Traditional Governance, Citizen Engagement and Local Public Goods: Evidence from Mexico*

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Abstract

In this paper we explore the role of traditional governance in the provision of public goods in indigenous communities in Mexico. Our theoretical approach proposes that poor communities that are governed through direct participatory democracy practices based on indigenous traditions will be better able to provide local public goods than communities that have delegated to political parties collective-decision making. We propose three specific channels through which traditional governance affects local public good provision: community headmen's institutional embeddedness, broader civic engagement in collective-decision making, and social sanctions. We empirically assess our theory with a two-pronged strategy to analyze observational data, controlling for selection effects. Our results reveal that in traditional governance municipalities, citizens are significantly more engaged in collective decision making, and as a result, the intra-community distribution of social services, including potable water and sewage, exhibits less anti-poor biases than in municipalities ruled by political parties, which are subject to elite capture.

1 Introduction

The goal of this paper is to assess the effects of traditional governance on local public good provision. We ask if poor indigenous communities are better or

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worst off by choosing to govern themselves through customary law and participatory democracy, versus delegating decisions concerning the provision of public goods to political parties. The literature offers primarily three explanations for the differential provision of public goods. First, ethnic diversity seems to make public good provision more difficult. Second, governments that in some measurable way are more capable might be better able to provide public goods. Third, local government accountability and civic engagement, particularly by women, are essential to curb rent seeking and capture in the provision of public goods. Our paper seeks to contribute to this body of research by focusing on the effects of local governance on public good provision.

Our research design takes advantage of an important institutional innovation in the state of Oaxaca, Mexico, that in 1995 allowed indigenous communities to choose between two forms of governance: on the one hand, a form of "traditional indigenous governance" called *usos y costumbres* (*usos* hereafter), which entails electing individuals to leadership positions through customary law in non-party-sponsored elections, making decisions through direct participatory democracy, and monitoring compliance through a parallel system of law enforcement and community justice; on the other hand, "party governance", which entails the selection of municipal authorities through electoral competition among political parties and adjudication of conflicts through existing institutional channels, including the state and federal judiciary. This legal change provides a unique opportunity to make inferences about the effects of local participatory democracy vis-à-vis political parties. Although municipalities differ across type of governance, they share formal political institutions such as the structure of municipal government (e.g. having a municipal president) or the legal and fiscal relationship to the state and the federation. We have thus variation in governance type while retaining the structure of government

fixed. Our theoretical approach proposes that poor communities that are governed through direct participatory democracy practices based on indigenous traditions will be better able to provide local public goods than communities that have delegated to political parties collective-decision making.

We propose three specific channels through which traditional governance affects local public good provision: community headmen's institutional embeddenes, broader civic engagement in collective-decision making, and social sanctions. We argue that traditional governance practices, including direct participatory democracy practices, citizens obligation to provide services for the community, and the establishment of a parallel system of justice, better allow poor communities to prevent elite capture and to monitor and sanction free-riding.

Before 1995 municipalities in Oaxaca were formally governed by political parties. The choice that municipalities faced after the constitutional reform was whether they wanted to maintain a party-based system of governance, or switch to *usos*. Our research design involves a multi-method approach first using aggregate data measuring household coverage of local public goods and municipal poverty, on the one hand, and individual-level data measuring civic engagement in collective decision-making and intra-community distribution of public services, on the other.

Aware of the fact that there may be strong selection effects, we use a quasi-experimental design to estimate the effects of *usos y costumbres* on aggregate indicators of public service coverage. We first instrument for the self-selection of municipalities into governance type, and use the estimation of the probability of selection as a propensity score to create two sets of comparable (cuasi) treatment and control groups: one for the 1990 census, and one for the 2000 census. In order to control for fixed unobservables and estimate the average

treatment effects on the treated (ATT) we use a first differences approach, measuring public good provision as the change in levels before and after the 1995 reforms. Our results show that electricity provision increased faster in those municipalities governed by *usos*. They also suggest that traditional governance municipalities experienced more significant reductions in poverty. With respect to citizen engagement and elite capture, contrary to existing scholarly, we find no evidence of entrenchment of local bosses (*caciques*) associated with the former ruling party, the Institutional Revolutionary party (PRI), in places ruled by *usos*. Moreover, on average municipalities governed by political parties are less likely to hold open council meetings wherein citizens participate in decision-making processes.

We attribute better electricity coverage and faster poverty reduction to differences in governance and collective decision making practices shaping intra-community distributive politics, wherein there is significantly less bias toward the poor and uneducated in *usos* municipalities relative to party ones. To support our conclusions derived from aggregate-levle data, the second stage of our empirical approach involved the design and collection of a stratified random sample involving 600 questionnaires of men and women over 18 years old in rural and semi-rural areas in Oaxaca. The stratification divided Oaxaca municipalities according to the size of their cabecera (the core town, seat of the municipal government) and their governance institutions. The survey asked respondents about their participation in collective decision making and their access to public services. Although water, electricity, and sewerages are in theory public services, access to these services is not universal. For example, electricity might exist in a village, but this does not mean that all streets will have public lighting, or that all households will be connected to the public grid. Households in the outskirts of the villages might not be reached. Similarly,

public goods vary in their quality although the municipality might invest in road pavement, some streets might have more wholes than others. Water is scarce in the villages that we visited: even when a household in theory had access to potable water, often this arrived only once a day or even once a week. Our survey allows us to model intra-cimmunity distribution of these public services by asking respondents about their access to them.

To model civic engagement and intra-community service distribution, we implement a Heckman correction model to adress the problem of selection into either type of governance astructure (Heckman, 1979). A Heckman correction allows us to take into account the potential selection bias that may alter the estimates, and by doing a separate regression for each governance type using the appropriate inverse Mills ratios, to allow variation in the regression coefficients by governance type. This enables us to explore the effects of governance type on each of these coefficients.

Our main findings show that even after controlling for selection effects, there is considerably more civic engagement in *usos* municipalities while citizens remain profoundly apathetic, uniformed, and disengaged in municipalities governed by political parties. Our results further indicate that collective decision-making in party municipalities tends to be captured by a small party elite, which distributes public services –water and sewage– predominantly to wealthier individuals and those who belong to the party's network or political clientele. By contrast, participatory democracy practices in *usos* municipalities permit a broader group of citizens to engage in collective-decision making and as a result we find a more egalitarian distribution of public services.

This paper is structured as follows. The next section introduces the scope and limitations of existing hypotheses on the effects of local governance on the provision of public goods. The third section presents a typology of traditional

and party-based governance systems in Mexico. We then describe our data and elaborate on the methodology used to create the counterfactuals to assess the effects of governance on public good coverage using aggregate data. We proceed then to describe our survey and present our empirical results regarding civic engagement and intra-community public service distribution. The last sections discuss our results and conclude.

2 Traditional Governance

Understanding the effects of traditional governance on public good provision is important both from a theoretical and policy perspectives. As noted by Besley (2006), a general shortcoming in development research is that we know far less about local public good provision than about policy interventions aimed at income support, even though the former have equally important effects on well-being. Well-being hinges not just on individual income, but on access to public goods and services such as potable water, sewerage, electricity, schools, and health clinics. Furthermore, a better understanding of governance and public good provision in highly marginalized villages brings us closer to addressing crucial issues about poverty and improvements in material well-being.

The provision of public goods and its relationship to governance has received increased attention by the academic and policy communities. The most influential hypothesis in the last few years has been one associated with Alesina et al. (1999), which proposes that greater social heterogeneity –as measured through an index of ethnolinguistic fractionalization (ELF)– makes it harder for communities to provide public goods. Such failure is attributed to the idea that it is more difficult for groups to engage in collective action when the marginal utility of a public good differs across sub-groups. In Alesina et al.

preference heterogeneity is driven by ethnic fractionalization. Studies finding evidence of the impact of social heterogeneity in public good provision across nations and within countries include Alesina and La Ferrara (2000); Khwaja (2009); Miguel (2004); Miguel and Gugerty (2005); Dayton-Johnson (2000); and Baqir (2002).

The most recent research agenda on the role of ethnic diversity and public good provision moves away from cross-sectional variation to a focus in local experimental settings, in which scholars have tried to understand the conditions under which communities are more able to create networks of trust. Habyarimana, Humphreys, Posner, and Weinstein (2007) in particular, performed experiments in Kampala, Uganda, testing the willingness of co-ethnics and non co-ethnics to cooperate. Their results show that co-ethnics cooperate more, and they attribute this finding to the existence of denser ethnic-based institutions that allow for monitoring and sanctioning of non-cooperative behavior. Confirming older psychological findings, recent economic experiments also show a higher level of pro-social behavior within ethnic groups than between groups (Bernhard, Fischbacher, and Fehr, 2006; Glaeser, Laibson, Scheinkman, and Soutter, 2000).

In this literature social structures are the main explanation of failures in public service provision, disregarding other potential causal links such as elite capture and government accountability. There is a long tradition of research, especially among political scientists, which has seen public good provision through the lens of state capacity (Kohli, 2001). The general thrust of that literature has been to suggest that failures in the provision of public goods reflect underlying problems arising from weak states that are incapable of taxing, running a bureaucracy, or in general, fulfilling basic public functions. However, when it comes to unpacking state capacity –its elements, causes, and

consequences– the literature remains quite underdeveloped[1].

Policy makers have increasingly paid more attention to local power structures and corruption as explanations for the difficulties governments face in providing public goods and services[2]. In a particularly poignant example, Reinikka and Svensson (2004) measured an astounding leakage of 87 percent in a program in Uganda meant to provide grants to schools for non-wage expenditures. Such leakage was successfully reduced through greater citizen involvement and information regarding the allocation of funds to the local schools (World Bank, 2003)[3]. Olken (2006) similarly found that the leakages in a poverty relief program delivering rice in Indonesia were large enough that they offset the welfare gains from having the program in place at all.

As a result of these findings, many scholars are now pointing to both top-down and bottom-up accountability mechanisms and their impact on local public good provision such as auditing to local officials (Ferraz and Finan, 2005); providing citizens with increased access to information about government performance; and community monitoring at the local level, especially of service providers.

The dynamics of party competition also seem to matter. Chhibber and

[1]For example, Acemoglu, Johnson, and Robinson (2001) deployed an instrument for good institutions (settler mortality rates) rather than any direct measure of it. In Fearon and Laitin (2003) the conditions that favor insurgency are linked to the strength of the state but the authors use a set of proxies (e.g., GDP/capita, mountainous terrain, reliance on oil revenues) instead of measuring state strength directly.

[2]Bardhan and Mookherjee (2000) have shown, in a formal model, that centralized systems of public service delivery are more subject to corruption. However, they also note that local elites might capture governments making them less efficient than a centralized arrangement. Besley and Coate (2003) have provided a model in which the advantages of decentralization depend on legislative behavior and how jurisdictional spillovers and conflicts arising from the variance in preferences over public good provision across places are mediated by the political system. Despite these theoretical advances, we are only starting to understand the links between democratic accountability, local public good provision and decentralization.

[3]In an empirical evaluation of Sen's (1981) influential hypothesis that democracy prevents famines, Besley and Burgess (2002) have shown that Indian states with greater freedom of the press are more likely to deliver disaster relief. Besley and Prat (2001) have similar findings for a cross section of countries.

Nooruddin (2004) found that Indian states where patterns of electoral competition are stiffer, in the sense that the incumbent faces strong contestation from one single challenger, are more likely to provide public goods. Diaz-Cayeros, Magaloni, and Estevez (2007) also demonstrate that there is more investment in public good provision relative to clientelistic or particularistic transfers in more competitive races in Mexico. Cleary (2004) does not find this effect of electoral configurations on public service provision, although he shows that variables related to political participation, such as literacy and turnout, improve public service delivery[4]. Closely related to the argument of participation, in the case of India, Chattopadhyay and Duflo (2004) have argued that female leadership in Village Councils led to greater investments in infrastructure related public goods (water, fuel and roads), while men tend to favor investments in education.

Our paper seeks to contribute to this body of research by focusing on the effects of local governance on public good provision. Our empirical analysis builds on ethnographic and aggregate data of the southern state of Oaxaca in Mexico (one of the most impoverished and indigenous in the country), which constitution allows municipalities since 1995 to select among two very different types of governance structures –those we have referred to as traditional indigenous and party governance. We ask whether communitarian self-rule improves local government accountability and the provision of local public goods, or as the conventional view holds, represents a form of autocratic enclave that works to protect entrenched local power structures and caciques allied with the former ruling party.

For most of Mexico's modern history, forms of indigenous communitarian self-rule have been extra-constitutional, although it has been widely practiced

[4]Platteau (2004) criticizes, however, participatory models of local level development.

and tolerated de facto by the federal regime (Cleary, 2007). In the mid-1990s, the state government of Oaxaca formally recognized *usos y costumbres* departing from constitutional doctrine and practice dating back to the 19th century, through which state authorities forbade indigenous communities from exercising formal autonomy over local political affairs along with the ability to use their own chosen institutions of governance.

Existing evaluations of this form of governance by political scientists are unfavorable. The prevailing view is that the reform in Oaxaca attempted to limit the extent of the anti-PRI vote (Benton, 2008) and insulate local PRI-supporting indigenous caciques by taking partisan elections off of the table entirely (Cleary, 2004). The argument is that the PRI allowed indigenous communities to choose usos in order to prevent opposition political parties from entering these impoverished political markets. In impeding opposition parties from competing in these elections, so the argument goes, the PRI was better able to sustain its political monopoly in the state of Oaxaca. Scholars also have found that this form of indigenous self-rule is highly discriminatory of women (Eisenstadt, 2007).

A key limitation of much of the existing research is that it ignores the problem of selection bias. Since the presence of usos y costumbres is non-random[5], it is not possible to claim any causal effects without properly addressing the problem of self-selection first. For example, when scholars argue that traditional governance works to protect the monopoly of the PRI, it is not clear if these municipalities exhibit significantly less political competition (as measured by vote shares in federal elections as in the existing scholarly work) because the PRI purposely designed *usos* to take the opposition out of the lo-

[5]The Oaxacan congress passed a law allowing for election by usos y costumbres in September of 1995, and in the municipal elections held two months later, 412 municipalities chose to select their leaders under this laws provision (and as the details of the law were ironed out, six additional municipalities joined).

cal political landscape or because these communities are intrinsically less likely to divide along partisan lines. Since random assignment of treatment is impossible in our setting, we work with observational data and use a multi-method approach to address the problem of selection bias.

3 Variation in Local Governance and its Impact on Local Public Good Provision

All municipalities in Oaxaca –regardless of whether they are ruled by parties or *usos*– share the same formal institutional structure: they all have a municipal president and a set of aides whose attributions stem from the federal and local constitutions, and they all share a similar legal and fiscal relationship with their state and the federation. Importantly, there is a constitutional prohibition for reelection in Mexico, which means that municipal presidents cannot run again for that position in the consecutive term.

Municipal presidents are in charge of making decisions over investments in local public good provision or social infrastructure projects that the constitution reserves to this level of government (roads, markets, public lighting, sewerage, street pavement, granary, slaughter houses, and the like). In poor municipalities, funds for investment in social infrastructure overwhelmingly come from federal transfers within the FISM (*Fondo de Infraestructura Social Municipal*), which is governed by a formula that is based on poverty indicators. These transfers are given by the federation directly to the municipalities, which retain ample discretion with regards to how these funds are distributed and used, the only restriction being that they need to be spent in social infrastructure projects. Federal transfers for social infrastructure projects within the FISM have significantly increased since 1997, allowing municipal presidents

to play an increasingly more important role in the provision and distribution of local public goods. Thus, for the purpose of this analysis we can take as exogenous the resources municipalities have at their disposal.

Despite an identical formal institutional and fiscal setting, there are important informal institutional differences among party and *usos* municipalities. We highlight the following key differences:

3.1 Selection of political leaders

Party municipalities select leaders through partisan elections. Political parties channel the progressive ambition of these politicians; solve collective action dilemmas and bargaining among different levels and branches of government; and hold their politicians accountable through the threat of loss of future utility streams through the assignment of office. The rule of no-reelection implies that municipal presidents interested in a career in politics need to service the leadership of their parties rather than their constituencies to get promoted to higher office. Governors are often the key figures determining who gets promoted. In the state of Oaxaca, the long-lasting PRI had been the dominant political party and had never lost the governorship of the state –until the 2010 gubernatorial election. The absence of consecutive reelection has generated a very deficient accountability mechanism at the municipal level in Mexico. The perverse system implies that if their parties decide to renominate irresponsive, incompetent, or corrupt officials for higher offices, there is virtually no way for the electorate to directly punish municipal presidents who underperform or even steal government funds.

Usos municipalities choose representatives in assemblies. Citizens meet in a public assembly, deliberate, and vote. There are no uniform rules with respect to how this collective decision-making should take place. In some

municipalities, the main neighborhoods nominate a number of candidates for the office of the mayor, and the full assembly then discusses each candidate until they are able to whittle the list down to four or five. "They then vote 'por terna', which is a form of approval voting in which the assembly considers one candidate at a time and counts affirmative votes. The candidate with the most approval votes wins, and serves a single three-year term" (Cleary, 2008: 15). In other municipalities, the serving municipal president proposes the names of three or four candidates, and the assembly then decides. In yet others, potential candidates must come from those who have a long and well-established record of serving the community. For the most part, women are not considered.

Voting can be secret or not. Most of the time a long deliberation takes place that can last up to ten hours and citizens raise their hands to vote. Formally, all such elections are supposed to be non-partisan, and the parties are not allowed to support candidates or run campaigns; in practice, however, political parties are sometimes associated with some candidates. A key difference in the *usos* municipalities is that municipal presidents are members of the community, and although these can't get reelected either, most of the time they will continue to live and to participate in collective decision making even after they step down from their posts. Moreover, our ethnographic research reveals that those who get elected to the municipal presidency normally have a record of servicing the communities in previous "cargos" or services. Municipal presidents in *Usos* municipalities are hence generally better embedded in their communities, which we believe, contributes to generate better accountability mechanisms than in party municipalities.

3.2 Solution of Collective Action Dilemmas

People in municipalities appoint local authorities in elections every three years. Once in office, executives usually make political decisions without much public scrutiny. Formally,the municipality is composed of a president (the executive) and a separate ‘‘*cabildo*" (assembly), although by design the largest party has the majority and the government is always unified. The usual monitoring and sanctioning mechanisms are performed by political parties.

In *usos* municipalities, collective decisions are taken item by item, mostly in assemblies where there is a process of collective deliberation. Assemblies meet regularly and citizens are allowed to participate; they are usually well attended and can often take hours. This publicness of political assemblies reinforces the collective monitoring mechanisms that elsewhere fall on political parties. Traditionally, women were excluded from participating in assemblies[6].

3.3 Taxation

In party municipalities, taxation is mostly exogenous to the provision of public goods: political leaders decide tax bases and rates, and investment decisions are often made independent of these. By contrast, in *usos* municipalities, the community decides tax structures, which include non-pecuniary contributions that are endogenous to the level of public goods provision. For example, when the community decides that a road needs to be repaved, or that garbage needs to be picked, some or most members of the community will be asked to pay with their own labor –a practice called "*tequio*", which is usually not remunerated.

[6]Although our field research revealed that this practice has changed in the last years, with women being allowed to participate and vote in most places.

3.4 Servicio

A key difference between party and *usos* municipalities relates to public jobs and "cargos". In party municipalities, all public services are performed by municipal employees, who are remunerated with public funds. Political parties have ample leeway to distribute these public jobs to their clienteles. In *usos* municipalities, members of the community are expected to perform public services, and with the exception of the municipal presidency, these services must be provided, often without remuneration. Citizens are hence deeply involved in the life of the community, either organizing religious festivities, coordinating public works, cleaning the roads, policing the streets, rural roads and fields, repairing the school, organizing the public market, decorating the church, etc[7].

3.5 Monitoring and Sanctioning

Party municipalities have a professional armed police force. Conflict resolution and adjudication takes the regular judicial channels, which are often located outside of the communities, and are administered by judges that have little knowledge of the locality. *Usos* municipalities have a parallel system of conflict resolution and adjudication and a parallel security system. The community charges men (so-called "topiles") with the task of protecting the security of its people, although none of these are armed. The assembly, a counsel of elders, or an indigenous tribunal hear the conflicts and impose sanctions.

Those who refuse to perform their cargos or services are normally sanc-

[7]Traditionally women were excluded from many of these duties. Field research reveals that since the introduction of conditional cash transfer programs in 1997 (*Progresa*/now *Oportunidades*), women got more deeply engaged in the life of the community, and now serve in health and education committees sponsored by the program. Women are also increasingly performing other important "cargos", but evidence from our qualitative field work also suggests that it is usually not high-level responsibilities.

tioned. Traditionally, sanctions included imprisonment, disruption in the supply of water, physical punishment[8], or in extreme cases, expulsion from the community. In our ethnographic work we found evidence of a gradual abandonment of the latter sanctions. We also found that servicio is intimately linked with cross-border dynamics. For example, some migrants will return to their home-towns specifically to perform servicio for free, and consume a substantial amount of their savings, reinforcing a cycle of decapitalization.

To sum up, all municipal governments in Mexico share the same formal institutions per constitutional mandate. After the 1995 constitutional state amendment in Oaxaca, municipalities were given the choice to switch to a traditional system of local governance. This system is loosely organized around the concept of *usos y costumbres*, but it encompasses a panoply of practices and rules to select leaders and solve collective-choice dilemmas. Once collective decisions are taken according to these informal rules, they are expressed in the formal apparatus of the municipal government.

Usos y costumbres is thus a system of informal rules and practices which are embedded in the formal, constitutional rules of municipal operation, and provides a rich example of the multiple nature of institutions (Greif, 2006).

This embeddedness provides a unique research design opportunity because formal institutions remain fixed while the informal practice of day to day governance vary. Formal rules are fixed within the municipality (regarding for example the nature and powers of municipal authorities) and they are the same across municipalities in how they relate fiscally or legally to the state or the federation. Despite these similarities, there is variation within Oaxaca in the way formal authority is selected and exercised: parties and electoral

[8]Our interviews attributed the gradual abandonment of physical punishment to the presence of the Human Rights Commissions, which received complains of human rights violations from members of the communities.

competition in some municipalities, and assembly-based, participatory rules in others. We exploit this variation to generate inferences about the effects of governance types on participation, provision of public goods and women participation in government.

Our theoretical expectation is that traditional governance institutions will be able to better provide local public goods because of their superior capacity to hold municipal presidents accountable, engage citizens in collective decision making, and monitor and sanction non-cooperative behavior. These theoretical expectations build from the work by Olson (1971) on the structural characteristics of groups that can foster the individual provision of public goods (i.e. monitoring and sanctioning) and the more recent extension by Ostrom (2009) on governance of natural resources, which shows the conditions under which communities can sometimes device informal direct participatory practices and monitoring and adjudication devices to successfully administer public goods. The complex social organization of *Usos* seems to have gradually evolved because of its functional role in allowing indigenous communities to better coordinate collective action toward the provision of public goods, often in the face of marginalization, poverty, and adversity.

4 Propensity Score Matching using Aggregate Data

Our analysis assesses the advantages and disadvantages of traditional governance relative to the institutions of representative democracy prevailing today. Given that traditional authorities are more likely to be present in extremely poor, indigenous and isolated communities, we make use of a matching procedure to create an appropriate counterfactual through which equally poor, isolated, indigenous communities can be compared in their forms of gover-

nance.

The fundamental problem that needs to be addressed is that *usos* is not randomly assigned. In fact, when the constitutional reform was carried out in 1995, indigenous communities in Oaxaca were asked to select whether they wanted to be ruled by one form of governance or the other. Recondo (2007) suggests that this selection was relatively autonomous, and although there were some adjustments in the numbers, as some municipalities shifted between governance regimes, since 2000 the communities ruled by *usos* have remained fixed at 418. Given the lack of records of the decision-making process that led communities to choose one or the other governance system, we make use of geography and long-term settlements patterns in order to find a counterfactual of what the social outcome would be of making collective decisions under systems of governance based on political parties, rather than *usos*. We rely on Propensity Score matching.

The greatest challenge with the validity of propensity score is to make sure that the balancing property is satisfied. Although this is not strictly a test of whether non-confoundedness actually holds, when the treated and control groups within the common support are balanced we can be more confident that the groups are actually comparable. In the end, however, we must recognize that propensity score methods are matching on observable independent variables, so we are subject to what Ho, Imai, King, and Stuart (2007) call the propensity score tautology, namely that the method depends on believing that we have successfully estimated a probability of treatment that keeps the same ordering as the unobserved true propensity score. Exact and nearest neighbor matching have some advantages over propensity scores, particularly when dealing with data that falls within few categories in its heterogeneity. But as soon as observations can be characterized by several meaningful variables that

distinguish their differences, and the differences are continuous rather than discrete, there is a curse of dimensionality typical of nonparametric estimation methods, which render the implementation o these other methods not viable.

Figure 1 provides a sense of the spatial distribution of municipalities in Oaxaca governed through *usos* and political parties. The figure presents municipalities governed by *usos* in color; while the ones governed by political parties are lightly shaded. The map also shows the municipal boundaries and the size of localities within the municipalities, where the circle diameter corresponds to the relative size. Two features become apparent from the map: *usos* is less prevalent in coastal areas and close to highways and large cities; and there is a spatial clustering (suggesting spatial dependence) in the distribution of *usos* across the territory. Although the figure does not depict this additional feature, municipalities ruled by *usos* are more likely to be observed in mountainous areas.

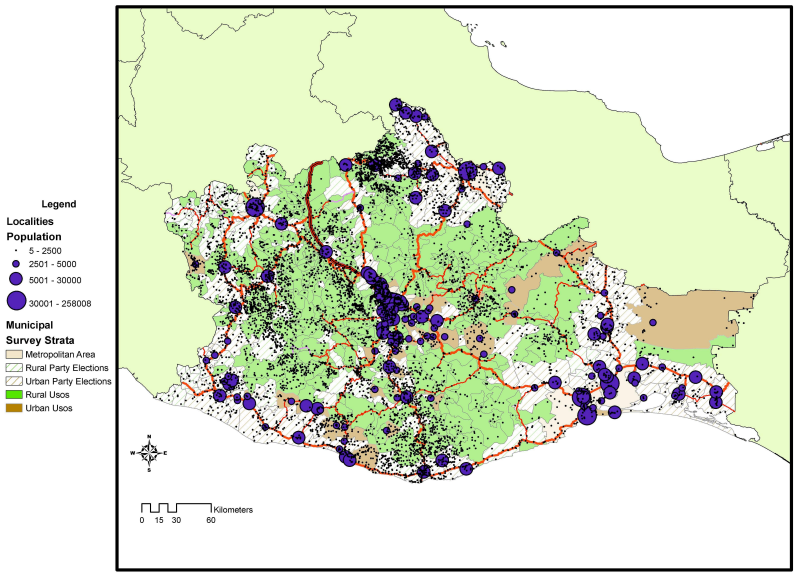


Figure 1: Spatial distribution of *usos*

The propensity score we calculate makes use of these geographic features,

the spatial dependence among observations, and the geographic distance of *usos* communities to features such as highways and large cities. Specifically, we calculate the propensity score as the predicted value of a probit estimation including the following variables:

Lag Usos. *Usos* municipalities are geographically clustered. This is a spatial lag indicating whether neighboring municipalities are ruled by *usos*. It is constructed through a weighting matrix that captures (queen) contiguity of order two, which means that a municipality is compared with the surrounding municipalities as well as those that surround the (first order) neighbors in the immediate vicinity [9].

Territorial Concentration. Within each municipality, we calculated a Hirschman-Herfindahl index of concentration, which takes into account how scattered or concentrated the population is in localities within the political jurisdiction. Population at the locality level comes from the 2000 census, as reported by National Institute for Statistics and Geography (INEGI in Spanish), using localities with at least 5 inhabitants. This variable ranges from 1 (where all the population in the municipality is concentrated in only one locality) to a theoretical value of 0 (denoting total dispersion).

Distance City. The Euclidean distance (straight line) in kilometers between the centroid of each municipality and the closest city with more than 100,000 inhabitants according to data from the 2000 census published by INEGI [10].

Distance Road. The Euclidean distance in kilometers between the centroid of each municipality and the closest paved road. Roads and their quality come from INEGI.

Indigenous. The presence of indigenous traditions is a precondition for the subsistence of traditional authorities. Unfortunately Mexico does not have a count of indigenous peoples based on self-adscription. We use the percentage of the municipality inhabitants over 5 years old who speak an indigenous language, as reported by

[9] The spatial lag was calculated using the statistical software GeoDA developed by Anselin (1998).

[10] Distances for this and the next variable were calculated using the ArcGIS software from ESRI.

the 2000 census by INEGI. This measure is consistent with recent conceptual clarifications in the literature on ethnic identity. Chandra (2006) argues that a proper conceptualization of ethnic identity requires to focus on descent-based features (genetic or cultural). Ethnic markers are the subset of those descent-based identifiers which are visible and costly to change in the short run.

Indigenous languages are reproduced inter-generationally within the household. Not all indigenous people speak an indigenous language, but it is reasonable to assume that people who speak an indigenous language are highly likely to be indigenous, specially given the fact that indigenous languages are not taught in Mexico's formal education system –except for special schools targeted to communities that are already indigenous–. Therefore, indigenous languages in Mexico fall within the constrained descent-based category proposed by Chandra, and our measure would be a lower bound of more complete measures of ethnicity[11].

Income. This variable is meant to capture structural characteristics of modernization. Given that the correlation between municipal per capita GDP and the share of indigenous population is extremely high (p=.47), we use the residuals of a regression of municipal GDP on indigenous. Per capita GDP is obtained from the UNDP Human Development Report for Mexico, and is calculated on the basis of data from the 2000 census.

Religious Fractionalization. Communities can be divided among ethnic, linguistic or religious lines. Trejo (2009) has shown that the most relevant dimension of division among communities in Southern Mexico is related to the inroads of non-catholic Christian faiths. We measure a Hirschman-Herfindahl index of fractionalization with the share of religious faiths according to the 2000 census.

Altitude. The average altitude of a municipality measured in kilometers [12].

[11] Provided independence across categories.

[12] Calculated using ArcGIS on the basis of raster files from INEGI.

5 Results

Table 1 provides the propensity score [13] using these variables. It is important to note that the propensity score does not include dependent variables of interest, such as coverage in the provision of public goods, political participation, or social change.

Table 1: Propensity Score (Dependent Variable: *usos*)

Lag Usos	**4.50*** **
	(*.22*)
Territorial Concentration	**1.09*** **
	(*0.26*)
Distance City	**.0039** **
	(*0.0017*)
Distance Road	0091
	(*0.0071*)
Indigenous	**1.02*** **
	(*.19*)
Income (Residuals)	**-8.44*** **
	(*1.37*)
Religious Frag.	**.81***
	(*.45*)
Altitude	**.37*** **
	(*.11*)
Constant	-4.48
	(*.37*)
n	2382
χ^2	1737.98
Pseudo-R^2	.79

Almost all the variables are statistically significant, and the fit in the estimation is very good. The specific signs are reasonable, given what we know about the historical processes that led to the retention of traditional methods of governance in indigenous communities. The positive sign of the territorial concentration variable suggests that *usos* is more prevalent in communities

[13] Calculated using the *pscore* package for Stata (Becker and Ichino, 2002).

concentrated in one core town. Remote municipalities farther from cities are more likely to retain traditional authorities. Municipalities that have kept their linguistic distinctiveness according to the indigenous variable are more likely to keep *usos*. Richer places as denoted by the Income variable are likely to be governed by political parties. Finally, higher places in the mountains are more likely to be ruled by traditional methods.

Table 2 presents a test of balancing in the propensity score over the common support. The table reports tests of means tests between the treatment and the control group (*usos* vs. parties) in each of 7 optimal blocks where the propensity score is not statistically different between groups, for each of the correlates. The table reports the difference in means and the standard deviation. None of the differences is statistically significant at the 99 percent level.

Table 2: Propensity Score (Dependent Variable: *usos*)

Blocks	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Lag Usos	-0.1095	-0.0614	0.0398	0.0242	0.0649	-0.0142	-0.0763
	(*0.0435*)	(*0.0627*)	(*0.0369*)	(*0.0356*)	(*0.0352*)	(*0.0353*)	(*0.0433*)
Fragmentation	-0.0426	0.1617	0.0355	-0.1567	0.0701	0.0056	-0.0119
	(*0.0948*)	(*0.1202*)	(*0.0674*)	(*0.0957*)	(*0.0937*)	(*0.1169*)	(*0.1721*)
Distance City	-12.98	3.052	6.242	26.861	-9.888	-2.81	7.462
	(*16.62*)	(*17.987*)	(*11.542*)	(*13.204*)	(*10.757*)	(*12.09*)	(*11.699*)
Distance Road	5.09	2.921	-0.338	-1.144	-2.337	-1.466	-11.326
	(*4.04*)	(*2.215*)	(*2.085*)	(*2.055*)	(*2.236*)	(*4.338*)	(*6.012*)
Indigenous	0.1242	-0.1066	0.0066	0.0647	-0.1201	0.0961	-0.1064
	(*0.1211*)	(*0.1289*)	(*0.0876*)	(*0.0928*)	(*0.1224*)	(*0.1459*)	(*0.2035*)
Income (residual)	-0.0168	-0.0025	0.0173	0.002	0.0255	0.0077	-0.0537
	(*0.0175*)	(*0.0236*)	(*0.0143*)	(*0.0159*)	(*0.0181*)	(*0.0201*)	(*0.0327*)
Religious Frag.	0.0334	-0.0838	-0.0285	0.0451	0.0273	-0.0121	0.0056
	(*0.0589*)	(*0.0431*)	(*0.0396*)	(*0.0407*)	(*0.0469*)	(*0.0517*)	(*0.0878*)
Altitude	0.2399	0.4574	-0.2523	-0.2958	-0.1657	-0.0196	-0.2876
	(*0.2512*)	(*0.2584*)	(*0.1563*)	(*0.2246*)	(*0.1821*)	(*0.1927*)	(*0.2277*)
Treated	12	16	32	16	11	8	4
Control	140	13	36	46	65	65	176
Observations	152	29	68	62	76	73	180

The propensity score provides useful counterfactuals to compare matched places ruled by *usos* with others ruled by political parties. The 1995 political reform allowed municipalities to switch away from a party-based system

in which the PRI used to control virtually all municipalities in the state of Oaxaca.

When the reform was carried out, some municipalities were perhaps already governed by traditional customs de facto. In those cases the reform might not have fully changed the system of government, but provided legal certitude and backing to the traditional practices. More importantly for our own purposes, the reform allowed indigenous communities to retain autonomy and insulate decision-making in their municipalities from party factionalism by eliminating party elections altogether. Thus, our relevant comparison is one between autonomous indigenous communities versus non-autonomous ones.

Thus, we can think of *usos* as a treatment that may have had some effects regarding social structure, political participation, the provision of public goods and other municipal characteristics. When available we will make matching tests using variables in first differences, comparing the variable of interest before and after the reform of *usos* was adopted (or traditional practices were validated by the state constitution).

Table 3 reports kernel density matching average treatment effects on the treated (ATT) on a series of socio-economic and public good provision variables [14] using bootstrapped standard errors. The propensity score is recalculated in each matching exercise in order to ensure that the uncertainty surrounding the estimation of the propensity score is also incorporated into the calculation of the bootstrapped errors. The variables of interest are all first differences between the census indicators of 1990 and 2000. Hence the table measures whether the treatment of *usos* as a governance structure had a statistically significant effect on the evolution of social characteristics and the provision of public goods. The variables are measures of religious fractionalization; changes

[14] As calculated with the attk routine in Stata

in percentages of the population who are bilingual; who speaks an indigenous language; and who are illiterate; poverty as defined as percent of households earning less than one minimum wage; and coverage of public goods –electricity, water and sewerage –as measured by percentages of households with access to these services.

Table 3: Socio-economic and Public Good Provision Matching

Change 2000-1990	**ATT**	**SE**	**t**
Religious Fractionalization	-0.002	0.008	-0.283
Bilingual	-0.007	0.013	-0.535
Indigenous	0.001	0.006	0.039
Illiteracy	0.008	0.011	0.719
Extreme Poverty	**-0.08**	**0.036**	**-2.245**
Electricity	**0.125**	**0.036**	**3.457**
Water	-0.056	0.139	-0.4
Sewerage	-0.155	0.274	-0.565
Treated = 412			
Control = 228			

In terms of social development, there is not evidence suggesting lower literacy rate changes in municipalities ruled by *usos*. Social change as denoted by bilingualism or speaking an indigenous language does not seem to be affected by *usos*, as compared to its counterfactual of relatively isolated, poor indigenous communities. Furthermore, there is no evidence of greater division in places ruled by political parties, as could be denoted by an increase in religious cleavages.

The ATTs are are small and statistically not significant, except for the case of electricity provision and the extreme poverty headcount. Hence, there is evidence suggesting that the change in the poverty rate, as measured by the percentage of households living with earnings of less than one minimum wage, has favored places ruled by *usos*. Furthermore, *usos* places seem to

be more effective in finding ways to extend the coverage of electricity more widely among their inhabitants. We attribute this finding to higher equality in the distribution of public goods in indigenous communities ruled by *usos*. The provision of electricity requires first that the locality is connected to the federal grid, but the determination of who gets electricity within the town is determined by local governance choices.

Table 4: Socio-economic and Public Good Provision Matching

	ATT	**SE**	**t**
Difference margin	-0.011	0.035	-0.321
Diff Number of Parties	0.142	0.093	1.533
Difference PRI	-0.008	0.024	-0.33
Difference PAN	0.011	0.015	0.692
Difference PRD	-0.013	0.02	-0.671
Former Mayor	-0.011	0.022	-0.497
Sessions	-1.423	4.513	-0.315
Open Sessions	**2.136**	**1.137**	**1.879**
Female Council Members	**-0.052**	**0.019**	**-2.727**
Female mayors	**-0.025**	**0.012**	**-2.119**
Treated = 412			
Control = 228			

Table 4 makes a similar exercise for variables related to political participation. It reports the difference between the federal presidential electoral patterns in 1994 and 2000 at the municipal level[15]. The first five variables are measured in first differences, testing whether electoral competition at the federal level was depressed, or parties became entrenched due to the *usos* reform. They report respectively the ATT for the differences in the margin of victory, the effective number of parties, the share of the PRI, the PAN and the PRD. None of these are statistically significant. If anything, the signs suggest a slight increase in competitiveness as denoted by the effective number

[15]It should be noted that the choice of *usos* did not limit partisan political competition for posts at higher levels of government.

of parties. Hence, our results strongly suggest that there is no evidence of an entrenchment of PRI politicians, as has been generally assumed by scholars such as Benton (2008) or Recondo (2007). *usos* municipalities exhibit very similar levels of party competition at the federal level than party municipalities, which means that the PAN, the PRD, and other political parties have been able to make similar inroads in these impoverished communities than in the ones that allow political parties to contest for municipal elections. The results thus support the view that the PRI is not more entrenched in these communities

The last five rows show results regarding civic participation in collective decision-making and whether there might be entrenchment or capture by local elites. We use data from the Survey to Municipal Presidents on Social Development [16]. The first item asks whether the current mayor has previously held the post. Although there is no immediate reelection in Mexico, it is not uncommon for entrenched caciques to be mayors again after some terms. There is no evidence that in *usos* the same mayor has held office more frequently, and in fact, from the anthropological literature what emerges is more a sense of rotation in charges, including the duty of mayor.

The next variables are all related to political engagement at the municipal level. The Social Development survey asks mayors how often they carry out council meetings, and whether those are sessions open to citizens. Although there is no difference in the average number of council meetings, in municipalities ruled by *usos* those meetings are open to citizens more often. Data from our own survey research in the state of Oaxaca reported below further corroborates that in *usos* municipalities there is ample civic engagement in collective decision-making whereas in party municipalities citizens remain frankly

[16]Encuesta Nacional para Presidentes Municipales Sobre Desarrollo Social in Spanish, carried out by the Secretariat of Social Development in 2002

disengaged.

Finally, the table reports two indicators of governance where *usos* does not fare as well as places ruled by political parties. These are related to female participation in the top echelons of municipal government. The variables measure the share of the municipal council made up by women, and whether the current mayor is a woman, as reported by the National Municipal Information System [17] in 2002. The ATT suggest that in *usos* there is a smaller participation of women in high office. This is in keeping with the findings of Eisenstadt (2007).

6 Individual Level Analysis of Civic Engagement and the Distribution of Public Services

The aggregate data gives us a rough approximation to differences in governance and public good provision between both types of municipalities. We can confidently reject the hypothesis that traditional governance serves to entrench autocratic enclaves associated with the former ruling party. We also can confidently conclude that traditional governance does not lead to underprovision of public goods in indigenous communities; if anything, the results with aggregate data suggest the opposite.

However, individual-level data is needed to explore citizen engagement in collective decision-making and its impact on the distribution of public services within the community. We designed and collected a stratified random sample involving 600 questionnaires of men and women over 18 years old in rural and semi-rural areas in Oaxaca.

The stratification divided Oaxaca municipalities according to the size of

[17] Sistema Nacional de Informacion Muncipal (SNIM) produced by the Secretariat of Government.

their cabecera (the core town, seat of the municipal government) and their governance institutions. The conventional classification from Mexico's statistical agency, INEGI, defines a municipality as either rural or urban, according to a threshold of whether the majority lives in localities below or above 2500 inhabitants. Such classification does not take into account the peculiar settlement patterns characterizing indigenous municipalities. Indian communities in Mexico are the result of the reconstruction of the surviving indigenous populations after the decimation of their numbers during the 16th century. The Spanish Crown coerced the scattered Indian inhabitants into living in urban areas, creating pueblos de indios.

Almost every cabecera in the around 2450 Mexican municipalities today was a pueblo during the colonial period, but there were more than 4,500 pueblos of the colonial era, so only half of them achieved the status of heading a municipality of their own. The typical settlement pattern of an indigenous municipality is to have a political jurisdiction over a relatively small land area, with most of the population living in the cabecera. This characteristic dictated the type of stratification we designed.

Strata were established classifying municipalities as rural when there were less than 2500 inhabitants in the cabecera, regardless of the overall size of the municipality; urban municipalities were those with cabeceras of between 2500 and 5000 inhabitants; and we excluded large metropolitan areas. This coverage was established in order to enable inferences about governance conditions in territories that could meaningfully be thought of as single units. This excluded mid-size cities as well as some municipalities adjoining metropolitan areas.

On the governance dimension, strata were established depending on whether municipal governments are elected trough political parties or through the use of customary law (usos). The classification used comes from the Instituto

Electoral Estatal de Oaxaca, which established in 2009 that 418 municipalities were governed through usos. The joint stratification by size and governance yields an oversampling of rural localities and municipalities governed by usos. These are places where much of the rural poverty is concentrated and municipal administrations are very fragile in terms of staffing, skills and finance.

For the selection of individual municipalities we used the mapping of the Federal Electoral Institute that divides the territories into tracts comprising 750 voters. Each of this so-called secciones electorales are equally likely in terms of their probability of being chosen, hence providing a very reliable sample frame for the kind of rural areas where the survey was carried out. Around half of the sample points fell into cabeceras while the rest in smaller localities called agencias. 16 questionnaires were collected in the cabeceras and 8 in the other localities. These numbers were chosen by calculating the power of the tests across governance structures and localities that we planned to make, using the Optimal Design software (Spybrook et al., 2008). 60 was too expensive due to the dispersion of the sample; 40 not enough power. The final distribution of surveys in Usos/Parties and Cabeceras/Agencias in the sample is depicted in figure 2.

The large dispersion of the sample is a consequence of taking a rural approach in the design of the sample. The survey was collected in August 2009. Two survey teams had 4 routes collected. Permission was obtained from municipal presidents to enter the communities. In many cases of Usos municipalities this meant the calling of an assembly, after which the research team was able to visit the town or village. Below we present some basic cross-tabs from our survey that convey the profound differences in civic engagement in both types of municipalities.

Table 5.- Basic Descriptives for Usos and Parties.

		Parties	*Usos*
Have you ever gone to a community assembly of the municipality (for usos)/ an assembly of the Cabildo (for parties)?	Yes	10.37	**62.25**
		(25)	(254)
	No	**89.63**	37.75
		(216)	(154)
Does the municipal president consult people to hear their problems and decide which public works he will realize?	No	**62.36**	31.61
		(111)	(122)
	Yes	37.64	**68.39**
In general, do you think that the current municipal president governs to service the community or he does not care about people?s problems?	To service the Community	48.86	**68.78**
		(86)	(249)
	He does not care about our problems	**51.14**	31.22
		(90)	(113)
Would you say that the current municipal president has carried out public works that benefit people like you or not?	Yes	**54.4**	**62.73**
		(99)	(234)
	No	45.6	37.27
		(83)	(139)
How much do you get to know about what is decided in the municipality?	Nothing	**81.48**	**60.4**
		(154)	(241)
	A lot	18.52	39.6
		(35)	(158)

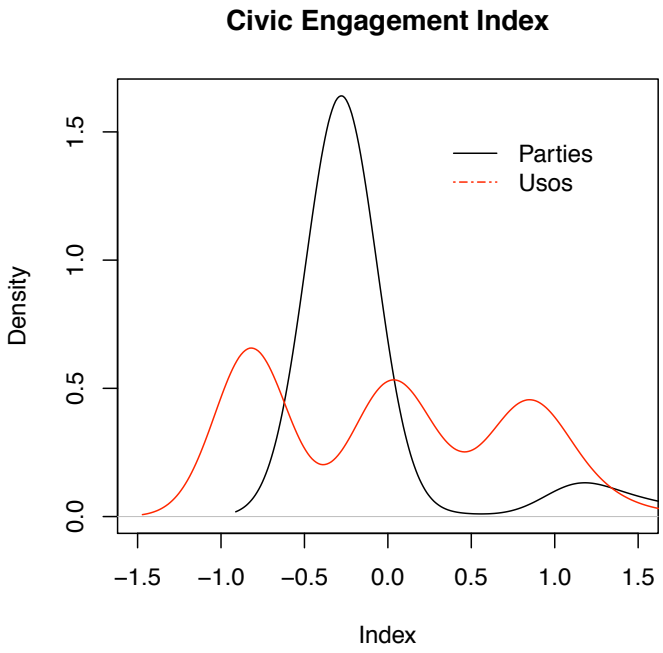
The data suggests that municipalities governed by usos have significantly higher civic engagement – citizens tend to participate in the collective decision making, feel that their leaders are more accountable, and have more information about government decisions. The data also suggest profound citizen disengagement in municipalities governed by political parties citizens do not participate in collective decision-making and have very little information about pubic decisions. Although these differences seem to be quite large, they might be driven by problems of selection and omitted variables. Below we address

these issues in a more systematic way.

We are interested in assessing patterns of civic engagement in usos and party municipalities –who participates in collective decision-making and who remains disengaged. To model civic engagement, we implement a Heckman correction model to address the problem of selection into either type of governance structure (Heckman, 1979). A Heckman correction allows us to take into account the potential selection bias that may alter the estimates, and by doing a separate regression for each governance type using the appropriate inverse Mills ratios, to allow variation in the regression coefficients by governance type. This enables us to explore the effects of governance type on each of these coefficients.

The dependent variable is an index of participation and civic engagement. We used household level-data to build an index that captures the level of civic engagement among the population. For Usos, the index captures whether people find out about municipal government activity through town assemblies, whether they actually attend these assemblies, and how many times they do so in a year. The equivalent questions for municipalities governed by parties register whether people find out about municipal government decisions through cabildo meetings, if they attend, and how many times a year. In both cases, the index is the simple average of each one of the standardized items that part of it. This index is used as our primary dependent variable at this stage of the analysis.

The first step in the models is a probit that will explain selection into governance type, and the second step regression is a GLS with clustered standard errors in which the clusters are the 48 municipalities where the survey was carried out. Estimates of the covariates are made for each government type. The selection equation is not calculated only for the 48 municipalities in our



survey sample frame, but for the 570 municipalities in Oaxaca. We use the same variables as in the propensity score matching parametric estimation from the previous sections. But given that we only include the state of Oaxaca, we do not use a spatial lag. For the second stage we use individual level variables from the survey, and include the inverse mills ratio calculated from the first stage, in order to control for selection effects. These estimations were implemented in R.

In keeping with the literature on political engagement, participation depends on individual socio-demographic characteristics, political attitudes, participation in national social programs, as well as environmental conditions at the community level. The community level variables are primarily driven by the differences in governance structure between municipalities ruled by usos and those selecting authorities through party competition. We expect to have selection effects in participation, as well as different coefficients for those variables according to the governance structure. In particular, we hypothesize that

participation is influenced by the following factors:

Age. Younger members of the community will participate less than older adults who are heads of household and have children. Other things equal, we expect participation to taper off after some age, where the oldest community members are less likely to participate than when they were in the prime of their adult lives. We operationalize this with the variable age, measured in years, and its square (*age2*).

Gender. Given that Oaxaca is a relatively traditional society, we expect women to participate less than men, but the effect will be mediated by age, given a generational shift as younger women have become more empowered. We therefore include the dummy variable women and its interaction with age measured in years: women*age.

Education. We expect more engagement by the more educated citizens. This is operationalized with three dummy variables, *noeducation* for those who have no formal schooling, secondary for those who have completed some years of middle school, *highschool* for those with some years of high school and *college* for those with some university schooling. The baseline is for respondents with some elementary school.

Poverty. We expect poorer households to be less engaged. We created the dummy variable poor, indicating respondents in households falling below a $120 USD a month poverty line.

Ethnic Identity. We operationalize indian identity with the direct question of whether the respondent speaks an indian language (indian).

Migration. We expect migrants to be more engaged in community issues. Oaxaca has a long tradition of international migration to the United States. Migrants are entrepreneurial individuals who continue sending remittances and return because they have a particular stake in their communities. We opera-

tionalize this as a dummy variable (migrant).

Remittances. Households that receive remittances from abroad might be less likely to participate because they are less dependent from the community for the provision of services, which they might opt to provide privately. We use a dummy variable remittances.

Pay Taxes. We use the response as to whether the respondent pays property tax as a proxy that indicates both homeownership and the contribution an individual makes to the municipal coffers. This is a dummy variable denoted by the name of the property tax in Mexico, predial. We expect respondents who pay predial to participate more.

Participation in Social Programs. We expect recipients of the Conditional Cash Transfer program Oportunidades to be more engaged in community matters. The variable Oportunidades denotes whether the respondent family is a recipient of the program, regardless of the fact that the cash transfer itself is handed out only to women.

Partisan identification. Although usos entails not allowing political parties to nominate candidates for the mayor's office, partisan politics still exists in all Oaxacan municipalities for federal and state elections. Given the dominance of the PRI, we expect that there will be more participation among citizens who identify with that party. Non-identifiers to any political party might be less inclined to participate, because they are less connected with the political organizations. We expect any of these effects to be much larger in places ruled by political parties compared to usos. The variables in the estimation are dummies for PAN, PRD and no identification (panid, prdid and noid), where the base category is being identified with the Parties.

Table 6.- Logit for Participation Index.

	Usos	Parties

Female	0.2427		4.1857	***
	0.8953		1.4605	
Female*Age	−0.0459	***	−0.1384	***
	0.0176		0.0390	
No School	−0.5174		−7.2984	***
	0.5784		1.1537	
Middle	0.8364	*	−1.0077	
	0.4558		1.0057	
High School	0.5065		0.9740	
	0.7234		0.6754	
College	0.3091		2.3603	**
	0.7392		1.0527	
Age	0.1458	***	0.3136	***
	0.0465		0.1058	
Age2	−0.0010	**	−0.0021	***
	0.0005		0.0008	
Poor	0.2984		0.6708	
	0.3410		0.8682	
No Party ID	0.3108		−3.3220	**
	0.4281		1.3911	
PAN	1.0677	**	−4.3638	***
	0.5521		0.9368	
PRD	−0.0390		−2.2520	**
	0.5274		0.9721	
Other	1.6478	**	−10.1465	***
	0.6871		1.5586	
CCT	0.8685	**	0.7238	
	0.3895		0.7712	
Migrate	0.5996	*	1.4194	*
	0.3297		0.8564	
Property Tax	−0.4914		−0.5953	
	0.3702		1.0782	
Remiittances	−0.4757		−0.5386	
	0.3260		1.1294	
Indigenous	0.2046		−0.0565	
	0.3258		0.8698	
IMR	−1.2629	***	1.2297	
	0.3022		0.9002	

We highlight the main findings. First, even after controlling for selection effects, there is considerably more civic engagement in usos municipalities as indicated by the negative and strongly significant sign of the IMR. There is significantly more participation of women in party municipalities, although considering how little citizens participate in party municipalities, we do not find evidence that women are significantly more disempowered in usos municipalities relative to party ones. Third, the poor and uneducated are seriously disengaged in party municipalities; not such income gap exists in usos municipalities, where citizens of all income levels participate in collective decision-making. As expected, middle age individuals participate more than the young and old and this is true for both governance types.

With respect to partisanship, we find that propensity to participate in party municipalities is strongly correlated with partisanship. In these municipalities, only PRI voters tend to participate in collective decision-making, whereas those who support other parties remain profoundly disengaged. Not such result emerges in usos municipalities. In fact, contrary to the prevailing approach about usos being an autocratic enclave of the PRI, those who identify with the PAN and other parties participate more in these municipalities.

Lastly, with respect to social programs and migration, we find that Oportunidades has an important role in mobilizing citizens to participate in collective decision-making mainly in usos municipalities. A final result is that returning migrants are more prone to participate in the community's collective decision making processes, and this is true both for usos and party municipalities.

The last task of the paper is to estimate the effects of local governance on the distribution of public goods within the community. Presumably, the intra-community distribution of local public goods should be in part shaped by civic engagement. Our expectation is that, given that collective decision-

making in party municipalities seems to be captured by a small party elite, the distribution of public services in these communities should happen along along clientelistic lines. By contrast, given participatory democracy practices in usos municipalities permit a broader group of citizens to engage in collective-decision making, we expect to find a more egalitarian intra-community distribution of public goods services.

Our survey asked respondents to tell us where they access water –whether their household had running water in versus collected water in rivers, lakes, or public wells and if they had sewerage. We estimate Heckman correction models for access to these services, controlling for similar sociodemographics and various measures of wealth.

Table 7.- Distribution of Public Goods by Governance Type (includes Inverse Mills Ratio).

	Water				**Sewage**			
	Usos		*Parties*		*Usos*		*Parties*	
Constant	−1.3795	**	−0.7518		−3.7296	***	−9.3332	***
	0.7509		1.3794		1.0721		3.1539	
No school	−1.3203		0.6859		−8.1128	***	−1.8139	
	0.8951		0.8285		0.9073		2.2828	
Middle	0.2399		0.9766	**	0.7186		2.2843	***
	0.3664		0.4763		0.5416		0.8383	
High School	−0.2407		0.6438		−0.4065		2.6428	***
	0.6167		0.7357		0.6330		0.9402	
University	0.0293		0.5781		−0.4436		1.8190	**
	0.9039		0.5937		0.9611		0.8611	
Poor	0.0971		−0.7407	**	0.0599		−0.7855	
	0.3302		0.3396		0.3528		0.5036	
No party ID	−0.1354		−0.7493	**	0.0181		−1.5496	**
	0.3186		0.3523		0.3958		0.6356	
PAN	−0.1179		−0.2745		−0.1422		−1.2220	
	0.4253		0.5201		0.5932		1.1450	
PRD	0.0529		−0.9066	**	0.4550		−1.6525	**
	0.4406		0.4156		0.5898		0.7127	
Other	−0.5417		0.9354	*	1.0500		4.2054	

	0.7343		0.5668		1.8119		0.7103	
CCT	−0.1763		−0.3346		−0.8517	*	2.5022	*
	0.4666		0.4881		0.4657		1.4689	
Migrate	0.7932	*	−1.2621		−0.6912	*	0.6634	
	0.4874		1.2231		0.4176		0.6547	
Property tax	−0.0188		−0.5243		1.1727	**	0.8683	
	0.4183		0.5541		0.5544		1.0868	
Remittances	−0.2172		0.4493		−0.7708	**	−5.7409	***
	0.3238		0.9319		0.3268		1.2328	
Indigenous	1.1134	***	1.0474	*	1.5184	***	0.9644	
	0.3961		0.5481		0.5928		0.7355	
Dirt floor	0.0116		−1.2515		0.5576		−2.2334	**
	0.5614		0.7975		0.4818		1.0272	
cabecera	−0.7833		1.5639	**	1.8657	**	6.4989	***
	0.4849		0.7140		0.7744		2.5914	
IMR	2.1476	***	−1.3424		−2.0005	***	3.1080	*
	0.6796		0.8302		0.8066		1.7467	
Light bulbs	0.0827		0.0460		0.1130	**	0.1873	**
	0.0582		0.0585		0.0556		0.0788	

Our results support our contention about diverging patterns of intra-community public service distribution. The distribution of public services is more egalitarian or universal in usos municipalities relative to party ones. In particular, we find that party municipalities favor in the distribution of both water and sewage higher educated individuals (middle school and up) over those with elementary or no schooling. By contrast, usos municipalities seem to favor lower educated individuals or those with elementary schooling. Similarly, we find that the poor are more often excluded from public services in party municipalities and not such effect exists in usos municipalities.

Our results further indicate, consistent with out theoretical expectations, that party municipalities politicize the distribution of services, predominantly favoring individuals who belong to the party clientele. That is, those who belong to the PRI (the base category) have better access to public services,

much better certainly than PRD but also PAN voters. None of the party coefficients were statistically significant in the usos municipalities, suggesting that not such clientelistic practices could be detected in these localities.

The effect of indigenous language is positive for usos municipalities both in the water and sewage regressions, suggesting that usos municipalities reward those who retain indigenous traditions. Interestingly, we found a positive effect for indigenous also in party municipalities, but only in the water regression.

Lastly, we find a strong bias in favor of cabeceras in party localities, wherein access to both water and sewage tend to be disproportionately concentrated in the municipality's political center. For usos municipalities, we also find a pro-cabecera bias in the distribution of sewage, not water, although it should be noted that this bias is significantly stronger in party municipalities.

Overall, our findings suggest that traditional governance and direct participatory democracy practices in indigenous communities leads to higher civic engagement in collective decision making and more egalitarian distributions of public services. By contrast, in similarly poor communities, citizens remain profoundly apathetic and disengaged from collective decision making where they are governed by political parties. Governance through political parties allow for elite capture wherein public services tend to be distributed according to clientelistic lines and to neglect the poor.

7 Discussion

Previous research focusing on the political dimension of the provision of public goods recognizes three main reasons for variation in the provision of public goods: ethnic diversity (or more in general, social heterogeneity), state capacity and local government accountability. Our analysis contributes to this

research agenda by focusing on the effects of local governance structures (direct participatory democracy embedded in customary law vs representative democracy) on the provision of public goods. The evidence we have presented points to a less pessimistic view about the effects of local traditional governance systems in indigenous Mexico, contrary to the claim of other observers.

Our hypothesis was that municipalities governed by *usos* would have higher rates of change in the provision of public goods because of the political processes that lead to the allocation of municipal funds to collective projects. Systems of governance based on electoral competition among political parties differ essentially from *usos* because decisions are taken by politicians without an on-going process of consultation to the citizenry. The monitoring and sanctioning dynamics that come into play when citizens gather in public assemblies are usually absent in party-run municipalities, and thus the allocation of resources for public goods seems sub-optimal.

These findings are corroborated in a household level survey we conducted in the state of Oaxaca in 2010, in which we find higher levels of civic engagement and political participation and a more egalitarian distribution of public goods within the communities governed by *usos*.

The differences between the two types of governance that we presented in our typology point to a broader distinction between types of democracy. The format of decision making in electoral democracies seems to bear a higher risk of agency loss than participatory democracies.

Although modern societies are, by their size and complexity, not the ideal locus of direct and participatory democracy, there are lessons to be extracted from the fact that, with regards to the provision of some basic well-being services, non-partisan political arrangements seem to present some advantages over the widespread party-based democratic activity. Our findings confirm

old ideas about the importance of participation and collective monitoring of authority to maximize collective well-being.

A related line of thought is the profound crisis of political parties across countries, specially in new democracies (Mainwaring et al., 2006; Hagopian and Mainwaring, 2005; Smith, 2005; Levitsky, 2005). When new democracies cannot provide a minimum basis of material well-being, support for democracy erodes substantially, opening the door to anti-systemic leaders and in extreme cases to authoritarian setbacks. The quality of new democracies seems directly linked to the perception of government capacity to provide minimal well-being. Public goods are an integral part of this function.

Rethinking the way electoral and party-based systems of governance work, and contrasting their logic with other forms of participatory democracy (of which *usos* is a good example) should also prove valuable in the ongoing effort of institutional design to which all democracies are subject.

A policy prescription that emerges from these results leads to reevaluate the possibility to establish *usos* beyond Oaxaca. We are in the process of extending our field survey with a second out-of-sample one in which the sample frame involves counterfactual polling points, matched to the polling points already visited in the first survey, using propensity scores to pick locations outside of the state of Oaxaca, where municipalities are not allowed to use traditional governance methods.

Our goal will be to explore the impact of the formalization of *usos*. In sampling indigenous communities beyond Oaxaca, we will be able to identify places that informally use traditional collective decision-making processes, but formally are ruled by political parties, and places that are only ruled by political parties. Hence, we will be able to compare three forms of municipal governance –pure party governance, pure traditional governance, and dual

governance– and to analyze how these impact collective decision-making, civic engagement, and public good provision in poor communities in Mexico.

References

Acemoglu, D., S. Johnson, and J. Robinson (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review 91*(5), 1369–1401.

Alesina, A., R. Baqir, and W. Easterly (1999). Public Goods and Ethnic Divisions. *Quarterly Journal of Economics 114*(4), 1243–1284.

Alesina, A. and E. La Ferrara (2000). Participation in Heterogeneous Communities. *Quarterly Journal of Economics 115*(3), 847–904.

Anselin, L. (1998). OpenGeoDa.

Baqir, R. (2002). Social Sector Spending in a Panel of Countries. Working paper 02/35, International Monetary Fund.

Bardhan, P. and D. Mookherjee (2000). *Corruption and Decentralization of Iinfrastructure Delivery in Developing Countries*. Boston University, Institute for Economic Development.

Becker, S. and A. Ichino (2002). Estimation of Average Treatment Effects Based on Propensity Scores. *The Stata Journal 2*(4), 358–377.

Benton, A. (2008). Bottom-up Challenges to National Democracy: Mexicoś (legal) Subnational Authoritarian Enclaves. *Comparative Politics*.

Bernhard, H., U. Fischbacher, and E. Fehr (2006). Parochial Altruism in Humans. *Nature 442*(7105), 912–915.

Besley, T. (2006). *Principled agents?: The Political Economy of Good Government*. Oxford University Press.

Besley, T. and R. Burgess (2002). The Political Economy of Government Responsiveness: Theory and Evidence from India. *Quarterly Journal of Economics 117*(4), 1415–1451.

Besley, T. and S. Coate (2003). Centralized versus Decentralized Provision of Local Public Goods: A Political Economy Approach. *Journal of public economics 87*(12), 2611–2637.

Besley, T. and A. Prat (2001). Handcuffs on the Grabbing Hand? Media Capture and Government Accountability. *Mimeo, London School of Economics*.

Chandra, K. (2006). What is Ethnic Identity and Does It Matter? *Annual Review of Political Science 9*.

Chattopadhyay, R. and E. Duflo (2004). Women as Policy Makers: Evidence from a Randomized Policy Experiment in India. *Econometrica 72*(5), 1409–1443.

Chhibber, P. and I. Nooruddin (2004). Do Party Systems Count? *Comparative Political Studies 37*(2), 152.

Cleary, M. (2004). *Electoral Competition and Democracy in Mexico*. Ph. D. thesis.

Cleary, M. (2007). Electoral Competition, Participation, and Government Responsiveness in Mexico. *American Journal of Political Science 51*(2), 283–299.

Dayton-Johnson, J. (2000). Determinants of Collective Action on the Local Commons: A Model with Evidence from Mexico. *Journal of Development Economics 62*(1), 181–208.

Diaz-Cayeros, A., B. Magaloni, and F. Estevez (2007). Private versus Public Goods as Electoral Investments: A Portfolio Diversification Model with Evidence from Mexico. In H. Kitschelt and S. Wilkinson (Eds.), *Patrons, Clients, and Policies. Patterns of Democratic Accountability and Political Competition*. Cambridge University Press.

Eisenstadt, T. (2007). Usos y Costumbres and Postelectoral Conflicts in Oaxaca, Mexico, 1995-2004: An Empirical and Normative Assessment. *Latin American Research Review 42*(1), 52–77.

Fearon, J. and D. Laitin (2003). Ethnicity, Insurgency, and Civil War. *American Political Science Review 97*(01), 75–90.

Ferraz, C. and F. Finan (2005). Reelection Incentives and Political Corruption: Evidence from Brazilian Audit Reports. *University of California at Berkeley (Working paper)*.

Glaeser, E., D. Laibson, J. Scheinkman, and C. Soutter (2000). Measuring Trust. *Quarterly Journal of Economics 115*(3), 811–846.

Greif, A. (2006). *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Cambridge University Press.

Habyarimana, J., M. Humphreys, D. Posner, and J. Weinstein (2007). Why Does Ethnic Diversity Undermine Public Goods Provision? *American Political Science Review 101*(04), 709–725.

Hagopian, F. and S. Mainwaring (2005). *The Third Wave of Democratization in Latin America: Advances and Setbacks*. Cambridge University Press.

Ho, D. E., K. Imai, G. King, and E. A. Stuart (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis 15*(3), 199–236.

Khwaja, A. (2009). Can Good Projects Succeed in Bad Communities? *Journal of Public Economics 93*(7-8), 899–916.

Kohli, A. (2001). *The Success of India's Democracy*. Cambridge University Press.

Levitsky, S. (2005). Argentina: Democratic Survival amidst Economic Failure. In F. Hagopian and S. P. Mainwaring (Eds.), *The Third Wave of Democratization in Latin America: Advances and Setbacks*. Cambridge University Press.

Mainwaring, S., A. Bejarano, and E. Leongómez (2006). *The Crisis of Democratic Representation in the Andes*. Stanford University Press.

Miguel, E. (2004). Tribe or Nation?: Nation Building and Public Goods in Kenya versus Tanzania. *World Politics 56*(3), 327–362.

Miguel, E. and M. Gugerty (2005). Ethnic Diversity, Social Sanctions, and Public Goods in Kenya. *Journal of Public Economics 89*(11-12), 2325–2368.

Olken, B. (2006). Corruption and the Costs of Redistribution: Micro Evidence from Indonesia. *Journal of Public Economics 90*(4-5), 853–870.

Olson, M. (1971). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press.

Ostrom, E. (2009). A General Framework for Analyzing Sustainability of Social-Ecological Systems. *Science 325*(5939).

Platteau, J. (2004). Monitoring Elite Capture in Community-Driven Development. *Development and Change 35*(2), 223–246.

Recondo, D. (2007). *La Política del Gatopardo : Multiculturalismo y Democracia en Oaxaca.* México D.F.: CIESAS. Publicaciones de la Casa Chata.

Reinikka, R. and J. Svensson (2004). Local Capture: Evidence From a Central Government Transfer Program in Uganda. *Quarterly Journal of Economics 119*(2), 679–705.

Sen, A. (1999). *Development as Freedom*. Oxford University Press.

Smith, P. (2005). *Democracy in Latin America: Political Change in Comparative Perspective*. Oxford University Press.

Trejo, G. (2009). Religious Competition and Ethnic Mobilization in Latin America: Why the Catholic Church Promotes Indigenous Movements in Mexico. *American Political Science Review 103*(03), 323–342.

World Bank (2003). World Development Report 2004: Making Services Work for Poor People. Technical report.