverty line											
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)	3SLS(a)	3SLS(a)	OLS(b)
Δ NGO	-0.692 *	-1.325 **	-0.832 **									
	(0.38)	(0.63)	(0.36)									
Δ Government				-0.118	-0.069	-0.331	-0.235	-0.178	-0.353	-0.376	-0.4502	-0.36
				(0.45)	(0.74)	(0.31)	(0.43)	(0.71)	(0.31)	(0.47)	(0.77)	(0.31)
Δ Small NGOs				-0.038	-0.493	-0.714	-0.01	-0.232	-0.753			
				(0.72)	(1.17)	(0.50)	(0.71)	(1.16)	(0.50)			
Δ Big NGOs				-1.081 **	-2.301 **	-1.38 **						
				(0.54)	(0.87)	(0.48)						
Δ Grameen							-1.115	-1.006	-0.907			
							(1.32)	(2.15)	(1.05)			
Δ BRAC							0.0439	-2.191	-1.00			
							(0.91)	(1.46)	(0.66)			
Δ Proshika							-1.88	-1.438	-0.708			
							(2.00)	(3.22)	(0.90)			
Δ Caritas							-2.571 **	-4.672 **	-4.871 **			
							(1.12)	(1.81)	(1.97)			
Δ Credit										-1.752 **	-2.13 *	-0.45
										(0.75)	(1.18)	(0.47)
Δ Education										2.27	1.84967	-1.15
										(1.50)	(2.46)	(0.82)
Δ Skills										-0.425	-0.11	-0.40
										(1.45)	(2.40)	(1.31)
Δ Family Planning										-2.033	-2.45	-1.35
										(1.49)	(2.41)	(0.99)
Δ Water and										0.5507	-1.47	-1.67
										(3.05)	(4.75)	(1.91)
Δ Real per capita expenditure	-28.30 **			-27.07 **			-27.03 **			-27.68 **		
	(1.56)			(1.59)			(1.57)			(1.57)		
Δ electrification	-1.36			-1.169			-1.314			-1.055		
	(0.97)			(0.97)			(1.05)			(0.98)		
Δ Literacy	0.0142			0.0102			0.0037			0.00		
	(0.03)			(0.03)			(0.03)			(0.04)		
Distance to Dhaka and District	0.3476	-0.366	-0.40	0.2812	-0.335	-0.38	0.2461	-0.30	-0.34	0.34	-0.29	-0.38
	(0.31)	(0.51)	(0.49)	(0.32)	(0.51)	(0.47)	(0.32)	(0.51)	(0.48)	(0.34)	(0.55)	(0.49)
N	213	213	213	209	209	209	209	209	209	209	209	209

(a) Three-stage least square with regional dummies and a constant

(b) Robust standard errors using Huber-White estimator of variance. Regression include regional dummies.

\* indicates a 10% confidence, \*\* 5% and \*\*\* 1%.

**Table 9a: Summary statistics for estimation sample using HIES data for 1995**

YEAR 1995	N	Mean	sd	Correlations number of NGO program, change in number of NGO program	
				<i>Number</i>	<i>Change</i>
<i>Variables used in the regressions</i>					
Number NGO program	231	0.92	1.10		-0.40
Number government program	249	1.51	1.28	0.19	-0.02
Change in NGO programs	228	1.95	1.98	-0.40	
Change in government programs	247	3.02	2.15	-0.06	0.28
Distance from Dhaka (km)	245	255.75	145.61	0.01	0.18
Distance from district (km)	251	34.96	20.45	-0.20	0.02
Distance from Thana (km)	250	12.92	8.13	-0.13	-0.13
Distance from transport station	246	4.55	4.81	-0.15	-0.04
Electricity	251	0.47	0.50	0.14	-0.04
Per capita income	249	8276.43	2402.94	0.02	-0.11
Head of household schooling	248	6.28	1.60	0.05	0.05
Literacy	249	34.60	15.22	0.10	0
Number of households	252	549.38	631.17	0.15	0
Presence of chairman	252	0.17	0.37	0.09	-0.06
Presence of member	252	0.65	0.48	0.01	0.03
Presence of secretary	252	0.09	0.29	0.16	-0.01
<i>Missing variable frequencies</i>					
Number NGO program		0.08	0.28	.	.
Number government program		0.01	0.08	-0.04	0.19
Change in NGO programs		0.09	0.29	-0.03	.
Change in government programs		0.02	0.14	-0.01	0.14
Distance from Dhaka (km)		0.03	0.16	0.12	-0.03
Distance from district (km)		0	0.06	.	.
Distance from Thana (km)		0.01	0.08	-0.05	0.10
Distance from transport station		0.02	0.15	-0.10	0.06
Electricity		0	0.06	.	.
Per capita income		0.01	0.10	-0.04	-0.09
Head of household schooling		0.02	0.12	0.01	-0.11
Literacy		0.01	0.10	-0.04	-0.09
Number of households		0	0	.	.
Change in number of household		0	0.06	0.01	0.03
Presence of chairman		0	0	.	.
Presence of member		0	0	.	.
Presence of secretary		0	0	.	.

**Table 9b: Summary statistics for estimation sample using HIES data for 2000**

YEAR 2000	N	Mean	sd	Correlations number of NGO program, change in number of NGO program	
<i>Variables used in the regressions</i>					
				<i>Number</i>	<i>Change</i>
Number NGO program	247	2.83	1.80		0.84
Number government program	250	4.50	2.00	0.34	0.28
Change in NGO programs	226	1.96	1.98	0.84	
Change in government programs	245	3.03	2.15	0.25	0.27
Distance from Dhaka (km)	243	225.33	123.57	0.22	0.14
Distance from district (km)	252	30.09	18.00	-0.01	0.03
Distance from Thana (km)	251	10.76	7.28	-0.21	-0.19
Electricity	252	0.65	0.48	0.24	0.10
Per capita income	252	10631.4 6	4014.05	-0.06	-0.05
Head of household schooling	251	2.63	1.36	0.07	0.03
Literacy	252	40.62	15.49	0.04	-0.01
Number of households	251	875.96	1059.53	0.27	0.19
Presence of chairman	239	0.28	0.45	0.10	0.06
Presence of member	248	0.87	0.33	0.11	0.05
Presence of secretary	234	0.14	0.34	0.09	0.12
<i>Missing variable frequencies</i>					
Number NGO program					
Number government program		0.01	0.08	-0.03	-0.03
Change in NGO programs		0.10	0.30	-0.08	
Change in government programs		0.03	0.16	0.07	0.10
Distance from Dhaka (km)		0.04	0.19	0.02	0.01
Distance from district (km)		0	0		
Distance from Thana (km)		0	0.06	0.15	0.05
Electricity		0	0		
Per capita income		0	0		
Head of household schooling		0	0.06	-0.06	-0.02
Literacy		0	0		
Percentage of women working		0	0		
Number of households		0	0.06	0.04	0.02
Change in number of household		0.02	0.12	-0.01	0.02
Presence of chairman		0.05	0.22	-0.07	-0.03
Presence of member		0.02	0.12	0.05	0.05
Presence of secretary		0.07	0.25	-0.03	-0.01