



# The Uneven Reach of Decentralization: A Case Study among Indigenous Peoples in the Bolivian Amazon

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## Abstract

Decentralization reforms aim at strengthening democracy by promoting political participation among citizens. Research shows (1) that information is a prerequisite for political participation and (2) that people face different private costs in acquiring information. Here we combine the two lines of research and ask: what private costs hamper the acquisition of information on decentralization? For the analysis, we use data from an indigenous population of lowland Bolivia. We surveyed 319 Tsimane' adults in 12 villages. We found that nine years after the passage of the decentralization laws, knowledge about those reforms had only partially reached the Tsimane'. People who live closer to municipal towns, had more schooling, and participated in the market economy were more aware of decentralization. Political authorities trying to spread the potential benefits of decentralization should address the structural limitations of the dissemination of political knowledge.

## Keywords

Bolivia, decentralization, indigenous peoples, information costs, popular participation

## Introduction

Democratic decentralization refers to the transfer of resources and power to lower government authorities that are democratic and independent of higher levels of government (Manor, 1999). Under democratic decentralization, citizens and their representatives are granted power in decision-making (Von Braun and Grote, 2002). It has been theorized that shifting the locus of power away from centralized authorities makes public service provision more efficient due to better targeted policies and lower transaction costs (Faguet, 2004: 867–93).

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Because of the scale and potential impact of decentralization, researchers have analyzed its causes and consequences (Crook and Manor, 1998; Manor, 1999; Montero and Samuels, 2004; Smoke, 2001; Van Cott, 2003: 751–75; Yashar, 1999: 76–104). Here we take a different approach and study the covariates of awareness of decentralization, because information about decentralization reforms – including knowledge of the new powers and capabilities of local government – is critical to the realization of accountability in decentralized systems (Montero and Samuels, 2004). We follow Zaller (1992) and define awareness of decentralization as the degree to which a citizen has information about politics, and ask: what private costs hamper the acquisition of information on decentralization? For the empirical analysis, we use unique data collected among adults from a farming-foraging population in the vicinity of a recently created municipality in the Bolivian Amazon. We hypothesize that people with higher private costs in gaining access to information would have less awareness of decentralization than those with lower private costs.

This research contributes to studies of decentralization in at least three ways. First, the study of political awareness among citizens is a relatively new field (Delli Carpini and Keeter, 1993: 1179–206). Recent research has focused on political knowledge as an explanatory variable for political attitudes and as a phenomenon to be explained in its own right (Delli Carpini and Keeter, 1993: 1179–206; Zaller, 1990, 1992). However, research on the measurement of political awareness is scarce and the studies on the topic focus on advanced industrial democracies (Delli Carpini and Keeter, 1993: 1179–206). Here we contribute to the nascent field of political awareness with a study of an indigenous group in a developing democracy.

Second, if decentralization reforms aim to promote political participation but limited information hampers the participation of some citizens, then decentralization reforms would fail unless they level the varying degrees of citizens' political awareness. By studying the correlates of awareness of decentralization, we generate results that can inform policy-makers so they can promote policies that reach groups that have high costs of acquiring political knowledge.

Last, we contribute to research on decentralization by focusing on an often excluded population: lowland indigenous peoples. Studies of decentralization in Latin America have focused on cities (Campbell, 2003) or on highland populations (Van Cott, 2003: 751–75). Lowland indigenous peoples are among the poorest in the world and are often excluded from national politics (Patrinos, 1994). Because the Tsimane' share many socioeconomic characteristics with other lowland indigenous peoples in Latin America, they illustrate the challenges faced by Latin American lowland indigenous peoples as they try to take part in decentralized political institutions.

## **Decentralization and Political Awareness**

Scholars have argued that decentralization reforms have the potential to promote democratization and stimulate the growth of civil society by allowing people to participate in local politics and, as a consequence, to hold local authorities accountable (Diamond, 1999; Grindle, 2000; Hiskey and Seligson, 2003: 64–88; Yashar, 1999: 76–104). However, empirical research shows that only under some circumstances does decentralization enhance political participation and bring transparent, accountable, and responsive local governments. Where local institutions fulfill the needs of the citizens, decentralization can strengthen citizen support of politics at a national level, but where the performance of local institutions falters, decentralization can spread corruption and favor entrenched local elites (Crook and Manor, 1998; Grindle, 2000; Hiskey and Seligson, 2003: 64–88).

Fundamental to meaningful democratic decentralization is downward accountability, or the ability of citizens to hold their officials accountable (Agrawal and Ribot, 1999: 473–503; Eckardt, 2008: 1–17; Manor, 1999). In functioning democracies, formal rules and oversight provide a

system of checks that ensure the accountability of governments. However, in most developing countries formal rules are poorly enforced and oversight of government is weak. To ensure downward accountability, citizens in developing countries must rely on instruments such as participation in elections and referenda, or the presence of multiple political parties (Blair, 2000: 21–39). For example, officials can be voted out of power through electoral processes, or citizens can move to jurisdictions with preferred public service provision (Seabright, 1996: 61–89). However, in most developing countries these opportunities are limited (Bardhan, 2002: 185–205; Echeverri-Gent, 1992: 1401–22; Fiszbein, 1997: 1029–43) and the media and civil society engagement are the only means for helping in the realization of accountability.

Information about decentralization reforms – including knowledge of the new powers and capabilities of local government – is critical to the realization of accountability in decentralized systems. Information leads to informed decision-making processes and might increase the political costs of not responding to local demands. Furthermore, Montero and Samuels (2004) found that citizen demands on local representatives increased with political awareness because knowledgeable citizens can take advantage of the institutional mechanisms and resources that decentralization offers them. However, information is not equally available to all citizens. People face variable private costs – costs to the individual rather than to society – associated with acquiring, processing, and using political information (Rosenstone and Hansen, 1993; Wolfinger and Rosenstone, 1980). For example, people with higher education levels have lower costs in understanding and processing political information (Andersson, 2004: 233–49; Wolfinger and Rosenstone, 1980), and people living in remote areas, or speaking minority languages have higher costs in acquiring political information because radio broadcasts are either unavailable or broadcast in the language of the majority.

Thus, decentralization reforms that aim to level the varying degrees of citizen political participation should first try to understand what costs hamper the acquisition of political information and then try to reach groups that face higher costs in acquiring knowledge about decentralization.

## **Decentralization and Indigenous Peoples in Bolivia**

### *Decentralization Reform*

Among Latin American countries undergoing decentralization processes, Bolivia has been singled out as the most significant and innovative example (Mayorga, 1997: 143–63). The decentralization reform in Bolivia, first approved in 1994 by the Law of Popular Participation (LPP), had political, fiscal, and administrative components. It included (1) the direct election of municipal officials and the creation of new municipalities, (2) a substantial transfer of central government funds to the municipal governments, (3) the granting of tax categories to municipalities for raising their own revenues, (4) an increase in the development of the responsibilities and resources of municipal governments, (5) a censure provision to remove mayors in cases of misconduct, and (6) the responsibility of municipal governments to develop an Annual Operative Plan (AOP) or annual budgets reflecting the priorities of the municipal development plan (Faguet, 2004: 867–93; Grindle, 2000; Hiskey and Seligson, 2003: 64–88; O’Neill, 2003: 1068–91; Rengel, 2004).

The decentralization reform in Bolivia also incorporated the creation of a complex system to encourage citizens to get involved in local government. For example, the LPP begins by granting formal recognition to grassroots community organizations (*Organización Territorial de Base*) such as indigenous communities, neighborhood associations, and peasant associations. The law encourages these entities to form municipal oversight committees (*Comité de Vigilancia*) to monitor local

governments, and grants them the right to petition the central government to suspend a municipality's fiscal transfers in cases of mismanagement (O'Neill, 2003).

### *Indigenous People's Political Participation*

In Bolivia, indigenous peoples have been excluded from political participation for most of modern history. Indigenous peoples were granted the right to vote after the 1952 revolution. In 1994 the state recognized the multiethnic nature of Bolivia and granted indigenous people territorial rights, precipitating a growth in indigenous political influence (Hall and Patrinos, 2005).

Political influence in Bolivia is not equally distributed among all the indigenous groups. Because of the cultural background, indigenous politics in Bolivia has traditionally been dominated by highland indigenous organizations (Hall and Patrinos, 2005). Only during the last two decades have lowland indigenous organizations emerged in national politics. The main demands of lowland indigenous organizations have centered on territorial rights to protect lowland indigenous peoples from local encroachers on their land.

### **The Tsimane' and Their Political Organization**

The Tsimane' are a farming-foraging society of about 8,000 people in the department of Beni in the Bolivian Amazon. Most of the territory they inhabit lies in the municipality of San Borja, one of the administrative units created under the Law of Municipalities. The town of San Borja (population approximately 19,000) is at the heart of the municipality and the most important commercial center for the Tsimane' villages in our study.

In common with other lowland indigenous peoples in Bolivia, most Tsimane' live below the poverty line and have low levels of education (Godoy et al., 2002: 397–409; Hall and Patrinos, 2005). At present the Tsimane' connection with the modern market economy is through employment in the local labor market and through the sale of agricultural and forest products. The Tsimane' work on cattle ranches, in logging camps, and in the farms of colonist farmers. Some Tsimane' with education and Spanish fluency are employed as teachers or with local organizations.

Following a common trend among Bolivian lowland indigenous groups, during the 1980s the Tsimane' started to organize politically. In 1989 the Tsimane' created their own political organization, the Great Tsimane' Council, whose main role was to channel demands from the Tsimane' to national institutions. With the passing of the decentralization law, Tsimane' participation in politics changed in two ways. First, like other groups, the Tsimane' created grassroots community organizations (GCOs). Villages close to the municipality town were the first to form GCOs; more isolated villages followed. Members of GCOs direct their demands to the Great Tsimane' Council, which in turn presents them to the municipal government. Second, in 2002 the counselor of the town hall of San Borja decreed the creation of an indigenous sub-municipality. Legally, the sub-municipality cannot ask for separate funds from the Bolivian government, but it can obtain funds through the municipal budget of San Borja. However, at the time of writing (2008) no funds had been received.

Despite these opportunities, Tsimane' participation in local government is limited and generally restricted to Tsimane' representatives. For example, members of GCOs do not participate directly in the municipal government; they channel their demands through the Great Tsimane' Council. To date no indigenous representatives – including those on the Great Tsimane' Council – have been elected as members of the municipal government.

## Hypotheses

To study the private costs that influence the acquisition of information on decentralization, we equate awareness of decentralization with the private costs of gaining information on decentralization reforms. We expect that people with higher private costs in gaining access to information will have less awareness of decentralization. Specifically, we hypothesize that distance from local urban centers is negatively associated with awareness of decentralization (H1). We also hypothesize that information about decentralization decreases with distance from the respondent’s household to the village center (H2). In the study site villagers typically hold meetings in village schools, so people living a long way from the school will be less likely to be aware of meetings and also face higher costs to attend meetings. We also hypothesize that people with less schooling will know less about decentralization (H3), because some of the mechanisms through which people can participate in and benefit from national society (e.g. voting or having an identity card) require skills in reading, writing, or speaking Spanish, the national language in Bolivia. People with lower levels of education and of fluency in Spanish are also excluded from accessing print media and most radio broadcasts in Bolivia. Finally, we hypothesize that people who enter the market economy through wage labor and the sale of products will know more about decentralization than more autarkic people (H4). People engaged in the market economy are more likely to obtain legal documents since such documents facilitate work in cities.

## Estimation Strategy

For the empirical analysis, we estimate the parameters of the following expression:

$$A_{ihv} = \alpha + \lambda G_{ihv} + \gamma E_{ihv} + \psi M_{ihv} + \beta D_{ihv} + \varepsilon_{ihv} \tag{1}$$

$A_{ihv}$  stands for awareness of decentralization of participant  $i$  of household  $h$  and village  $v$ .  $G_{ihv}$  is a vector of two variables that proxy for distance from the person’s house to (1) the village school and (2) the closest market town.  $E_{ihv}$  is a vector of variables related to human capital that includes fluency in speaking Spanish and the highest grade completed in school.  $M_{ihv}$  captures the individual’s level of integration in the market economy.  $D_{ihv}$  stands for the age and sex of the participant.  $\varepsilon_{ihv}$  is a random error term.

We expect the coefficient of the variable for distance ( $\lambda$ ) to be negatively associated with awareness of decentralization (H1 and H2), and the coefficients of modern human capital ( $\gamma$ ) and integration in the market ( $\psi$ ) to be positively associated with awareness of decentralization (H3 and H4).

For the analysis, we use ordinary least square and probit regressions. Since we did not have convincing instrumental variables to control for the endogeneity of the explanatory variables, we cannot infer causality from the parameters we estimate. For example, it is possible that people who speak Spanish have high awareness of decentralization, but it is also possible that people who gained knowledge of decentralization decided to learn Spanish. Therefore, we do not talk about causality but about association between the variables explored. Unless indicated otherwise, we only discuss values associated with awareness of decentralization at a 90 percent confidence level or above.

## Methods

The information comes from a study conducted between August 2002 and November 2003. Data were collected in four quarterly surveys carried out among the same participants. We collected demographic information (i.e. age, sex, schooling, distance from town) during the first quarter and information on political awareness during the last quarter. To capture seasonal variation in sources of income, we collected information on income from wages and sales throughout the four quarters. Four female and four male researchers collected the information, using translators for the interviews.

## Sample

We carried out surveys in 174 households in 12 Tsimane' villages in the municipality of San Borja. To select villages, we used distance from the village to the town of San Borja. It takes one day by canoe from San Borja to reach the remotest village in the sample, and a one-hour walk to reach the closest. All the people of voting age, i.e. 18 or over, in all the households in the 12 villages were interviewed. The total sample included 319 participants, 51 percent men and 49 percent women.

## Dependent Variable

We followed Zaller (1990, 1992) and collected information on awareness of decentralization through a questionnaire. We asked one question about the Decentralization Law and one about the Popular Participation Law, two questions related to mechanisms created by decentralization reforms (i.e. *Grassroots Community Organization* and *Annual Operating Plan*), and two questions related to the local municipality (i.e. name of the mayor and name of the municipality). No one knew about the Decentralization Law, so we excluded that variable from our summary measure. The remaining five variables had statistically significant and positive correlation coefficients (from 0.21 to 0.40) and a Cronbach's alpha of 0.64, so we used them to construct a summary measure of awareness of decentralization using principal component factor analysis (see Table 1).

## Explanatory Variables

*Distance to town and village school:* Villages varied in terms of their distance to the municipal town. We divided villages into two groups. The first group included five villages located between 6 and 15 km from the town of San Borja. The second group included seven villages located between 33 and 50 km from the town of San Borja. The settlement pattern of the villages was nucleated.

*Modern human capital:* We defined schooling as the highest school grade completed by the participant. Interviewers evaluated the participants' fluency in spoken Spanish during the survey and assigned a "one" if the person was able to answer the survey in Spanish and zero otherwise. Some 34 percent of the sample was able to answer the survey in Spanish.

*Integration in the market:* We asked participants about cash income from wage labor and the sale of products during the 14 days prior to the interview. Since we collected information on cash income four times during the study, we averaged the information over the four quarters to obtain a single measure per person.

**Table 1.** Descriptive Statistics of the Variables Used in Regression Analysis

| Variable                                   | Definition   | Obs | Mean | SD    |
|--|--|-----|------|-------|
| <b>Awareness of decentralization</b>       |  |     |      |       |
| Awareness                                  | Sum of positive answers to five yes/no questions on decentralization   | 319 | 0.68 | 1.05  |
| <b>Distance to town and village school</b> |  |     |      |       |
| Distance to town                           | Distance from the village to the center of the municipality, in km   | 12  | 27.5 | 15.69 |
| Time to school                             | Time taken to walk from the house to the village school, in minutes  | 174 | 10.5 | 11.6  |
| <b>Modern human capital</b>                |  |     |      |       |
| School grade                               | Highest school grade completed by subject  | 319 | 2.0  | 2.5   |
| Spanish                                    | Ability to speak Spanish fluently as determined by surveyor (1=yes; 0=no)  | 319 | 0.34 | 0.47  |
| <b>Integration in the market</b>           |  |     |      |       |
| Wage                                       | Individual earnings from wage labor for 14 days prior to the day of the interview, in <i>bolivianos</i>            | 319 | 43.2 | 95.0  |
| Sales                                      | Individual earnings from cash sale of products for 14 days prior to the day of the interview, in <i>bolivianos</i> | 319 | 40.3 | 87.7  |
| <b>Control</b>                             |  |     |      |       |
| Age  | Age of participant, in years   | 319 | 35.1 | 14.7  |
| Male                                       | Percentage of males (1=male; 0=female)   | 319 | 51   | 50    |

Source: Data collected and elaborated by authors. 1 US\$ = 7.35 *bolivianos*

## Results

### *Awareness of Decentralization*

We found that the Tsimane' lacked knowledge of the Decentralization Law, had little knowledge of the Popular Participation Law, and had a limited awareness of the mechanisms and institutions used to implement the political reforms. When asked directly whether they knew the purpose of the Decentralization Law, none of the participants said they did. Only 5 percent of the sample had ever heard about the much-touted Popular Participation Law (see Table 2). Awareness of the mechanisms and institutions used to implement decentralization reforms was higher than awareness of the laws themselves, but still low. Only 29 percent of the people interviewed knew the name of the municipality on which their village depended, and only 21 percent knew the name of the mayor of the municipality at the time of the survey. Although in each of the study villages there was a representative for the Grassroots Community Organization, we found that only 12 percent of the people knew the function of a GCO. We also found that only 2 percent of the respondents knew the purpose of the municipal Annual Operating Plan.

We found statistically significant differences in the level of awareness of decentralization between the Tsimane' living close to and those living far from San Borja. The Tsimane' living close to San Borja had higher levels of awareness of the Grassroots Community Organization and of the municipal Annual Operating Plan. The percentage of people who knew the name of the

**Table 2.** Mean Percentage and Standard Deviation of Variables Measuring Awareness of Decentralization and t-test of the Difference between Tsimane' Living Close to and Far from the Center of the Municipality (n=319)

| Description of Variable  | Pooled | Close | Far   | t-test |
|--|--------|-------|-------|--------|
| <b>PPL</b>   |        |       |       |        |
| Have you heard about the Popular Participation Law? (1=yes; 0=no)      | 5±22   | 4±21  | 5±23  | Ns     |
| <b>Municipality</b>  |        |       |       |        |
| Do you know which municipality your village depends on? (1=yes; 0=no)  | 28±45  | 28±45 | 28±45 | Ns     |
| <b>Mayor</b>   |        |       |       |        |
| Do you know the name of the mayor of the municipality? (1=yes; 0=no)   | 21±41  | 27±45 | 16±37 | 0.01   |
| <b>GCO</b>   |        |       |       |        |
| Do you know what a Grassroots Community Organization is? (1=yes; 0=no) | 12±32  | 17±37 | 7±26  | 0.004  |
| <b>AOP</b>   |        |       |       |        |
| Do you know what a municipal Annual Operating Plan is? (1=yes; 0=no)   | 2±15   | 4±20  | 0.6±7 | 0.01   |

Note: The number after  $\pm$  is the standard deviation (SD); Ns = not significant; close = 6 to 15 km to the town center of the municipality; far = 30 to 50 km to the town center of the municipality.

Source: Data collected and elaborated by authors.

municipality mayor was also higher among the Tsimane' living close to San Borja than among those who lived farther away (see Table 2).

### *Correlates of Awareness of Decentralization*

In Table 3 we present the results of three regression models. In the first model we test the association between awareness of decentralization and village-to-town and house-to-school distance (H1 and H2). In the second model we add variables related to human capital (H3). In the third model we add variables that serve as proxies for participation in the market economy (H4).

The results from the first regression (column [1]) confirm H1 and H2, i.e. awareness of decentralization is positively associated with physical proximity to sources of information. A 1 percent increase in the distance from the village to the town of San Borja correlated with a decrease of 0.29 standard deviations in the index of awareness of decentralization ( $p < 0.02$ ). Each extra minute of walking time between the household and the village school was associated with a 0.01 lower score of awareness of decentralization ( $p < 0.01$ ). We tested for the joint significance of the two variables that proxy for distance and found evidence that the two variables together had a statistically significant negative association with awareness of decentralization ( $F = 4.94$ ;  $p > F = 0.02$ ).

In column [2] we found that an additional year of schooling was associated with 0.20 higher standard deviations in the score of awareness of decentralization ( $p < 0.01$ ). Speaking Spanish was also associated with an increase of 0.36 standard deviations in the score of awareness of decentralization ( $p < 0.01$ ). As expected, the two variables that proxy for modern human capital – schooling and fluency in spoken Spanish – had a significant joint positive association with awareness of decentralization ( $F = 16.79$ ;  $p > F = 0.0005$ ). In this model, the sign and level of statistical



**Table 3.** Covariates of Awareness of Decentralization among Tsimane' Indigenous Peoples (n=319)

| Explanatory Variables               | Models:      |              |               |
|-------------------------------------|--------------|--------------|---------------|
|                                     | [1]          | [2]          | [3]           |
| Distance to town and village school |              |              |               |
| Distance to town (log)              | -.29(.10)**  | -.27(.08)*** | -.29(.05)***  |
| Time to school                      | -.01(.004)** | -.09(.004)** | -.005(.003)   |
| Modern human capital                |              |              |               |
| School grade                        | ^            | .20(.04)***  | .12(.04)***   |
| Spanish                             | ^            | .36(.09)***  | .16(.09)      |
| Integration in the market           |              |              |               |
| Wage                                | ^            | ^            | .004(.001)*** |
| Sales                               | ^            | ^            | .002(.000)*** |
| Control                             |              |              |               |
| Male                                | .66(.11)***  | .25(.08)***  | .05(.08)      |
| Age                                 | -.01(.005)   | .01(.003)*** | .004(.002)*   |
| Joint test                          |              |              |               |
| Distance to town + Time to school   | 4.94(.02)    | 5.53(.02)    | 22.34(.0001)  |
| School grade + Spanish              |              | 16.79(.0005) | 5.46(.02)     |
| Wage + Sales                        |              |              | 84.96(.0000)  |
| R <sup>2</sup>                      | 0.16         | 0.40         | 0.50          |

Notes: Dependent variable is the individual score in the vector of awareness of decentralization calculated with principal component factor analysis.

[1] Model with distance and control variables. [2] Model with distance, human capital, and control variables. [3] Model with distance, human capital, market integration, and control variables. Regressions are OLS with robust standard errors (in parentheses) adjusted for clustering on village of residency. Regressions include constant (not shown).

\*, \*\*, and \*\*\* statistically significant at the 10%, 5%, and 1% level.

^ variable intentionally excluded from the analysis.

Source: Data collected and elaborated by authors.

significance of the variables related to distance to town and village school resemble those of column [1].

Last, in column [3] we find a positive association between awareness of decentralization and income from wage labor. With each extra *boliviano* earned from wage labor, adults had 0.004 higher standard deviations in their score of awareness ( $p < 0.01$ ). Similarly, we found that income from the sale of products bore a positive and statistically significant association with awareness of decentralization. The two variables (wage labor and monetary income) had a joint significant association with awareness of decentralization ( $F = 84.96$ ;  $p > F = 0.0001$ ). Adding the variables that proxy for integration in the market did not change the sign or level of statistical significance of the variables related to distance, but it did make the coefficient for the variable Spanish fluency statistically insignificant.

### Extensions

We extended the analysis in two different ways. First, we ran equation 1 with the different proxies of awareness of decentralization separately (see Table 4). The results of the Cronbach's alpha were

**Table 4.** Covariates of Various Proxies for Awareness of Decentralization among the Tsimane' (n=319)

| Explanatory Variables                | Dependent Variables: |                     |              |              |
|--------------------------------------|----------------------|---------------------|--------------|--------------|
|                                      | [1]<br>PPL           | [2]<br>Municipality | [3]<br>Mayor | [4]<br>GCO   |
| Distance to town and village school  |                      |                     |              |              |
| Distance to town (log)               | -.001                | -.05                | -.12***      | -.07***      |
| Time to school                       | -.0002               | -.002               | -.004***     | -.001        |
| Modern human capital                 |                      |                     |              |              |
| School grade                         | .01*                 | .03**               | .02*         | .02***       |
| Spanish                              | .05***               | .03                 | .09          | .02          |
| Integration in the market            |                      |                     |              |              |
| Wage                                 | .0001                | .002***             | .001**       | .0001*       |
| Sales                                | .0001**              | .0004               | .005         | .0002*       |
| Control                              |                      |                     |              |              |
| Male                                 | .01                  | .01                 | .06          | .07***       |
| Age                                  | .001*                | .001                | -.004*       | .002         |
| Joint tests                          |                      |                     |              |              |
| Distance to town +<br>Time to school | 0.16(.92)            | 0.66(.72)           | 43.57(.0000) | 6.95(.03)    |
| School grade + Spanish               | 5.20(.07)            | 8.77(.01)           | 3.13(.20)    | 17.09(.0002) |
| Wage + Sales                         | 10.18(.006)          | 47.53(.0000)        | 5.31(.07)    | 7.27(.02)    |
| Pseudo R <sup>2</sup>                | .30                  | .17                 | .28          | .30          |

Notes: Regressions are probit with standard errors adjusted for clustering on village of residency.

\*, \*\*, and \*\*\* statistically significant at the 10%, 5%, and 1% level.

For definition of dependent variables see Table 3, and for definitions of explanatory variables see Table 2.

Source: Data collected and elaborated by authors.

too low to create a convincing index. Furthermore, the results from the index do not allow one to assess which dimension of awareness of decentralization was particularly associated with the explanatory variables. We found that an increase in the distance from the village to the town was associated with a decrease in the probability of knowing the name of the municipality's mayor and the function of a Grassroots Community Organization. Distance between the household and the village school appeared to be associated with a lower score for awareness of the name of the mayor. Schooling was positively associated with the four proxies of awareness of decentralization (columns [1] to [4]), whereas fluency in spoken Spanish was positively associated only with knowledge of the Popular Participation Law (column [1]). Finally, income through wage labor was positively associated with the four proxies of awareness of decentralization, whereas sale of products was related to two of the proxies of awareness of decentralization. The positive joint effect of individual wage labor and sale of products on awareness was significant in the four models used.

Second, we used as dependent variables proxies of awareness of national and local politics (not shown). In the regression using as a dependent variable awareness of national politics (i.e. having voted in the last national election and knowledge of the results of the election), we found that awareness of national politics was positively and significantly associated with higher income from sales and wage labor, but not with distance to town or with variables related to modern human capital. In the regression using as a dependent variable awareness of local politics (i.e. name of the president of the Great Tsimane' Council, name of the indigenous mayor, and name of the village

representative of the Grassroots Community Organization), we found that awareness of local politics was negatively associated with distance to town and village school, and positively associated with income from wage labor.

## Discussion and Conclusion

Two main findings deserve discussion. First, we found that, despite the passage of nine years since the enactment of the laws of decentralization, knowledge about decentralization reforms had only modestly reached the Tsimane'. The Tsimane' have very limited awareness of the Decentralization and Popular Participation laws. Their knowledge about the institutions and mechanisms related to this reform is also scarce. Second, our analysis confirms the hypothesis that people who face higher costs in accessing information are less aware of decentralization. We found that people who lived closer to the municipal town and to the village school had more education, participated in the market economy and were more aware of decentralization than people without those characteristics. Contrary to our expectations, fluency in Spanish was not associated with political awareness.

The first finding – that the Tsimane' know little about decentralization laws and national politics – contrasts with the contemporaneous rise in indigenous movements in Bolivian national politics (Hall and Patrinos, 2005). Data presented here were collected in 2002, the same year that the first indigenous representatives entered the Bolivian Congress. Since then, an indigenous leader has become president of Bolivia. The low level of Tsimane' awareness of decentralization also contrasts with the initiatives of the municipal government to incorporate the Tsimane' in local politics through the creation of a sub-municipality.

We suggest two explanations as to why the Tsimane' have remained unaware of national politics despite local municipal efforts and at a time when other indigenous peoples were increasing their participation in national politics. First, the low level of political awareness among the Tsimane' might contrast with the general increase in indigenous politics in Bolivia, but it could be representative of *lowland* indigenous peoples. We do not have much information about efforts to promote the decentralization reforms among the indigenous population in Bolivia. Research suggests that when decentralization laws were first passed in Bolivia, the government, national political parties, and international agencies were active in providing information about the decentralization reforms (Grindle, 2000; O'Neill, 2003: 1068–91). Nongovernmental organizations also contributed to the effort and used radio messages, workshops, and pamphlets to spread information about decentralization. But our own observations suggest that the effort was more intense in the highland than in the lowland areas. It is also possible that because highland indigenous peoples have a long tradition of social stratification and communal organization (Kohl, 2003: 153–64), highland indigenous cultural practices and ways of life fit better with the new way of structuring society proposed by the decentralization reforms. Thus, highland indigenous peoples could have been more receptive to and understood better the political changes undertaken by the reforms. By contrast, the Tsimane', like other native Amazonian societies (Johnson, 2003), have traditionally been a highly egalitarian and acephalous society (Ellis, 1996). Tsimane' individuals and households have traditionally enjoyed high levels of autonomy in production and household activities, and their social structure is centered around the extended family (Daillant, 2003; Huanca, 2008). For the Tsimane', the political structure proposed by the decentralization reforms might be as foreign as the previous centralized political structure, thus making it hard for them to adopt and take advantage of these political spaces. Unfortunately, we do not have information on how Tsimane' levels of awareness of decentralization

compare with the levels of political awareness of other lowland and highland indigenous groups. More empirical research is needed to explore the plausibility of this explanation.

The second explanation of why the Tsimane' have low levels of awareness of decentralization relates to the combination of the uneven reach of the state in Bolivia (Yashar, 1999: 76–104) and geographic (e.g. distance between villages and municipal town) and socioeconomic (e.g. years of schooling and integration in the market) conditions. This combination might explain the high costs implied in acquiring political information among the Tsimane' as a group. It is important to stress that these conditions are structural, and thus it is difficult for lowland indigenous peoples to overcome them on their own.

The two explanations highlight the failure of decentralization policies to overcome the structural problems that create inequalities among citizens of the same country (Larson et al., 2007: 251–68). Decentralization policies were originally conceived as a way to transfer powers or responsibilities from the center to local governments, because centralized governments seemed not to reach all the citizens. The results presented here suggest that the implementation of decentralization reforms suffers from the same structural problems they are attempting to overcome.

The second finding that deserves discussion is the association between awareness of decentralization and socioeconomic characteristics. Similarly to Wolfinger and Rosenstone (1980), we find that people who have a higher income, are older, and have more schooling face lower costs in acquiring information on politics. The finding that socioeconomic characteristics are linked to awareness of decentralization has implications for policy-makers. If policy-makers want to have a large share of the population participating in national and local politics to avoid the entrenchment of power in the hands of a minority, but find that information on decentralization only reaches selected groups, then they must level the informational playing field by focusing on policies that reach groups with less knowledge of decentralization. Strategies to lower the costs of decentralization should take into account the factors that increase the costs of accessing the information (e.g. distance). For example, authorities should invest proportionately more resources in reaching isolated, poorly educated citizens than they do in reaching organized, well-connected, and educated citizens.

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