RESEARCH REPORTS AND NOTES

DO COMPETITIVE ELECTIONS PRODUCE BETTER-QUALITY GOVERNMENTS?
Evidence From Mexican Municipalities, 1990–2000

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Abstract: *Electoral theories of governmental accountability assume that competitive elections produce responsive governments because they allow voters to punish or reward the performance of incumbent politicians at the ballot box. This research note investigates whether the increasing competitiveness of municipal elections in Mexico during the 1990s has improved the performance of local governments by focusing on the provision of potable water and drainage. The empirical evidence does not seem to support the electoral accountability hypothesis, but rather suggests that municipal governments are more responsive to the influence of socioeconomic modernity, as well as to the direct pressure of politically mobilized citizens. The findings cast doubts on the idea that competitive elections, by themselves, will significantly improve the quality of local governments in the country.*

INTRODUCTION

After several decades of dominance by a single party, Mexico's electoral environment has undergone significant transformations, moving towards a situation characterized by strong levels of interparty competition, especially at the state and municipal levels. Along with the progressive increase in the competitiveness of local elections, state and municipal governments have been acquiring important responsibilities in several public expenditure areas such as education, health services, and basic

infrastructure. The devolution of policy functions to local and subna-
tional governments is frequently justified on the grounds of efficiency,
since these levels are assumed to be better equipped to respond to the
policy preferences of local constituencies, particularly under a situation
of intense electoral competition where voters can use their suffrage to
affect local policy choices. No matter how intuitive those propositions
might appear, they require systematic investigation.

This research note analyzes the extent to which the process of electoral
opening in Mexico might have produced improvements in the perfor-
mance of local governments. Specifically, it tests the proposition that
increases in electoral competition have improved the provision of basic
services assigned constitutionally to municipalities. The paper draws
insights from three theoretical perspectives—electoral accountability,
participatory democracy, and political modernization theories—that
provide alternative explanations of why a democratic system can produce
responsive governments, and offers for testing an empirical model that
is based upon municipal-level data for the period 1990–2000.

DEMOCRACY AND GOVERNMENT RESPONSIVENESS: THEORETICAL CONSIDERATIONS

A widespread notion in the scholarly literature on democratic theory is
that democracy produces accountable and responsive governments. For
example, Schmitter and Karl (1991, 76) define democracy as a "system of
governance in which rulers are held accountable for their actions in the
public realm by citizens, acting indirectly through the competition and
cooperation of their elected representatives." Free and regular elections
are regarded as one of the principal vehicles through which a democratic
system forces governmental authorities to respond to the preferences of
citizens, either because elections serve to select good policies and politi-
cians (the "mandate" conception, as defined by Manin et al. 1999), or
because the vote allows people to reward or punish the performance of
their current governments at the ballot box (the "accountability" concep-
tion, as defined by the aforementioned authors). The latter notion, also
labeled "retrospective vote theory," implies not only that citizens will be
willing to reelect a government if they perceive that such a government
did a good job during its tenure, but also that incumbent political lead-
ers, being aware of the possibility of being thrown out of power in the
next election, will attempt to improve their performance with the goal
of getting reelected (Fiorina 1981; Key 1966).

However, elections are not the only reason why a democracy might
produce responsive governments. Besides their vote, citizens also have
more direct means to affect the outcomes of democratic governments,
mostly through participatory methods. In contemporary democracies,

people mobilize with the intention of obtaining specific benefits from their governments, either by participating in interest groups, through the use of institutional instruments for public consultation and deliberation, or simply by having informal contact with public officials. In fact, participatory methods of citizen influence upon the policy-making process have been regarded as an essential requirement to assure the accountability of governmental leaders, especially by authors who are skeptical about the ability of elections to produce, by themselves, responsive governments. Proponents of the participatory approach assert that political participation is not only a normatively desirable attribute of a democratic system, but also instrumental for better public policy design and implementation (Robinson 1999). For example, in a recent study of local government innovations in Latin America, Campbell and Fuhr (2004, 447) claim that "the more participatory and inclusive the design of participatory processes, the more likely the new rules will be accepted by participating actors, and better the chances for repeated interactions." In addition, social participation is expected to reduce the monitoring and enforcement costs for governments, and to improve the accountability of public officials.

In short, there are at least two alternative theoretical explanations of why a democratic system can improve the responsiveness of a government: an electoral one, which emphasizes the ability of competitive elections to motivate incumbent authorities to improve their performance, and a participatory one, in which governments respond to the more direct pressure of citizens who act through nonelectoral mechanisms. Although these two hypotheses are not necessarily rival propositions (a government might be responsive to its people both because it wants to avoid the possibility of being removed in the next election *and* because organized citizens are effective in voicing their demands for policies), they nevertheless constitute two different theories about government responsiveness.

However, both views present important caveats. Electoral theories of governmental accountability rest on the strong assumption that voters have sufficient information about the conditions under which governments make decisions. In other words, the hypothesized connection between elections and government responsiveness may not hold if citizens are unable to tell whether the decision-making environment (legal, technological, international) that their governments face is favorable enough to allow policy choices to produce voters' desired results (Manin et al. 1999). Furthermore, elected politicians have few incentives to disclose that information to the public, which would allow them to contend that adverse conditions were responsible for the bad outcomes of their actions. On the other hand, political participation exerted through nonelectoral means might overly promote the interests of well-organized social groups, as opposed to the policy preferences of other citizens with fewer resources to influence the government agenda. In fact, some

contemporary theorists of democracy contend that the principles of interest-group representation are in conflict with the norms of liberal democracy, since they argue that suffrage constitutes the only equitable form of political representation.[1]

The process of democratization in Mexico, particularly that which is taking place at the local and subnational levels, provides an interesting case to investigate whether the theoretical relationship between elections and government responsiveness has an empirical basis, especially because such a process has been markedly uneven across states and municipalities in the country. A disadvantage in using the Mexican case to test the electoral accountability hypothesis is the constitutional ban on the consecutive (i.e., back-to-back) reelection of practically every governmental post throughout the country, a feature that restricts the ability of voters to punish or reward incumbent government leaders. Nevertheless, even in the absence of immediate reelection, incumbent policymakers arguably do have significant incentives to improve their performance in order to maximize the probability of their parties' winning the next election. Thus, even if voters lack the capacity to penalize government leaders individually, they can still hold the party that is in power accountable at the ballot box.[2]

Several studies appear to support the electoral accountability hypothesis as applied to Mexico, particularly regarding state and municipal governments. Rodríguez and Ward (1992, 1994, 1995), for example, observed that during the first half of the nineties the newly democratically elected local governments started to put a stronger emphasis on efficiency and transparency principles in public policy making and management. Ward (1998) further argues that the traditional partisan style of governance has been gradually replaced by more technocratic and modernizing approaches, and that this shift in governance styles is explained, not by differences in the partisan affiliations of local mayors, but by the increasing competitiveness of local elections and by the need of parties to exercise effective government in order to remain in power. In a similar vein, Beer (2003) claims that the increase in electoral competition at the state level has produced more active, professional, and autonomous local legislatures, more participatory methods of candidate selection, and more decentralized

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1. Huntington (1975), for example, claims that political participation entails important dangers for the stability and survival of democracy.

2. Recent literature on Mexican politics asserts that the rise in electoral competition has produced more decentralized and participatory candidate selection methods (Beer 2003; Langston 2001). In addition, Langston and Díaz-Cayeros (2003) find that competition has allowed local politicians to more successfully compete for gubernatorial nominations. These important changes could imply that local mayors improve their prospective political careers by demonstrating good performance in order to keep their parties in power in the next electoral race.

decision-making processes. Similarly, Hiskey (2005) finds that multiparty competition allowed Mexican states to recover from the 1995 economic crisis, although not in a linear fashion.

However, there have been very few attempts to evaluate local government responsiveness in terms of policy outcomes rather than in relation to policy processes. This paper attempts to fill this gap by focusing on two basic public services in Mexico—potable water and drainage systems—both of which municipal governments have legal responsibility to provide. I offer a mechanism of analysis that allows for an assessment of whether the provision of those services has been more responsive to electoral incentives, or to a more participatory political environment.

THE RISE OF ELECTORAL COMPETITION AT THE MUNICIPAL LEVEL IN MEXICO

The process of political opening in Mexico—which in 2000 gave rise to the first experience of alternation at the national presidency—had initial manifestation at the state and municipal level elections (Lujambio 2000). While the predominant party—the Partido Revolucionario Institucional (PRI)—had been virtually uncontested during all the years that followed its (effective) creation in 1929, by the end of the 1980s the electoral environment of local governments in Mexico had undergone a remarkable transformation. One of the most important features of this change was the gradual erosion of the hegemony of the PRI in municipal elections. Although in 1990 the levels of electoral support for the PRI in these elections remained close to 70 percent, with each of the other two parties receiving less than 20 percent of the total vote, that situation changed markedly from the middle 1990s onwards, in parallel with the progressive decline in electoral support for the dominant party. From 1998 to 2001, the PRI's share of the vote in municipal elections had almost halved from its former level and appeared to have stabilized at around 43 percent. In the meantime, the Partido Acción Nacional (PAN) has progressively increased its own share of the vote in local elections, making it the second most important electoral force in Mexican municipalities. The third most important party at the municipal level is the Partido de la Revolución Democrática (PRD), although the evolution of its electoral strength has not been steady.[3]

The increase in electoral competition across the country has often given rise to the alternation of parties in municipal governments. In 1990 the PRI controlled 96 percent of all the municipalities in the country, which

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3. These figures were obtained from the database on local elections compiled by the Mexican think-tank CIDAC (Centro de Investigación para el Desarrollo), available on-line through www.cidac.org.mx.

concentrated 90 percent of the population in Mexico (not including the Federal District). In contrast, in 2001 the PRI governed 70 percent of all Mexican municipalities, but these encompassed less than half of the total residents in the country (again not counting the Federal District). The alternation of parties has become a normal feature of local politics, although most of this alternation has taken place among the three most important national parties. During the period 1990–2001, 51 percent of all municipalities in the country experienced an alternation of parties in power at the local government level on at least one occasion. However, the notable change in local electoral conditions has been uneven across the country, as there are still municipalities that have never experienced alternation in office, and the PRI wins with ample margins of victory. In some cases there are accusations of electoral fraud, and local bosses sometimes still enjoy the power to control the electoral choices of the population by means of clientelism and other informal practices, including coercion.[4]

Today in Mexico, electoral competition has become a normal feature of local politics, even though variations between municipalities still exist. Returning to the earlier discussion, theories of governmental accountability would regard the increase in the competitiveness of local elections as positive, to the extent that it provides ordinary citizens with the ability to control, through their periodic use of suffrage, those who hold government office. If one adheres to those theoretical views, then we should expect that competitive elections will make public officials more responsive to the citizens. Is there any empirical basis to support that argument?

MEASURING GOVERNMENT PERFORMANCE THROUGH BASIC SERVICE COVERAGE

Providing an operational definition of the concept of government performance is a complex issue. The notion of "good government" is normative, and is not free from ideological considerations or value judgments. Also, the concept is multidimensional, given that governments carry out very diverse activities, which range from the classical laissez-faire function of protecting the property rights of citizens, to other forms of interventions, such as providing welfare benefits to low-income groups or managing public services. Furthermore, given its multidimensional character, it might be possible to find some governments that are successful in the provision of a specific service but ineffective in other areas. Consequently, a single indicator by itself

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4. The unevenness of the democratization process across regions in Mexico is analyzed in Cornelius (1999).

cannot account for the overall performance of a government. Empirical studies of democratic governance (Putnam 1993) and public management (Heinrich and Lynn 2000) commonly stress two different dimensions of government performance. One emphasizes its policy efficacy component: namely the capacity of governments to generate socially desirable outcomes. The second underlines its procedural component: the ability of governmental organizations to effectively carry out their day-to-day tasks. In this paper I concentrate only on the policy efficacy dimension, measuring it through the rates of coverage of potable water and drainage systems, since the provision of these two basic services constitutes what the average citizen can expect as a minimum from their local authorities, regardless of any ideological or party concerns. Furthermore, the provision of water and drainage in Mexico is a constitutional mandate, and the local levels are assigned very specific areas of responsibility.[5] In addition, water and drainage are the services municipal authorities regard as their two principal priorities, such that we should expect prioritization of effort to improve coverage.[6]

Water and drainage coverage is defined as the proportion of households in a municipality that report having access to each of these two services. However, access to these services can take different forms. In the case of water, the Mexican census reports five types: 1) water inside the dwelling; 2) water outside the dwelling but at least within the terrain where the dwelling is settled; 3) water carried from the street; 4) water carried from other dwellings; and 5) water carried from standpipes, rivers, wells, and other watercourses. For the purposes of this work, my measurement of water coverage focuses only on the first four categories, since they all imply the existence of some sort of public system for water provision. With respect to drainage coverage, I concentrate only on households whose sewer is connected either to the street drainage network or to a septic tank; therefore, I exclude cases for which drainage means basically the use of local watercourses. Again, the logic behind this choice is to focus only in sewerage systems that imply some form of significant public involvement.

In order to cope with possible methodological problems of "path dependency" in the nature of service coverage (i.e., municipalities

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5. Article 115 of the national constitution determines that municipal governments are responsible for providing potable water, drainage, and sewage systems; public lighting; trash collection; public markets; cemeteries; slaughterhouses; streets and public parks; public and road safety. Although a comprehensive measure of local government performance should include the totality of services under municipal control, reliable data are only available for water and drainage.

6. According to a survey on municipal development (INEGI-INDESOL 2000) the provision of potable water was regarded as being the main priority by 79 percent of all local mayors in the country.

exhibiting high coverage levels at any point in time are very likely to display high coverage rates at any other moment), I control for the coverage levels that municipalities had at the beginning of the period analyzed. In other words, the analysis introduces the level of household coverage in 1990 as an independent variable, which serves as a baseline. A likely objection to this measure of government performance is that it does not track down the performance of specific local governments: municipal administrations last no more than three years, while my measurement of service coverage is based on data for the year 2000, controlling for the coverage levels that municipalities had in 1990. In consequence, the performance indicators cannot attach individual responsibility to each of the administrations that took place over the course of the decade. Also, the ten-year gap might mask time variations in the institutional, political, and economic environment of local governments that could have occurred during those years. This limitation is due to the fact that the Mexican census is only conducted every ten years, and it constitutes the only available data source suitable to assess coverage for these three services. Nevertheless, this problem does not invalidate the analysis for a number of reasons. First, coverage levels do not change very much from one year to another, thus a ten-year interval adequately reflects how municipalities improved the access of people to services. Second, even though we cannot observe how municipal administrations react to the electoral environment at specific points in time, we can still appreciate the cumulative effect of electoral competition on service coverage throughout an entire decade. Third, the ten-year interval covers the period in which competitive elections became prevalent in most Mexican municipalities.

Like it has in most other Latin American countries, public service coverage in Mexico has improved over the past decade. Nevertheless, there are still persistent problems of inequality of access to basic services across municipalities. Despite the fact that the average rate of water and drainage coverage has increased in the last ten years, as shown in table 1, there are considerable differences across municipal governments in their ability to provide basic services to the population. For example, in 1990 there were 181 governments that provided water access to no more than 30 percent of their residents, a coverage rate well behind the municipal average rate in that year (66 percent). Ten years later, only one-third of the municipalities that belonged to the low-performing group had succeeded in providing access to potable water to at least 50 percent of their population. In the case of drainage, only 158 municipalities had managed to improve their coverage rates, from 30 percent in 1990 to at least 50 percent in 2000. The following section investigates the factors that explain these variations in performance across municipal governments in Mexico.

Table 1 Water and Drainage Coverage in Mexican Municipalities, 1990 and 2000 (Proportion of Households Covered per Municipality)

Service	Year	N	Mean of coverage per municipality	Standard deviation
Water	1990	2387	66	23
	2000	2426	79	19
Drainage	1990	2387	37	25
	2000	2426	56	27

Source: Elaborated on the basis of INEGI, Censos de Población y Vivienda 1990 and 2000 (www.inegi.gob.mx)

EXPLAINING SERVICE COVERAGE IN MEXICAN MUNICIPALITIES

This section presents a statistical analysis to test whether variations in the rates of coverage for water and drainage can be explained by electoral theories of governmental accountability, using differences in levels of electoral competition at the municipal level in Mexico. In addition, drawing on arguments proposed by theorists of participatory democracy, the analysis incorporates political participation as an alternative variable that could explain improvements in service coverage. The dependent variable of the analysis are the rates of coverage for water and drainage in 2000, defined by the number of households that reported having access to each service, divided by the total number of households per municipality.

The first key independent variable of the model is electoral competition, which is measured as 100 minus the difference in the share of votes obtained by the two strongest parties in a local election. In other words, the percentage margin of victory (i.e., the difference between the wining candidate's share of the vote and that obtained by the runner-up) is subtracted from 100. Therefore, the lowest value the index can take is zero, indicating that a single party obtained the totality of votes in an election (i.e., the party was actually uncontested). Conversely, a value close to 100 would imply that the election was extremely competitive. This indicator of electoral competition explicitly underlines the risk faced by incumbent parties to lose power, since this is precisely what might motivate elected officials to improve their performance. The electoral competition index is expressed in terms of its annual average all over the period 1990–2000.

The second key explanatory variable in the model is the voter turnout rate for municipal elections in Mexico. This is introduced as a proxy for the level of political participation, although I acknowledge that voter turnout does not completely capture the several venues through which

people participate in public affairs.[7] Unfortunately, information on these other participatory manifestations (for example, the number of NGOs, social protests, lobbying, or levels of newspaper readership) are not available at the municipality level in Mexico. The inclusion of voter turnout rates responds to the theoretical expectation that the involvement of citizens in public affairs fosters the responsiveness of governmental institutions. Once more, this variable is measured as the turnout rate annual average (i.e., the total number of votes divided by the potential number of voters) during 1990–2000.

Although electoral competition and voter turnout rates are conceptualized as independent forces influencing the local policy-making process in their own way, it is important to acknowledge that the two variables are not completely unrelated to each other, mainly because as electoral races become more competitive, voters might perceive that their chances to affect the outcome are greater, so they are motivated to vote (Cox 1988). In addition, competitive elections induce political parties to mobilize their supporters. However, the empirical relationship between electoral competition and voter turnout during the years included in this analysis is not strong enough as to create a severe problem of colinearity that could preclude us from disentangling the individual effect of each variable on local government performance.[8]

The performance of municipal governments is evidently affected by many other factors. A central variable is the financial capacity of local governments to contribute to the provision of services. The fiscal arrangement that has prevailed in Mexico since the mid-1980s assigned to the federal government the most important taxes (such as value-added and income taxes). Although state and municipal governments were provided with new taxing powers, the revenues collected from local sources are still not enough to finance the several expenditure areas under the responsibility of subnational governments.[9] In consequence, municipal governments are highly dependent on transfers from the center. In order to control for municipal financial capacity, the model includes the total budget constraint of local governments, which encompasses all revenues collected by municipal authorities from local sources, as well as unconditional transfers from other governmental levels, particularly

7. Although a higher voter turnout does not necessarily imply that citizens actively take part in public affairs, some studies have found marked correlations between voter turnout rates and other forms of social participation (see, for example, Olsen 1972).

8. For any year between 1990 and 2000, the coefficient of correlation between competition and turnout never exceeds 0.24.

9. For example, article 115 of the national constitution entitles municipal governments to enjoy the proceeds from property taxes, user fees, and other local surcharges. For a review of the historical process by which Mexico centralized its fiscal system see Courchene, Díaz-Cayeros, and Webb (2000).

revenue-sharing grants from the federal government. The budget constraint is expressed in real per capita terms. In order to allow for other nonmunicipal expenditures aimed at expanding basic services in Mexico, the model includes the earmarked funds created by the Mexican government under the Programa Nacional de Solidaridad (PRONASOL), a poverty relief program that supported, among other things, the provision of local infrastructure from 1989 to 1994.[10] Since the allocation of these funds was decided by the federal government in conjunction with community organizations, PRONASOL resources were not part of the municipal budget constraint. The variable is measured in terms of the annual average of PRONASOL funds (in real per capita terms) spent in water and drainage throughout the period 1989–1994.[11] Additionally, in order to control for the possibility that municipal governments had faced further financial restrictions imposed by state governments (possibly due to political reasons), the model incorporates a dummy variable identifying municipalities that had experienced, at least on one occasion, the phenomenon of political "juxtaposition," in which the party membership of a local mayor and that of the state governor diverge. A priori, we can expect that municipalities whose mayors won under the banner of an "opposition" party will have more limited access to state government funds (especially if these are distributed under discretionary criteria, as it seems to be the case in many Mexican states) and, consequently, less capacity to expand the coverage of services.

Besides financial constraints, the performance of local governments is strongly influenced by the demographic and socioeconomic conditions under which they operate. The geographic dispersion of people across the municipal territory affects the ability of governments to provide basic services to the residents, given that it is more costly to provide water and sanitary systems in very isolated areas than in more concentrated zones. The model measures this variable as the percentage of people living in localities with less than 1,000 inhabitants.[12] As not every municipality is expected to have the same level of need for water and drainage, the model includes two variables that capture the potential demand for these services: the population size of the municipality and the rate of population growth

10. The inclusion of PRONASOL funds aims only to control for the increase in service coverage that could have been attributable to the program during the first half of the decade. A systematic evaluation of PRONASOL on the provision of basic services can be found in Díaz-Cayeros and Magaloni (2003).

11. Due to the way the data are reported in PRONASOL's dataset, it was not possible to obtain separate figures of drainage and water expenditures. Also, PRONASOL data from all municipalities from Oaxaca were unavailable. Nevertheless, as will be shown below, the basic results of the analysis remain unchanged, even if they are obtained on the basis of the whole sample, or if observations from Oaxaca are left out. I am thankful to Jonathan Hiskey for sharing with me the data on PRONASOL expenditures.

12. In Mexico, localities are geographic units smaller than municipalities.

between 1990 and 2000. One can expect that the need for basic services will be higher in more populated municipalities and also where population is growing faster. Two additional socioeconomic factors included in the analysis are poverty levels (measured as the proportion of people earning less than the official minimum wage) and literacy rates (proportion of the adult population who know how to read). The reason to incorporate these dimensions is grounded on political modernization theories, which assume that socioeconomic modernity is an essential condition for an effective democracy (Dahl 1989). Those theories hypothesize that socioeconomic wealth facilitates the performance of democratic institutions because it increases the level of education, expands the size of the middle class, thereby creating a more active and attentive citizenry. Given the lack of data on municipal-level GDP in Mexico, poverty and literacy are used as surrogate indicators of socioeconomic modernity. Drawing on socioeconomic modernization arguments, we should expect a negative relationship between government performance and poverty rates, while a positive link between performance and literacy.

A set of thirty dummy variables identifying each state in Mexico (taking Aguascalientes as the comparative case) are incorporated in the model, given that states might have an unobservable effect on service coverage. Also, as stated previously, the model includes as an independent variable the level of service coverage at the beginning of the period (i.e., the level of coverage of each service in 1990). The analysis is performed on the basis of a municipal-level dataset assembled by the author from a variety of sources, which combines information on municipal elections, public finance data, and sociodemographic characteristics.[13] It covers practically every municipality in the country, excluding the sixteen boroughs of the Federal District (because their legal framework is very different from the Mexican municipal regime), as well as those municipalities in Oaxaca state that are ruled under *usos y costumbres* (i.e., customary laws by which 412 indigenous municipalities of Oaxaca elect their authorities based on a civic-religious hierarchy and popular traditions, rather than through modern party systems).

The model is estimated through the use of ordinary least squares. However, it is assumed that the relationship between coverage and the remaining variables is curvilinear, so that the scope for furthering coverage diminishes as we approach a situation where almost every household

13. Finance data come from a dataset by INEGI (the Mexican Census Bureau), which contains yearly information (from 1989 to 2001) on different types of municipal revenues and expenditures. Data on local elections come from a dataset compiled by CIDAC, which contains information on the distribution of votes across parties in all municipal elections that have taken place since 1980 (accessible on-line at www.cidac.org.mx). Socioeconomic and demographic indicators (including water and drainage coverage) are based on the population censuses carried out by INEGI in 1990 and 2000.

is fully covered. In other words, the marginal effect of an independent variable on service coverage is assumed to vary depending on the point at which the function is evaluated, thereby describing a more realistic situation. In order to allow for this nonlinear relationship to hold, the dependent variable is expressed in terms of the natural logarithm of the coverage "odds ratio." [14] Also, this transformation avoids predicted values falling outside the 0–100 range. Since the assumption of constant variance in the error term is often violated in cross-sectional analyses (particularly when dealing with very heterogeneous units, such as Mexican municipalities), heteroscedasticity-consistent standard errors are reported. The regression results for water and drainage are displayed in table 2. One should also bear in mind that the regression coefficients reported do not have a straightforward interpretation, since they represent the marginal effect of an independent variable on the log-odds ratio of coverage, rather than on coverage simply. In order to facilitate the exposition, results will be discussed in terms of the effect of each relevant variable on the proportion of households covered, holding all other variables constant at their median value.[15]

DISCUSSION OF FINDINGS

In both analyses the initial rates of service coverage appear to be extremely relevant factors in predicting coverage in 2000. The strong positive relationship between the two variables is consonant with the path-dependent nature of service coverage discussed earlier. For example, if in 1990 a municipality had 10 percent of its households covered with a sanitary system, we can expect its drainage coverage rate to increase to 35 percent ten years later, holding all other variables constant at their median values. On the other hand, a municipality exhibiting a drainage coverage rate of 90 percent in 1990 would expect to have a much smaller increase in 2000 (no more than two additional points), evidently because the scope for improving access to the service is much more reduced. Overall, these results reveal that, regardless of any other fiscal, political, or sociodemographic factor, the distribution of service coverage across municipalities continued being influenced by the relative levels of coverage municipalities had ten years before, probably reflecting the effect of many forces driving the process of modernization in the country.

14. The log-odds ratio is equal to the natural log of $p/(100-p)$, where p stands for the proportion of households covered by the service.

15. When the dependent variable is expressed in terms of the log-odds ratio, the model is written as follows: $y=\ln[p/(1-p)] = B_0+B_1X_1+ \ldots +B_kX_k+e_i$, where p represents the proportion of households with access to the service. In order to determine the value of p, the equation $p=\exp(y)/(1+\exp(y))$ is evaluated keeping the value of the remaining independent variables constant.

Table 2 OLS Regressions on the Log-odds Ratio of Drainage and Water Coverage Rates

Dependent variable	Drainage coverage rate in 2000		Water coverage rate in 2000	
Independent variables	Including PRONASOL	Not including PRONASOL	Including PRONASOL	Not including PRONASOL
Drainage coverage in 1990	0.0370*** (0.0011)	0.0375*** (0.0011)		
Water coverage in 1990			0.0383*** (0.0043)	0.0373*** (0.0014)
Electoral competition	-0.0003 (0.001)	.0001 (0.001)	-0.0006 (0.0012)	-0.0004 (0.0011)
Voter turnout rate	0.002 (0.0016)	0.004* (0.0016)	0.0068*** (0.0020)	0.0087*** (0.0018)
Total municipal budget (per capita)	0.00008* (0.00003)	0.00005 (0.00003)	0.00008 (0.00004)	0.00005 (0.00004)
PRONASOL funds for water and drainage (per capita)	0.00007 (0.0001)		0.00033 (0.00018)	
Juxtaposition (dummy)	0.047 (0.033)	-0.007 (0.03)	0.062 (0.041)	0.050 (0.038)
Population dispersion	-0.0048*** (0.0008)	-0.005*** (0.0008)	-0.0035*** (0.0009)	-0.0027** (0.0009)
Population size (thousands)	0.0015 (.00015)	0.0009 (0.0011)	0.0061*** (0.0014)	0.0065*** (0.0014)
Population growth	0.0007 (0.0009)	0.0011 (0.0009)	0.0010 (0.0011)	0.0008 (0.0010)
Poverty rate	-0.0105*** (0.0017)	-0.0174*** (0.0017)	0.0011 (0.0021)	-0.0002 (0.0020)
Literacy rate	0.0384*** (0.004)	0.0391*** (0.004)	0.0080* (0.0038)	0.0108*** (0.0035)
Intercept	-4.06*** (0.426)	-4.2*** (0.453)	-1.56*** (0.430)	-1.75*** (0.403)
N	1801	1953	1801	1953
R-squared	0.861	0.843	0.754	0.744

Note: Huber-White standard errors in parentheses. *N*-1 (30) state dummy variables were included in all estimations (the omitted unit is Aguascalientes), but their coefficients are not reported for ease of exposition.

***$p<.001$ **$p<.01$ *$p<.05$

The effect of electoral competition on the rate of coverage for the two services analyzed is practically zero, as indicated by the very small size of the coefficients and the relatively large magnitude of their associated standard errors. This fundamental result holds no matter at which point the function is evaluated, and regardless of the use of any other measure of electoral competitiveness.[16] Therefore, by and large, there is no evidence supporting the proposition that electoral competition has improved the relative levels of service coverage in Mexican municipalities, casting doubts about the ability of elections, per se, to promote the responsiveness of governments.

In contrast, voter turnout does appear to be a factor that contributes to the growth in coverage for the two services analyzed. In most specifications, its coefficient is not only statistically significant, but is also relatively large, especially in the case of water provision. The specific effect of voter turnout on water coverage can vary between 5 and 22 percent, depending on the level of water coverage that municipalities had at the beginning of the decade: in cases where initial water endowments were already high, the ability of voter turnout to increase water coverage ten years later is no more than 5 percent. However, its effect increases to 22 percent if the function is evaluated holding the initial rate of water coverage at 20 percent. This implies that water-disadvantaged municipalities were those who benefited the most as a result of their higher rates of voter participation. In the case of drainage, turnout is also influential, though its marginal effect is smaller. In any case, the analysis suggests that the participation of voters in local elections plays a much more relevant role in improving the provision of basic services, possibly implying that local policy making is more responsive to a highly mobilized electorate than to a contested electoral environment.

Another important result concerns the marked influence of socioeconomic conditions on service provision. Literacy rates have a substantial positive impact on both drainage and water coverage: municipalities with literacy rates approaching 100 percent have, on average, 60 percent more households with access to sewage systems, compared to municipalities with literacy rates close to zero. In the case of water, the effect of literacy rates on coverage is no more than 12 percent when the function is evaluated at relatively high initial water endowments (70 percent in 1990), but its magnitude can increase to 26 percent in

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16. Two other surrogate measures of electoral competition used in the analysis were the Laakso-Taagapera (1979) index of the effective number of political parties, and a dummy variable identifying municipalities that experienced alternation of parties during the first three years of the period analyzed (to allow for a possible delayed effect of competition on service coverage). However, none of these alternative measures of competition changed the basic result.

municipalities whose water coverage at the beginning of the decade was around 20 percent. On the other hand, poverty rates appear to have a large negative effect on drainage coverage, but their influence on water provision is not significant. Taken together, the consequences of literacy and poverty on government performance are in line with political modernization theories, implying that more educated and wealthier citizens are better equipped to induce their government to supply more local services. In short, socioeconomic modernity seems to be an important condition to foster the responsiveness of governmental authorities.

Consistent with our a priori expectations, the geographical dispersion of residents has an unfavorable effect on the rates of coverage for water and drainage, implying that the cost of service provision increases as people tend to reside in more isolated areas. For example, a municipality whose population is extremely dispersed across the territory is expected to present a drainage coverage rate of about 43 percent, while other municipalities with less population dispersion can achieve coverage rates close to 56 percent, holding all other factors constant. Also, contrary to the conventional wisdom, party differences between mayors and state governors do not seem to have made any difference on service coverage rates.

In summary, the evidence presented here does not seem to support the claim that municipal government performance has been responsive to a contested electoral environment, as electoral theories of governmental accountability would suggest. On the other hand, municipal governments seem to respond more to the influence of socioeconomic modernity, as well as to the direct pressure of politically mobilized citizens.

FINAL REMARKS

The evidence presented in this research note suggests that electoral democracy in Mexico has not yet implied better-quality governments, a finding that casts serious doubts on the ability of elections to serve, by themselves, as instruments to promote the responsiveness of local governments in Mexico, at least in terms of policy efficacy. Contrary to the argument proposed by electoral theories of governmental accountability, the results show that local electoral competition does not seem to provide sufficient incentives for incumbent local administrations to expand the coverage of basic services. On the other hand, the evidence provided here indicates that the principal forces driving improvements in government performance come from "demand" factors, such as literacy, socioeconomic wealth, and higher rates of voter participation. That is, governments seem to be more receptive to societal influences than to a contested electoral environment, a finding that supports the

arguments of political modernization theories, as well as those coming from participatory democratic notions.

Evidently, the available data do not allow us to draw more robust inferences about the consequences of the many other forms of social participation (besides the electoral one) on the performance of Mexican local government. In addition, further research is required to elucidate the causal mechanisms that mediate the relationship between societal influences and government performance. For example, the positive relationship between voter turnout rates and service coverage can be attributable either to politically active citizens who are effective in influencing local policymaking, or simply to the efficacy of political parties to mobilize people through the use of local services as a particularistic incentive, which would imply that political clientelism cannot be discarded as a variable explaining the functioning of local governments in Mexico.

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