



UNIVERSITY OF THE PHILIPPINES  
SCHOOL OF ECONOMICS

Discussion Paper No. 0407

June 2004

**Engendering Local Civic Participation via a  
Citizen Feedback Mechanism in  
Bulacan and Davao del Norte**

*by*

*Joseph J. Capuno\**

\*Assistant Professor, School of Economics  
University of the Philippines

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# **Engendering local civic participation via a citizen feedback mechanism in Bulacan and Davao del Norte**

Joseph J. Capuno\*  
University of the Philippines

## *Abstract*

This paper presents the educating effects on civic participation of a citizen feedback mechanism (GOFORDEV Index), which helps promote transparency and accountability in local governance. Using three rounds of household survey data collected during the two-year pilot of the Index in two Philippines provinces, the econometric results show that basic information on local government performance, when disseminated using traditional media, remains an effective way of encouraging membership in local organization or self-participation in public affairs. Further, the participation of organized groups in civic activities is found to reinforce individual commitments.

## 1. INTRODUCTION

A current theme in development literature, (e.g., *World Development Report* 2002) emphasizes the critical role of governance institutions such as those that foster democratic participation in determining the pace and quality of economic development and social capital (Knack 2000; Putnam 2000). Partly to promote participation in the labor market, public investments in education have been widely adopted, since education is now hardly disputed to enhance or, at least, signal one's own human capital. Education is likewise found an important determinant of political participation especially in many developed countries like the US where "a strong and robust relationship between education and voting" is found (Milligan, Moretti and Oreopolous 2003). Thus, public investment in education is further justified because it yields "social externalities through the production of a better polity."

The need for an educated or, at least, informed electorate is now more critical in developing countries like the Philippines that have recently shifted to fiscal decentralization as another development strategy. Essentially, this strategy is expected to disperse growth since it endows service clients (people) with more direct control over the public servants (bureaucrats and politicians) (Shah, 1997; Faguet, 2001; Khemani, 2001). The same strategy, however, may also exacerbate underdevelopment if used by the local elite, through coercion or deception, to subvert the popular will (Proudhomme, 1995). Thus, without governance reforms, fiscal decentralization alone will not ensure economic progress.

Perhaps for these reasons, the Philippines' Local Government Code of 1991, which devolved central government functions and resources to local government units (LGUs) in the country, has incorporated a number of features that minimize elite capture. Among the key features are the term limits on all elected officials, the recall of officials who have lost the confidence of their constituency, and procedures for direct referendum. Also, local consultative bodies like the Local Health Board, Local School Board and the Local Development Council are required to have members representing local non-government organizations (NGOs) and civil society groups.

Despite the widened democratic space, however, the expected yield after 12 years of decentralization has not yet fully materialized: growth remains unevenly distributed in the country and overall political participation remains underdeveloped. Despite improvements in overall literacy rate, Zialcita (1997) notes that the Filipino political culture continually emphasizes familial kinship, narrow political discourse and limited venues for the exercise of citizenship. The last point is corroborated by Rood (1997) who observed that many of the mandated local consultative bodies are not constituted, nor convened regularly, nor includes civil society representatives. As evidence of persistent elite capture, familiar political clans continue to dominate local politics (Coronel, Chua, Rimban and Cruz 2004), often by sponsoring the recall from office of their successful rivals.

It is now realized that achieving wider participation in local governance would require more than the mere dissemination of basic information, but also the identification of options and solutions to specific problems, and the support facilities for the free exercise of choice. Thus, many public and civil society initiatives like citizen feedback mechanisms seek to consult, inform and empower local citizens to demand better services from their local governments.

One such initiative is the Governance for Local Development (GOFORDEV) Index of the Philippine Center for Policy Studies. Using survey data from a two-year social experiment in two Philippine provinces, the present paper reports on the educating impact of the Index on civic participation. Specifically, it estimates the contribution of a person's exposure to the Index to the likelihood of his or her membership in a local organization and participation in local project planning, implementation, monitoring or evaluation. Exposure here is achieved through *komiks*<sup>1</sup>, posters, or attendance in a local public presentation. The critical econometric results suggest applicable lessons for engendering civic participation, especially in rural areas not yet adopting modern information and communication technology, namely that traditional low-cost information media and eliciting the support various local groups remain viable. Moreover, a causal relationship is demonstrated: the greater transparency and accountability achieved through a citizen feedback mechanism also begets wider participation.

The rest of the paper is organized as follows. A brief background on the Index and the data from the social experiment are provided in Section 2. The empirical framework is presented in Section 3. Then, the econometric results are discussed in Section 4. Some remarks conclude the paper.

## **2. A SOCIAL EXPERIMENT IN *GOOD* LOCAL GOVERNANCE**

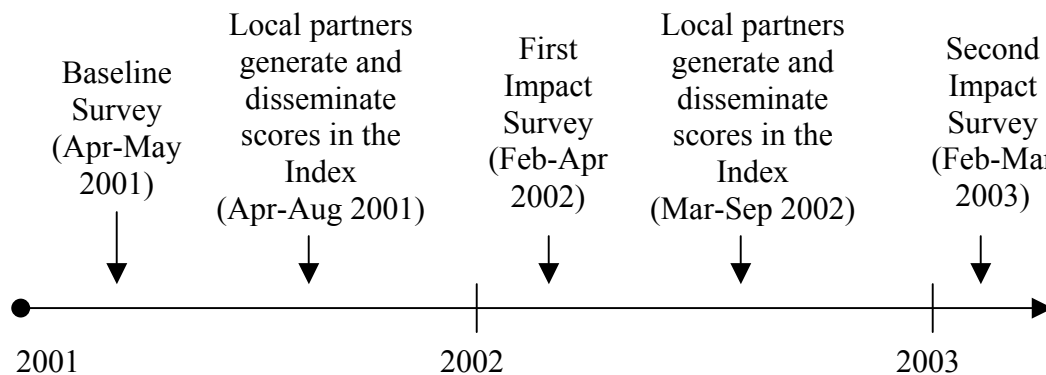
With the support of the Ford Foundation, the Philippine Center for Policy Studies<sup>2</sup> (PCPS) started in 1999 its four-year project on *Indicators for Good Governance and Local Development* to devise an index of the quality of governance at the city or municipality level and to advocate its wider adoption and institutionalization. Developed in 1999-2000, the Governance for Local Development (GOFORDEV) Index, which uses a 0-100 scale<sup>3</sup>, comprises ten indicators (Table 1) grouped into three sub-indices, namely:

- (1) Development Needs Index (DNI) – which comprise five indicators that reflect the people's overall assessment of their local government's performance in meeting their needs for basic public services
- (2) Development Orientation Index (DOI) – which measures the local government's relative priority for basic public services; and
- (3) Participatory Development Index (PDI) – comprising two indicators suggest the extent of people's participation and public consultation in the area.

Broadly, the GOFORDEV Index is a citizen feedback mechanism in that the people's overall assessment of the performance of their local governments when publicly announced and communicated to the local officials serve as their collective "voice". Thus, besides helping improve the transparency and accountability in local governance, the Index could also serve as inputs to fiscal planning.<sup>4</sup>

To validate and improve the Index, it was piloted in 2001 and 2002 in 12 cities and municipalities in the provinces of Bulacan and Davao del Norte. Designed as a social experiment, the pilot test yielded both baseline and post-intervention data for each of the six experimental (or treatment) areas and six control areas. Based on these data, the Index was evaluated for its impact on local budget outcomes and processes and on key development outcomes. One of these development outcomes is the level of civic participation, which is expected to rise with the effective introduction of the Index in the area, controlling for other factors.

To see whether the Index engenders civic participation, the data collected under three rounds of household surveys are used here. Undertaken in April-May 2001, the first survey was intended to provide the baseline information for the twelve pilot areas. Undertaken in February-April 2002 and in February-March 2003, respectively, the second and third surveys were meant to capture the effects of the GOFORDEV Index in these areas. The timeline of the pilot test activities is shown below:



**Table 1. Indicators of Governance for Local Development (GOFORDEV)\***

<i>Index</i>	<i>Objective</i>	<i>Indicators</i>	<i>Formula</i>
Development Needs Index (DNI)	To measure access to, and the adequacy of, basic public services	Adequacy of Health Services Ratio	Health Service = [(Number of respondents who are aware that there is a rural health center with a regular doctor in their <i>barangay</i> ) ÷ (Total number of respondents)] x 100
		Adequacy of Day Care Services Ratio	Day Care = [(Number of respondents who are aware that there is a day care center with a regular teacher or a social worker in their <i>barangay</i> ) ÷ (Total number of respondents)] x 100
		Access to Sources of Drinking Water Ratio	Drinking water = 100 - [(Number of respondents who have reported difficulty in getting drinking water) ÷ (Total number of respondents)] x 100
	To measure the perceived effectiveness of the LGU in solving public problems	Effectiveness in Addressing Public Problem Ratio	Public Problem Ratio = [(Number of respondents who are aware of some pressing public problems and report that the local government addresses these problems) ÷ (Total number of respondents)] x 100
	To measure the perceived effect on family condition in life	Effect on Family Condition Ratio	Family Condition Ratio = [(Number of respondents who report that the local government helped improved their family condition in life) ÷ (Total number of respondents)] x 100
Development Orientation Index (DOI)	To measure the relative prioritization for development-oriented public services	Development Expenditure Ratio	Expenditure Priorities = [(Expenditures on social services and economic services*) ÷ (Total expenditures*)] x 100 * net of outlays for personal services
Participatory Development Index (PDI)	To measure the extent of the people's direct participation in local consultative or decision-making bodies	Participation in Municipal or City Development Council	Municipal/City Development Council = 100 if the Municipal or City Development Council was convened at least twice last year with the presence of private sector representatives; 0 if not
		Participation in Local School Boards	School Board = 100 if the Local School Board was convened at least once last year with the presence of the president or representative of the Parents-Teachers Association ; 0 if not
	To measure the degree of public consultations	<i>Barangay</i> -Level Consultation Ratio	<i>Barangay</i> Consultation = [(Number of respondents who were consulted by their mayor, vice mayor, <i>barangay</i> officials or members of the Sangguniang Bayan (legislative council) at least once last year) ÷ (Total number of respondents)] x 100
		Presence in <i>Barangay</i> Meetings Ratio	<i>Barangay</i> Meeting = [(Number of respondents who reported that the mayor or vice mayor attended at least one public meeting in their <i>barangay</i> last year) ÷ (Total number of respondents)] x 100
GOFORDEV Index	To measure quality of local governance		GOFORDEV Index = 1/3 [DNI+DOI+PDI]

\*Formula used during the pilot test of the Index in 2001-02. Some of these were adjusted after the pilot test.

(a) *The experimental setup*

The 12 randomly selected pilot areas<sup>5</sup> are divided into two groups: (1) the experimental group comprises eight areas where the scores in the Index are both generated and publicly disseminated, and (2) the control groups consist four areas where the scores in the Index are computed but not announced. Based on a random survey of the 100 household respondents and as well as public documents, the area's score in the Index is computed by a local partner (Table 2), who is contracted by the PCPS.<sup>6</sup> In the experimental areas, four of the partners come from the respective LGUs and four come from civil society organizations (e.g., NGOs or academic institutions).<sup>7</sup>

**Table 2. The Pilot Areas and the Local Partners**

Relative Levels of Development*	Bulacan			Davao del Norte		
	Experimental Areas		Control Areas	Experimental Areas		Control Areas
	LGU Partner	Civil Society Partner	Civil Society Partner	LGU Partner	Civil Society Partner	Civil Society Partner
High	San Jose del Monte City (City Planning and Development Office)	Baliwag (Soroptimist International of Baliwag)	Plaridel (Bulacan State University-Bustos Campus**, Rotary Club of Bustos***)	Panabo City (City Planning and Development Office)	Sto. Tomas (Davao Provinces Rural Development Institute, Inc.)	Tagum City (St. Mary's College-Tagum City, University of Southeastern Philippines***)
Low	Guiguinto (Municipal Planning and Development Office)	Angat (Rotary Club of Angat)	Plaridel (Bulacan State University-Bustos Campus**, Rotary Club of Bustos***)	Braulio E. Dujali (Municipal Planning and Development Office)	Island Garden City of Samal (LAWIG Foundation)	Asuncion (PhilNet-Rural Development Institute**, University of Southeastern Philippines***)

\*Based on the average Internal Revenue Allotment (IRA) of the LGUs in the Province. An LGU with an IRA greater than or at least equal to the provincial average is classified as highly developed; otherwise, it is classified as less developed. Those in parentheses are the names of the specific partners in the areas. “\*\*” Partner for 2002 only. “\*\*\*” Partner for 2003 only.

To generate the scores, each local area partner underwent training in the conduct of household surveys and data retrieval from official sources. Also, eight of them completed training in public presentation and other information dissemination activities. To ensure consistency, the PCPS administered all the training sessions, and developed all training materials, survey design and instruments<sup>8</sup>, and the information materials distributed locally. As an incentive, the local partners were provided grants under a contractual arrangement with PCPS for each year of the pilot test.

To influence local government budget processes and outcomes, information about the Index, including the scores and other survey results, was disseminated through *komiks*, posters and public presentations, as shown in Table 3. Translated into Tagalog for the Bulacan areas and Bisaya for the Davao del Norte areas, the *komiks* (popular

magazines) and posters were printed in quantities proportional to the local population. To make the advocacy campaign more effective in 2002, the number and quality of *komiks* and posters were also adjusted and stickers were introduced.

Besides distributing these materials door-to-door, in local government offices, stores or other public places, the local partners were also required to hold at least three presentations. Open to the public, the presentations were attended both by local government officials, ordinary citizens and members of non-government organizations. In 2001, the total number of participants in Bulacan and Davao del Norte was 496 and 428, respectively, of whom at least 44 percent in each province were not working for their local governments. The total number of participants in the twelve areas increased to 1,161 in 2002 because the required number of presentations was increased to four, with the last specifically targeted to local officials, say, during the regular session of the local Sangguniang Bayan or a special meeting called by the mayor for the purpose. Despite the increase, however, the total number of participants per province in each year still represents less than one percent of the combined population of the pilot areas.

**Table 3. Public Presentations and Information Materials**

Pilot Areas	Number of Participants in Public Presentations				Number of Information Materials Distributed				
	2001 (min. 3/area)		2002 (min. 4/area)		Komiks		Posters		Stickers
	Total	Non-gov't (%)	Total	Non-gov't (%)	2001	2002	2001	2002	2002
Bulacan	496	61	565	58	2000	3001	20000	8000	4000
Angat	99	95	126	82	198	397	1983	793	1000
Baliwag	116	75	163	47	526	1053	5263	2105	1000
Guiguinto	164	53	174	46	269	538	2688	1075	1000
San Jose del Monte City	117	30	102	63	1007	1013	10066	4027	1000
Davao del Norte	428	44	596	45	1999	2999	18999	6034	4000
B. E. Dujali	141	50	102	40	35	172	352	345	1000
Panabo City	87	15	224	28	907	1305	9069	2644	1000
Samal City	99	38	119	32	530	763	5304	1527	1000
Sto. Tomas	101	66	151	83	527	759	5274	1518	1000

Note: For 2001, the total number of *komiks* and posters distributed is equivalent to 30% and 3% of the local population, respectively. For 2001, the total number of *komiks* and posters distributed is equivalent to 10% and 5% of the local population, respectively. For 2002, the total number of stickers is equivalent to the following percentages of the local population: 13% (Angat), 5% (Baliwag), 9% (Guiguinto), 2% (San Jose del Monte), 29% (Braulio E. Dujali), 4% (Panabo City), 7% (Island Garden City of Samal), and 7% (Sto. Tomas). For 2001, the total number of participants in Bulacan and Davao del Norte represent 0.1% and 0.08%, respectively, of the combined population of the pilot areas within the province. For 2002, the total number of participants in Bulacan and Davao del Norte represent 0.11% and 0.12%, respectively, of the combined population of the pilot areas within the province.



(b) *Some preliminary observations*

Some of the results of the baseline and post-intervention surveys of 3600 household respondents aged 18 years and above, or 1200 respondents per survey round, are shown in Table 4. To conduct the surveys, local academic institutions<sup>9</sup> were tapped and made to use the same sampling design and instruments as did the local partners.

**Table 4. Respondents' Membership in Local Organizations, Participation in Civic Activities and Awareness of GOFORDEV Index**

Respondent's characteristics	Number of Survey Respondents			Adjusted for Sampling Weights		
	Baseline Survey (2001)	First Impact Survey (2002)	Second Impact Survey (2003)	Baseline Survey (2001)	First Impact Survey (2002)	Second Impact Survey (2003)
Member of any local organization						
Experimental Areas	240	246	240	38,678	43,777	42,290
Control Areas	74	63	32	16,226	10,018	7,099
Member of any local organization						
Self-participated in planning, implementation, monitoring or evaluation of LGU projects	180	203	226	27,917	35,132	43,362
Member of an organization involved in planning, implementation, monitoring or evaluation of LGU projects	220	239	225	35,392	41,147	43,093
Not a member of any local org. Self-participated in planning, implementation, monitoring or evaluation of LGU projects	23	123	45	3,246	21,240	7,591
Member of any local organization						
Aware of the GOFORDEV Index	0	33	39	0	4,734	6,336
Read <i>komiks</i>	0	21	21	0	2,254	1,289
Seen posters	0	42	55	0	7,506	8,624
Attended a public presentation	0	13	8	0	1,394	358
Read <i>komiks</i> , seen posters or attended a public presentation	0	49	59	0	8,050	9,091
Aware of other indicators*	194	144	83	34,124	22,746	13,951
Not a member of any local org.						
Aware of the GOFORDEV Index	0	30	18	0	4,646	1,805
Read <i>komiks</i>	0	28	15	0	4,396	1,033
Seen posters	0	59	36	0	10,970	5,061
Attended a public presentation	0	12	8	0	1,056	890
Read <i>komiks</i> , seen posters or attended a public presentation	0	76	45	0	12,904	6,127
Aware of other indicators*	378	314	176	68,755	56,230	27,394

Note: The total number of respondents is 1,200 per survey year. \*The other indicators are the Minimum Basic Needs, Human Development Index, Galing Pook Awards and Clean and Green Awards.

The total number of respondents who claim to be members of any local organization - which may include Mothers' Club, tricycle operators and drivers associations, credit cooperatives or homeowners' associations - appears to be greater in the experimental areas than in the control areas. Further, the number of organized residents in the former remained constant at around 240 while that in the latter ranged from 74 to 32 during the survey periods. The same patterns are observed when the sample results are adjusted for population weights.

Interestingly, civic participation appears not limited to members of local organizations. Acting on their private capacities, some of the unorganized residents in the pilot areas also reported being able to participate either in planning, implementation, evaluation or monitoring of projects or programs of their city or municipal governments. However, the involvement of the unorganized population in local affairs, when compared to that of their organized neighbors, seems erratic. Further, many of the organized ones said that their organizations were likewise involved in local public activities, perhaps as representatives of NGOs or Parent-Teacher's Associations in local consultative bodies as mandated by the Local Government Code of 1991.

Providing a *prima facie* evidence on the effect of education on civic participation, the table further shows that the level of awareness of the GOFORDEV Index looks consistently higher among the organized members than among the other community members. Such awareness may have been the result of the respondent's having seen and read a *komiks* or poster about the Index or his or her attendance in one of the public presentations conducted by the local area partners.

However, these pieces of evidence still have to be statistically validated to isolate the real effect of the Index on civic participation from the biases induced by intervening factors. One of these factors is the presence of similar indicator systems introduced in the areas and which the respondents may have confused with the Index. This is certainly suggested by the large of respondents who are aware of other indicators systems such as the Local Productivity and Performance Measurement System (LPPMS), Human Development Index (HDI), Galing Pook Awards (GPA), Minimum Basic Needs (MBN) and the Clean and Green Awards (CGA).

### **3. AN EMPIRICAL FRAMEWORK**

#### *(a) Estimating equation*

A bivariate probit regression model is applied on the survey data to identify the size and direction of the effects of a person's knowledge of the Index on his or her likelihood of participating in civic activities. To account for the possible two-way causal relationship between these two variables, the following econometric model (Maddala, 1983; Greene, 1998) is used:

$$\begin{aligned}
y_1^* &= \mathbf{x}'_1 \beta_1 + \lambda_1 y_2 + \varepsilon_1, \quad y_1 = 1 \text{ if } y_1^* > 0, 0 \text{ otherwise,} \\
y_2^* &= \mathbf{x}'_2 \beta_2 + \lambda_2 y_1 + \varepsilon_2, \quad y_2 = 1 \text{ if } y_2^* > 0, 0 \text{ otherwise,} \\
E[\varepsilon_1 | \mathbf{x}_1, \mathbf{x}_2] &= E[\varepsilon_2 | \mathbf{x}_1, \mathbf{x}_2] = 0, \\
Var[\varepsilon_1 | \mathbf{x}_1, \mathbf{x}_2] &= Var[\varepsilon_2 | \mathbf{x}_1, \mathbf{x}_2] = 1, \\
Cov[\varepsilon_1, \varepsilon_2 | \mathbf{x}_1, \mathbf{x}_2] &= \rho
\end{aligned}$$

where  $y_1$  and  $y_2$  are the dependent variables,  $\mathbf{x}$  is a vector of independent variables,  $\beta$  is a vector of coefficients,  $\lambda$  is a coefficient, and  $\varepsilon$  is the error term. Note that the above model is a recursive simultaneous equation model since  $y_2$  and  $y_1$  are included, respectively, among the regressors in the first and second equations. The parameter  $\rho$  is a measure of the correlation of the omitted explanatory variables. To test this, a likelihood ratio test may be performed on  $H_0: \rho = 0$ .

The estimated coefficients in the above model only indicate the direction of the effects and their statistical significance, but not the individual marginal effects of the regressors. To derive these, the following joint probabilities are estimated through maximum likelihood methods:

$$Prob[y_1 = 1, y_2 = 1 | \mathbf{x}_1, \mathbf{x}_2] = \Phi[\mathbf{x}'_1 \beta_1 + \lambda_1 y_2, \mathbf{x}'_2 \beta_2 + \lambda_2 y_1, \rho],$$

where  $\Phi$  is the bivariate normal cumulative density function. The marginal effect of the  $i$ th regressor is then obtained as follows:

$$\frac{\partial \Phi}{\partial x_i} = \Phi'[\dots](\beta_{1i} + \beta_{2i}),$$

where the  $\beta$ 's in this case are the non-zero estimated coefficients of  $x_i$ . Analogously, the marginal effects of  $y_k$  on  $y_j$  is  $\Phi'[\dots]\lambda_{kj}$ , where  $k, j=1, 2$  and  $k \neq j$ , and the estimated  $\lambda$  is not zero.

#### (b) Variables and descriptive statistics

The specific variables used in the regressions are defined in Table 5 and their corresponding descriptive statistics (unweighted) are listed in Table 6. Several regression variables are transformed from the raw survey data to facilitate the regression analysis.

In particular, the variable “GI material” is constructed to indicate if the respondent has read a *komiks*, seen a poster or attended a public presentation of the Index. Arguably, this indicator of the respondent’s knowledge of the Index has more material basis than his or her answer to a direct question regarding her knowledge of such. Moreover, it minimizes the bias when the Index is confused with the other indicators systems present in the pilot areas.<sup>10</sup> To further reduce possible bias, the “GI material” is also interacted with the respondent’s awareness of other similar indicators.

**Table 5. Variable Definition**

Variable	Definition
Member	1= if member of any local organization in the city or municipality of residence; 0= otherwise
Self-participation	1=if personally involved in the planning, implementation, monitoring or evaluation of local government projects or programs; 0= otherwise
Org. Participation	1=if member of an organization that is involved in the planning, implementation, monitoring or evaluation of local government projects or programs; 0= otherwise
Komiks	1=if respondent read a GOFORDEV komiks; 0=otherwise
Posters	1=if respondent saw a GOFORDEV poster; 0=otherwise
Presentation	1=if respondent attended a GOFORDEV public presentation; 0=otherwise
GI materials	1=if respondent read a komiks, saw a poster or attended a public presentation about the GOFORDEV Index; 0=otherwise
Other indicators	1=if aware of other measures of good governance like HDI, MBN, Galing Pook Awards or Clean and Green Awards; 0=otherwise
Angat	1=if resident of Angat; 0=otherwise
Baliwag	1=if resident of Baliwag; 0=otherwise
Guiguinto	1=if resident of Guiguinto; 0=otherwise
San Jose del Monte	1=if resident of San Jose del Monte; 0=otherwise
Braulio E. Dujali	1=if resident of Braulio E. Dujali; 0=otherwise
Panabo	1=if resident of Panabo; 0=otherwise
Sto. Tomas	1=if resident of Sto. Tomas; 0=otherwise
Samal	1=if resident of Samal; 0=otherwise
Asuncion	1=if resident of Asuncion; 0=otherwise
Tagum	1=if resident of Tagum; 0=otherwise
Bustos	1=if resident of Bustos; 0=otherwise
Plaridel	1=if resident of Plaridel; 0=otherwise
Bulacan	1=if the province is Bulacan; 0=otherwise
LGU Partner	1=if the area partner is the local government itself; 0=otherwise
Yr00	1=if year is 2000; 0=otherwise
Yr02	1=if year is 2002; 0=otherwise
Age	Age in years of the respondent
Male	1=if the respondent is male; 0=otherwise
Married	1=if the respondent is married; 0=otherwise
Household head	1=if the respondent is the household head; 0=otherwise
Spouse	1=if the respondent is the spouse of the household head; 0=otherwise
Family size	Number of family members
High school	1=if the respondent finished at least high school; 0=otherwise
College	1=if the respondent went to or finished college; 0=otherwise
Electric bill	Average monthly electric bill for the last six months
Regular job	=1 if the respondent has a regular job or a source of income for the past six months; 0=otherwise
Government employee	1=if the respondent is a government employee or worker; 0=otherwise
Owner	1=if the respondent or his/her family is the owner of the house and lot they reside in; 0=otherwise
Reelected	1=if the current city/municipal mayor was re-elected in May 2001; 0=otherwise

**Table 6. Descriptive Statistics**

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
GI materials	3600			0	1
Komiks	3600			0	1
Posters	3600			0	1
Presentation	3600			0	1
Other indicators	3600			0	1
Angat	3600			0	1
Baliwag	3600			0	1
Guiguinto	3600			0	1
San Jose del Monte	3600			0	1
Braulio E. Dujali	3600			0	1
Panabo	3600			0	1
Sto. Tomas	3600			0	1
Samal	3600			0	1
Asuncion	3600			0	1
Tagum	3600			0	1
Bustos	3600			0	1
Plaridel	3600			0	1
Bulacan	3600			0	1
LGU Partner	3600			0	1
Member	3596			1	1
Self-participation	3600			0	1
Org. Participation	3600			0	1
Age	3598	41.833	14.858	18	90
Male	3581			0	1
Household Head	3590			0	1
Spouse	3600			0	1
High School	3600			0	1
College	3594			0	1
Family size	3592	5.194	2.494	1	28
Regular work	3600			0	1
Government employee	3600			0	1
Electric bill	3509	464.85	658.69	0	20000
Owner	3597			0	1
Re-elected	3600			0	1
Yr00	3600			0	1
Yr02	3600			0	1

Moreover, dummy variables are introduced corresponding to the respondent's socioeconomic and demographic characteristics and to the political and other features of his or her place of residence. These variables account for household and personal level intervening factors, as well as site-fixed effects such as the quality of transportation and communication facilities in that area and the degree of mayoral support.<sup>11</sup>

Finally, the treatment variables – komiks, posters, and public presentations – are interacted with a dummy variable representing 2002 (Yr02) to account for the changes made in the information campaign undertaken in 2002. Note that with Yr02 and another dummy for baseline survey (Yr00), another dummy variable for 2001 (Yr01) is not necessary. Moreover, the respondent's exposure to the GOFORDEV materials, which were first introduced in 2001, already partly captures the effect of dummy for 2001.

#### 4. EFFECTS ON CIVIC PARTICIPATION

Since a person's membership in community-level organizations and his or her personal involvement in local public affairs are critical dimensions of civic participation, the factors behind his or her membership status are of interest to policy or program design. Among the important factors shown below, an information and education campaign (like the GOFORDEV Index) engenders civic participation.

##### *(a) Membership in local organization and awareness of the Index*

The results presented in Table 7 suggest that GI materials – which indicates that a person's exposure to the *komiks*, posters or public presentation of the Index – have a positive and significant contribution to the probability of being a member in any local organization. The estimated coefficient of GI material is 2.326 (GI material + GI material  $\times$  Other indicators = 0.2.326 – 0.0), which is greater than that of all the other similar indicator systems (Other indicators = 0.164). The marginal effect of GI material on the probability of both being a member and awareness of the GOFORDEV Index is about 11 percent. In contrast, that of the other indicator systems is statistically zero, which is not surprising since the respondent is unlikely to confuse with the others the GOFORDEV Index after having seen the information materials on it.

Expectedly, local residents who are members of organized groups or who participate actively in local affairs also tend to be more knowledgeable about the Index. The estimated coefficients of Member (1.938) and Self-Participation (0.182) are both statistically significant from zero. However, only the membership status has a positive and significant effect (3 percent) on the probability of being a member and at the same time being knowledgeable about the Index. This result and that in the previous paragraph underscore an important finding: Knowledge of the Index induces a person to become a member if he or she is not yet one, and bring awareness of the Index to those who are already members.

**Table 7. Probability of Membership in Organization and Awareness of the GOFORDEV Index**  
(Bivariate probit regression model:  $\Pr(\text{Member}=1, \text{GI materials}=1|\mathbf{X})$ )

Explanatory Variables	Dependent variables (Model 1)				Marginal Effects	
	Member		GI materials		dF/dX	Std. Errors
	Coeff.	Rob. Std. Errors	Coeff.	Rob. Std. Errors		
GI materials	2.326	0.305**			0.107	0.018**
GI materials x Other indicators	-0.219	0.340			-0.002	0.010
Other indicators	0.163	0.064**	0.056	0.088	0.004	0.004
LGU Partner			0.127	0.091	0.003	0.004
Bulacan			0.473	0.106**	0.018	0.005**
Angat	-0.069	0.149			-0.001	0.005
Baliwag	0.223	0.138			0.004	0.006
Guiguinto	0.270	0.135**			0.006	0.006
San Jose del Monte	0.409	0.134**			0.011	0.006*
Braulio E. Dujali	0.893	0.132**			0.031	0.008**
Panabo	1.218	0.125**			0.043	0.008**
Sto. Tomas	0.780	0.128**			0.027	0.007**
Samal	1.554	0.131**			0.055	0.009**
Asuncion	0.102	0.143			0.002	0.006
Tagum	0.584	0.127**			0.018	0.007**
Member			1.938	0.130**	0.030	0.011**
Self-participation			0.182	0.105*	0.004	0.004
Age	0.011	0.002**	-0.005	0.004	0.000	0.000
Male			0.117	0.104	0.003	0.005
Household Head			-0.236	0.113**	-0.005	0.005
Spouse	-0.027	0.060			-0.000	0.002
High School	0.088	0.059	-0.003	0.079	0.001	0.003
Family size	0.016	0.013			0.000	0.000
Regular job	0.181	0.057**			0.002	0.002
Government employee	0.301	0.101**			0.006	0.005
Electric bill	0.000	0.000**			5.55e-07	3.62-e07
Re-elected	-0.112	0.141			-0.002	0.005
Yr00	0.122	0.064*			0.002	0.002
Yr02			0.121	0.064*	0.003	0.003
Constant	-2.104	0.173**	-2.013	0.188**		
Number of observations	3473					
Wald $\chi^2$	27755.50					
Prob> $\chi^2$	0.0000					
Log pseudo-likelihood	-349623.31					
$H_0: \rho=0$	-1	8.22e-09				
$\chi^2$	8.21623					
Prob> $\chi^2$	0.0042					

Note: The marginal effects are obtained using analytical methods (Bartus, 2003). “\*\*\*” and “\*\*” indicate that the corresponding z-statistics are significant at the 5% and 10% levels, respectively.

Among the other statistically significant factors are the dummy variables for Bulacan, San Jose del Monte, Braulio E. Dujali, Panabo, Sto. Tomas, Samal, and Tagum. Since Tagum City is a control area, its estimated marginal effect (1.8 percent) reflects some of its innate characteristics that strongly induce the local people to participate.

The socioeconomic and demographic variables that have statistical effects on the likelihood of group membership are Age (0.011), Regular job (0.181), Government employee (0.301) and electric bill. Completion of basic education (high school) does not seem to have any influence on the probability of membership. Likewise, those with higher education (college) do not appear to be more likely than others to have knowledge of the Index, other things being equal. Knowledge of the Index is more likely among those where the local area partner is the local government itself, and those who are older or heads of the household. The likelihood of membership appears greater in 2000, the reference period for the baseline survey, just prior to the local elections in May 2001. Expectedly, knowledge of the Index appears more likely in 2002 after an intensified information campaign in the treatment areas.

The findings seem robust since possible omitted variables do not seem to affect jointly the disturbances in the two probit equations, i.e.,  $H_0: \rho=0$  is rejected. Further, the joint tests of significance of the coefficients of GI material, GI material  $\times$  Other indicators and LGU partner cannot be rejected under conventional statistics.<sup>12</sup>

#### *(b) Self-participation and awareness of the Index*

Also, as can be seen in Table 8, voluntary participation in local public affairs appears greater among those exposed to the information materials about the GOFORDEV Index or who have attended public forum where the Index was discussed. The estimated coefficient of GI material is 1.414, even after discounting the possibility that the respondent may be mistaking the Index for other similar systems (i.e., 2.049-0.635). This translates to a 5.4-percent increase in the probability of both participating in local public affairs and knowing the Index. Other indicators have statistical effects only on the probability of Self-Participation (0.457) and none on the chances of knowledge of the Index.

Apparently, membership in a local organization has a positive effect on the likelihood of Self-participation or of awareness of the Index, but none on the joint probability of these two outcomes. Instead, the joint outcome of Self-participation and awareness of the Index is more likely among those members of organizations that are active in local project planning, implementation, monitoring or evaluation. This suggests that group pressure or perhaps camaraderie among members is a positive force for individual civic action.



**Table 8. Probability of Self Participation and Awareness of GOFORDEV INDEX**

(Bivariate probit regression model:  $\Pr(\text{Self Participation}=1, \text{GI material}=1|W)$ )

Explanatory Variables	Dependent variables (Model 2)				Marginal Effects	
	Self-participation		GI materials		Pr(Self-participation=1, GI materials=1)	
	Coeff.	Rob. Std. Errors	Coeff.	Rob. Std. Errors	dF/dX	Std. Errors
GI materials	2.049	0.167**			0.054	0.010**
GI materials x Other indicators	-0.635	0.182**			-0.007	0.004
Other indicators	0.457	0.087**	0.069	0.088	0.012	0.004
LGU Partner			0.331	0.077**	0.011	0.003**
Bulacan			0.305	0.090***	0.012	0.004**
Angat	-0.053	0.146			-0.001	0.004
Baliwag	-0.189	0.135			-0.003	0.004
Guiguinto	-0.054	0.124			-0.001	0.004
San Jose del Monte	0.097	0.119			0.002	0.004
Braulio E. Dujali	0.137	0.176			0.003	0.005
Panabo	0.208	0.117*			0.004	0.004
Sto. Tomas	0.747	0.133**			0.019	0.004**
Samal	0.648	0.137**			0.015	0.005**
Asuncion	-0.649	0.159**			-0.008	0.004**
Tagum	-0.022	0.142			-0.000	0.004
Member	0.693	0.125**	-0.665	0.159**	-0.007	0.007
Org. Participation	1.217	0.140**			0.013	0.006**
Self-participation			1.882	0.131**		
Age	-0.001	0.002	0.000	0.003	-1.95e-06	0.000
Male	0.029	0.092	0.074	0.118	0.003	0.004
Household Head	0.231	0.095**	-0.250	0.118**	-0.003	0.004
College	-0.069	0.083			-0.001	0.002
High School			0.070	0.086	0.002	0.003
Family size						
Government employee	0.259	0.142			0.006	0.004
Owner	0.038	0.076			0.001	0.002
Yr00	-0.578	0.080**			-0.011	0.002**
Yr02			0.007	0.085	0.000	0.003
Constant	-1.691	0.144**	-2.038	0.175**		
Number of observations	3561					
Wald $\chi^2$	2978.36					
Prob> $\chi^2$	0.0000					
Log pseudo-likelihood	-266231					
H <sub>0</sub> : $\rho=0$	-1.000	7.45e-06				
$\chi^2$	5.476					
Prob> $\chi^2$	0.0193					

Note: The marginal effects are obtained using analytical methods (Bartus, 2003). “\*\*\*” and “\*\*” indicate that the corresponding z-statistics are significant at the 5% and 10% levels, respectively.

In areas where the local partner is the local government itself, the probability of awareness of the Index is higher than elsewhere, other things being constant. In fact, the variable LGU Partner increases by 1.2 percent the likelihood of Self-participation and knowledge of the Index. Other variables that have the same positive effects are residency in Bulacan, Sto. Tomas, Samal and Asuncion. Given the negative results for Yr01, this suggests that the intensified information campaign in 2002 paid off in terms of greater likelihood of Self-participation and awareness of the Index.

None of the socioeconomic and demographic variables appear significant except Household Head, whose estimated coefficients for the probabilities of Self-participation and GI materials are 0.231 and -0.250, respectively. Unlike the case of membership in local organizations, the likelihood of Self-participation appears to be lower in 2000 than in 2001 or 2002, perhaps an indication of a normal political situation after the May 2001 elections.

Again, the robustness tests on estimated coefficients are favorable in this case.<sup>13</sup> Further, the disturbances of the two probit regressions seem to be uncorrelated as indicated by the rejection at the 5-percent level of  $H_0: \rho=0$ .

### *(c) Membership in local organization and self-participation*

Finally, the individual effects of the komiks, posters and the public presentations on the likelihood of being a member of any local organization and a participant in local public affairs are validated here. The results of the regression exercise are presented in Table 9, which indicate the varying influences of the information materials and activities on citizenship in the areas tested.

On the one hand, the komiks distributed during the second year of the pilot test and the posters have statistically significant and positive effect on the probability of being a member in a local association. Their respective coefficients are 0.805 and 0.548. On the other hand, the posters distributed in 2002 and the public presentations conducted during the entire pilot test show are seen to have a statistically significant and positive influence on the probability of Self-participation. Their respective coefficients are 0.696 and 0.825. However, only the attendance in public presentations has an impact on the probability of Member and Self-participation. The estimated marginal effect of such attendance is 2.5 percent  $(=(0.111-0.086) \times 100)$ .

**Table 9. Probability of Membership in Organization and Self Participation**  
(Bivariate probit regression model:  $\Pr(\text{Member}=1, \text{Self Participation}=1|\mathbf{Z})$ )

Explanatory Variables	Dependent variables (Model 3)				Marginal Effects	
	Member		Self-participation		Pr(Member=1, Self-participation=1)	
	Coeff.	Rob. Std. Errors	Coeff.	Rob. Std. Errors	dF/dX	Std. Errors
Komiks	-0.330	0.274	0.514	0.310*	0.001	0.038
Komiks $\times$ Yr02	0.805	0.495*	-0.906	0.611	-0.039	0.049
Posters	0.548	0.206**	-0.084	0.277	0.032	0.033
Posters $\times$ Yr02	0.119	0.286	0.696	0.317**	0.068	0.053
Presentation	0.344	0.342	0.825	0.369**	0.111	0.065*
Presentation $\times$ Yr02	-0.826	0.652	-0.947	0.635	-0.086	0.032**
Other indicators	0.222	0.067**	0.419	0.080**	0.050	0.010**
Angat	-0.017	0.154	-0.127	0.154	-0.010	0.016
Baliwag	0.257	0.142*	-0.172	0.147	0.004	0.017
Guiguinto	0.294	0.140**	0.014	0.142	0.023	0.018
San Jose del Monte	0.409	0.139**	0.111	0.135	0.041	0.020*
Braulio E. Dujali	0.912	0.140**	0.215	0.175	0.094	0.031**
Panabo	1.474	0.136**	0.601	0.215**	0.193	0.053**
Sto. Tomas	0.696	0.133**	0.922	0.132**	0.165	0.028**
Samal	1.849	0.136**	1.263	0.217**	0.376	0.073**
Asuncion	0.120	0.149	-0.625	0.180**	-0.038	0.014**
Tagum	0.547	0.129**	0.139	0.162	0.055	0.021**
Member			-0.261	0.372	-0.018	0.025
Org. Participation			1.575	0.174**	0.133	0.013**
Age	0.012	0.002**	0.000	0.003	0.001	0.000**
Male			0.025	0.091	0.002	0.007
Household Head			0.233	0.093	0.017	0.007**
Spouse	0.002	0.061			0.000	0.005
High School	0.075	0.066			0.006	0.005
College			-0.090	0.086	-0.007	0.006
Family size	0.019	0.013			0.002	0.001
Regular job	0.219	0.068**			0.017	0.005**
Government employee	0.404	0.112**	0.462	0.140**	0.078	0.022**
Electric bill	0.000	0.000			6.54e-06	3.08e-06**
Owner			0.042	0.075	0.003	0.006
Re-elected	-0.177	0.150			-0.013	0.011
Yr02	-0.0163	0.070**	0.068	0.080	-0.008	0.009
Constant	-2.110	0.183**	-1.785	0.158**		
Number of observations			3467			
Wald $\chi^2$			979.22			
Prob> $\chi^2$			0.0000			
Log pseudo-likelihood			-439392.86			
H <sub>0</sub> : $\rho=0$	0.4648	0.192				
$\chi^2$	4.22989					
Prob> $\chi^2$	0.0397					

Note: The marginal effects are obtained using analytical methods (Bartus, 2003). “\*\*\*” and “\*\*” indicate that the corresponding z-statistics are significant at the 5% and 10% levels, respectively.

Other variables that also positively affect the joint probability of Member and Self-participation are the awareness of the other similar indicators systems (5 percent); the involvement of one's organization in local projects (13.3 percent); the status of being a household head (1.7 percent); of having a regular job (1.7 percent) and being a government employee (7.8 percent). Residency in the following areas is also statistically significant: San Jose del Monte (4.1 percent), Braulio E. Dujali (9.4 percent), Panabo (19.3 percent), Sto. Tomas (16.5 percent), Samal (37.6 percent) or Tagum (5.5 percent). Residents of Asuncion appear to be less likely than the residents of either Bustos or Plaridel, both control areas, to be both members of local organizations and participants in local government affairs. Age and economic status (Electric bill) have only negligible effects on the joint probability of Member and Self-participation.

Under conventional statistical tests, the posited joint effects of the information materials and activities on the likelihood of membership in local organizations and personal involvement in public affairs cannot be rejected.<sup>14</sup> Further, the rejection of the  $H_0: \rho=0$  at the 5-percent level also implies that the omitted variables do not lead to correlation between the error terms in the two probit regressions.

## 5. CONCLUDING REMARKS

Broadly, the results here support the notion that education makes for a better citizenry. To engender civic participation in the Philippines, however, a special kind of education seems needed: one that consults, informs, presents options and provides venues for the collective voice to be heard by local officials. Thus, the payoffs to active citizenship become more certain with a citizen feedback mechanism like the GOFORDEV Index.

Moreover, the traditional media for disseminating information such as komiks, posters and even public fora are still effective alternatives to TV, radio or the Internet especially in rural areas where the latter remains inadequate or costly to access.

Also, the participation of organized groups in civic activities further reinforces individual commitments, even among non-members, either because of social pressure, a greater sense of belonging, *esprit de corps* or camaraderie. Since there is only weak evidence that active citizenship is limited to the old, well-off or highly educated members of the community, the proliferation of NGOs and civil society groups, with their networks, should be taken as an opportunity to involve a wider segment of the local population.

Finally, the results yet provide another reason to push for greater transparency and accountability achieved through citizen feedback mechanism. To the improvement in public services, wider participation is an added development payoff that can also be expected.

## REFERENCES

- Bartus, T. (2003). Estimation of average marginal effects using MARGIN.  
[http://www.bke.hu/bartus/download/bartus\\_sj\\_draft.pdf](http://www.bke.hu/bartus/download/bartus_sj_draft.pdf).
- Blair, H. (2000). Participation and accountability at the periphery: Democratic local governance in six countries. *World Development* 28(1): 21-39.
- Cappellari, L. and S. P. Jenkins (2003). MVPROBIT: Stata module to calculate multivariate probit regression using simulated maximum likelihood.  
<http://ideas.repec.org/c/boc/bocode/s432601.html>
- Capuno, J. J. (2000). GOFORDEV Index: Advocating good governance for local development. *Issues & Letters* 9(5-6). Quezon City: Philippine Center for Policy Studies.
- Capuno, J. J., M. M. S. Garcia, and J. S. Sardalla (2001). Promoting local development through good governance: A partial assessment of the GOFORDEV Index. *Issues & Letters* 10(3). Quezon City: Philippine Center for Policy Studies.
- Coronel, S., Y. Chua, L. Rimban and B. Cruz (2004). *The rulemakers. How the wealthy and well-born dominate congress*. Quezon City: Philippine Center for Investigative Journalism.
- Disk, T. (2001). *Democracy at the local level*. International Institute for Democracy and Electoral Assistance. Bulls Tryckeri, Halmstad, Sweden.
- Faguet, J.-P. (2001). Does decentralization increase responsiveness to local needs? Evidence from Bolivia. WB Policy Research Working Paper No. 2516. Washington, D.C.: World Bank.
- Greene, W. (1998). Gender Economics courses in liberal arts colleges: Further results. *Journal of Economic Education*, 29(4), pp. 291-300.
- Greene, W. (2003). *Econometric Analysis* (5<sup>th</sup> ed.). New Jersey, USA: Prentice Hall.
- International Institute for Rural Reconstruction (2001). *Enhancing participation in local governance: Experiences from the Philippines*. Cavite, Philippines: IIRR.
- Khemani, S. (2001). Decentralization and accountability. Are voters more vigilant in local than in national elections? WB Policy Research Working Paper #2557. Washington, D.C.: World Bank.

- Knack, S. (2000). Social capital and the quality of government. Evidence from the United States. WB Policy Research Working Paper #2504. Washington, D.C.: World Bank.
- Maddala, G. S. (1988). *Limited-dependent and qualitative variables in econometrics*. Cambridge, U.K.: Cambridge University Press.
- Milligan, K., E. Moretti and P. Oreopolous (2003). Does education improve citizenship? Evidence from the U.S. and the U.K. NBER Working Paper No. 9584. Boston, MA: National Bureau of Economic Research.
- Prud'homme, R. (1995). On the dangers of decentralization. *The World Bank Research Observer* (Aug.), pp. 201-210.
- Putnam, R. (2000). *Bowling alone: Collapse and revival of American community*. New York: Simon & Schuster.
- Reinikka, R and J. Svensson (2002). Assessing frontline service delivery. Development Research Group. The World Bank. Washington, D.C.
- Rood, S. (1997). Researching decentralized governance. In F. B. Miranda (Ed.), *Democratization: Philippine perspectives*, pp. 303-324. Quezon City: University of the Philippines Press.
- Shah, A. (1997). Balance, accountability, and responsiveness: Lessons about decentralization. Mimeo. Washington, D.C.: World Bank.
- Tigno, J. (1997). People empowerment: looking into NGOs, POs and selected sectoral organizations. In F. B. Miranda (Ed.), *Democratization: Philippine perspectives*, pp. 115-134. Quezon City: University of the Philippines Press.
- World Bank (2002). *World development report 2002*. Washington, D.C.: World Bank.
- World Bank (2004). *World development report 2004*. Washington, D.C.: World Bank.
- Zialcita, F. N. (1997). Barriers and bridges to a democratic culture. In M. S. I. Diokno (ed.), *Democracy and citizenship in Filipino political culture*, pp. 39-68. Quezon City: University of the Philippines Third World Studies Center.

## NOTES

\* I wish to acknowledge the institutional and financial support of the Philippine Center for Policy Studies and the Philippine Center for Economic Development. Also appreciated are the comments and suggestions of the participants during a UPSE Friday Seminar in December 2003 and a conference session of the Public Choice Society in March 2004.

<sup>1</sup> Taking off from the comic books of the West, the local *komiks* have gained widespread popularity especially among the lower income groups.

<sup>2</sup> An NGO founded in 1987, the Philippine Center for Policy Studies is oriented towards policy research and advocacy. Its Fellows are all development scholars and mostly teachers at the University of the Philippines.

<sup>3</sup> . Based on this measure, a city or municipality with a score close to 100 is said to be closely associated to what is considered *good* governance, but an area with a scores far from 100 is not deemed suffering from bad governance (e.g., corrupt).

<sup>4</sup> Two similar mechanisms, called public expenditure tracking surveys and facility-based quantitative service delivery survey, were tried out with favorable results in Uganda, Tanzania, Ghana and Honduras (Reineka and Svensson 2002).

<sup>5</sup> To account for the differences in the initial levels of socioeconomic development, the six pilot areas in each of the two provinces were randomly drawn from two clusters. One cluster (with three samples) consists of the relatively highly developed cities and municipalities and the other cluster (also, with three samples) comprises the relatively less developed ones. Bulacan also dominate Davao del Norte both in terms of fiscal resources and level of development (as indicated by the province's Human Development Index).

<sup>6</sup> The local area partner is first informed of the purpose of the projects before it is contracted to do specific pilot test activities. Their compliance with the terms of the contract is evidence by their participation in the relevant training, conduct of fieldwork and public consultations, and submission of a number of written outputs. The contract, which also includes financial support from PCPS, is renewed every year.

<sup>7</sup> From within the local government, the Local Planning and Development Office was specifically tapped as the implementing agency since the project activities are similar to some of their official functions. The two experimental areas in Bulacan were assigned to local civic organizations, whose members include prominent business and civic leaders. In contrast, the local partners in two experimental sites in Davao del Norte were non-government organizations promoting the causes of farmers, fisherfolks, plantation workers and indigenous people, and pursuing projects on environmental protection and sustainable development. In both provinces, a different set of civil society partners was contracted in each year to carry out the pilot test activities. The substitution was made since the original local partners in 2001 were either unavailable or no longer capable of undertaking the task in 2002. A minimal set of requirements was imposed in the selection

of civil society partners: residence or work in the area to insure familiarity of the site, a set of officers to insure accountability, and core group of members that will undergo the requisite training to execute the project activities.

<sup>8</sup> Consisting of a three-page questionnaire, the survey instrument is administered by an interviewer using a two-stage random sampling design in the selection of a household respondent.

<sup>9</sup> These academic institutions are the Bulacan State University-Malolos Campus and the Ateneo de Davao University for the baseline survey, and the University of Regina Carmeli and University of the Immaculate Conception for the two rounds of impact surveys. For these surveys, the same sampling design, but with a modified survey instrument, as the ones used by local partners was followed.

<sup>10</sup> However, it is possible for a respondent to be truly aware of the Index even without having seen a *komiks* or a poster, or attended a public presentation about the Index. His alternative sources of information may include friends, neighbors or other fellow members of organizations who are themselves exposed to the Index.

<sup>11</sup> However, no dummy variables for Bustos and Plaridel, which are both control areas in Bulacan, are included to avoid multicollinearity with the other site dummies. Note that both places also have lower levels of civic participation than any other pilot area, except for Angat. Quite apart from the site peculiarities, the dummy variable for a re-elected mayor is also included to control of the possible effects of the local elections held in May 2001 civic participation. This is possible, for example, if the incumbent local chief executive enjoined wider participation to win another term of office.

<sup>12</sup> The chi-square statistics for the  $H_0$ : GI materials=GI materials  $\times$  other indicators=LGU partner=0 is 250.02. The chi-square statistics for the  $H_0$ : GI materials=GI materials  $\times$  other indicators=0 is 247.69.

<sup>13</sup> The chi-square statistics for the  $H_0$ : GI materials=GI materials  $\times$  other indicators=LGU partner=0 is 179.66. The chi-square statistics for the  $H_0$ : GI materials=GI materials  $\times$  other indicators=0 is 175.81.

<sup>14</sup> The chi-square statistics for the  $H_0$ : Komiks=Komiks  $\times$  Yr03=Posters=Posters  $\times$  Yr03=Presentations=Presentations  $\times$  Yr03=0, for the same set of variables in the first and second equations, is 36.91. The chi-square statistics for the  $H_0$ : Komiks=Komiks  $\times$  Yr03=0, for the same set of variables in the first and second equations, is 8.98. The chi-square statistics for the  $H_0$ : Posters=Posters  $\times$  Yr03=0, for the same set of variables in the first and second equations, is 20.63. The chi-square statistics for the  $H_0$ : Presentations=Presentations  $\times$  Yr03=0, for the same set of variables in the first and second equations, is 8.44.