Does Democracy Matter?
Electoral Competition and Local Development in Mexico

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Abstract

The regime type-development nexus has long preoccupied scholars of the political economy of development. Investigation of this relationship generally has taken place at the cross-national level of analysis. In a world now dominated by a development strategy that seeks to empower local-level governments and community groups, an understanding of the development impact of the local political environment is essential. This paper examines the municipal-level development legacy of Mexico’s principal poverty alleviation program of the early 1990s, the National Solidarity Program (PRONASOL). PRONASOL’s demand-based approach to poverty alleviation reflects the dominant policy strategy being pursued across the developing world in the 1990s. Through OLS regression I explore the development consequences of distinct local-level electoral environments. The findings suggest that local-level democracy is critical for the success of the current decentralized development strategy prevalent across much of the world.
Democracy and the Decentralized Development Paradigm of the 1990s

Talk of decentralization among development scholars and practitioners almost invariably leads to talk of democracy. As evident in a recent World Bank report, decentralization is often viewed as a means to strengthen broader patterns of democratization and enhance the development prospects of developing countries, “First, decentralization can strengthen democratic participation in government . . . Second, decentralization can improve the quality and coverage of local public services” (Peterson 1997, 1). With the current “wave” of democratization now well into its third decade, developing countries seem poised to take advantage of the purported benefits of a decentralized development strategy. Few proponents of decentralized development, however, have paid much heed to the substantial subnational variations in political environments that exist within developing countries of the 1990s. Even fewer have devoted much attention to the possible consequences of pursuing a decentralized development strategy in these uneven democracies. In the following pages, I develop and test the proposition that local democratic institutions are critical to the success of the decentralized development strategy. In short, I explore the question of whether democracy matters in the decentralized developing world of the 1990s.

This paper examines the development legacy of Mexico’s principal poverty alleviation program of the early 1990s, the National Solidarity Program (PRONASOL). PRONASOL’s decentralized, demand-based approach to poverty alleviation reflects the dominant development strategy being pursued across the developing world in the 1990s (Manor 1999; Willis, et. al. 1998; Pradhan, et.al. 1998; Peterson 1997; Graham 1995; 1994a; Fox 1994b; Morris and Lowder 1992; Grosh 1990). Many developing countries have implemented antipoverty programs that require citizens to organize at the local level, develop funding proposals, and participate in project implementation. The demand-based design seeks to create “self-sustaining projects that are key to lasting poverty alleviation as well as to the enhancement of democratic government at the local level” (Graham 1995, 155). In a developing world now securely ensnared in a neoliberal paradigm, demand-based social funds have become the principal governmental and international development agency response to those citizens entangled in the pernicious tentacles of poverty.

In the nascent democracies of the developing world, however, where authoritarian, clientelistic enclaves endure at the local level amidst broader political openings at the national level, such neoliberal projects may only strengthen extant anti-democratic patterns and thus have a negative impact on the welfare needs of the poor. This study investigates the impact of the local political environment on the development outcome of demand-based programs. Specifically, I posit that a necessary condition for the success of development programs that emphasize citizen empowerment at the local level is a competitive political environment.

Why might the nature of the local political environment affect the outcome of antipoverty projects? Two, not mutually exclusive, lines of reasoning suggest a more developmentally beneficial outcome from demand-based projects implemented in competitive political environments.

First, it seems likely that citizens will be more willing and effective participants in project implementation (a feature of most demand-based programs) when the political system out of which these projects emerge allows, at a minimum, participation in free, fair, and competitive elections. Even if projects do not originate from grassroots community organizations as would be the case in the ideal demand-based program, but rather are initiated by local, state, or national-level elites, citizens are likely to be more receptive to these projects when they view the elections that produced these elites as free and fair.
Seligson found in Costa Rica that feelings of efficacy among citizens have a positive impact on “institutionalized participation” that can be “an important source of local community development” (1980, 98). If free and fair elections enhance a citizen’s feelings of efficacy, as Madsen suggests (1978), then we should expect citizens to be more receptive and willing to contribute labor and resources to projects coming out of a competitive electoral environment. When political elites emerge from an electoral system widely regarded as unfair and uncompetitive, citizens may be more likely to reject any requests from these elites to contribute labor and resources to a particular development project.

The logic guiding this argument builds on key elements of democratic theory. First, the local political environment is the first point of inclusion or exclusion of citizens in the political process (Teune 1995; Fox 1994b; Pateman 1970). Thus citizens living under a highly restrictive local political regime are less likely to initiate and/or sustain the level of political participation necessary to reap the long-term benefits of antipoverty projects founded on community involvement.

Previous research on citizen participation in politics supports the above proposition. In communities dominated by a select few, levels of participation are low. A study of municipal governments in Costa Rica suggests that “local ‘power elite’ domination of municipal government strongly discourages the participation of the public” (Seligson and Booth 1979, 104). At the national level, Davis found in a comparison of Mexico and Venezuela that “citizens . . . in more restrictive political environments may not be as likely to become politically active as their counterparts in more open polities” (Davis 1983, 440). These findings complement those of Holbrook and Van Dunk that show a positive relationship between the level of electoral competition in American states and citizen participation in politics (1993, 960).

Electoral competition may also further organize politics in a municipality such that the promotion of the interests of community “have-nots” is facilitated. As Key argued, “the grand objective of the haves is obstruction . . . Organization is not always necessary to obstruct; it is essential, however, for the promotion of a sustained program in behalf of the have-nots . . .” (Key 1949, 307). In a similar vein, Dahl argued that “political competition . . . vastly increase[s] the size, number, and variety of minorities whose preferences must be taken into account by leaders in making policy choices” (Dahl 1956, 132).

Greater and more meaningful political competition for local political offices, then, should have a positive impact on the outcome of community-based antipoverty projects through its effect on both residents and politicians of the municipality. Where citizens have a means of control over elected officials through the presence of viable electoral alternatives, the incentive and opportunity to participate in the political process are strengthened. Moreover, the increased level of uncertainty among local political elites that comes with greater electoral competitiveness between parties should enhance the responsiveness of those elites to the concerns of the citizenry. As Strom put it, “innovation and anticipation are born of competition and reflect efforts to escape a situation where failure is so perilously close . . . [T]hese dynamics may in the long run be the greatest benefit of political competition” (Strom 1992, 391). Given the increasing focus on the demand-based approach in developing countries with decidedly uneven democratic landscapes, the need is clear for extensive analysis of the relationship between the local political environment and antipoverty programs based on citizen empowerment.

Bits and pieces of research on this relationship have emerged over the years. In a study of demand-based poverty alleviation efforts in India, Echeverri-Ghent concludes that “political competition is essential to the effective” diminution of patronage and corruption, leading to a more positive outcome of community-based antipoverty projects (Echeverri-Ghent 1992, 1414). In his
study of the U.S. Community Action Program, an antipoverty initiative of the Johnson administration driven by the mandate for “maximum feasible participation,” Kramer found that the idea of neighborhood-based self help can only succeed if the entrenched local power elite allows community organizations to “become politicized” (Kramer 1969, 273). If one obstacle to the political empowerment of community organizations is a non-competitive electoral environment, as Key, Dahl and others have suggested, then Kramer's findings suggest that competitive local elections will increase the likelihood of successful demand-based antipoverty projects.

More recently, Fox and Aranda, in their study of Mexico's PRONASOL in the state of Oaxaca, conclude that project outcome was highly contingent on whether “local governments are already democratic and responsive to their citizens. Where these prior conditions do not hold, however, decentralization could actually reinforce authoritarian rule at the local level” (Fox and Aranda 1995, 2). Missing in this research, however, are studies that go beyond the case study approach to embrace a more comprehensive analysis of the role of the local political environment on demand-based antipoverty project success. One objective of this paper is to address this deficiency.

**Mexico and the Study of Demand-Based Development**

Mexico provides an ideal case with which to examine the impact of a competitive local political environment on the outcome of antipoverty projects designed to empower the poor. First, Mexico's political system historically has been highly centralized. While nominally a federal system with three tiers of government (federal, state, and municipal), politics in Mexico begins and ends in Mexico City. Indeed, Mexico perhaps best captures the “centralist tradition” that has long characterized the political systems of Latin America (Veliz, 1980). Thus, if local politics matters in a country as historically centralized as Mexico, then the impact in other, less centralized polities may be even greater.

At the same time, though, Mexico also has been part of a worldwide transition among developing country governments from a top-down, highly centralized developmental philosophy to one that seeks to empower subnational governments and citizen groups (Rodriguez 1997; Teune 1995; Ziccardi 1995; Fox 1994b; Hellman 1994; Rodriguez 1993; Morris and Lowder 1992; Fox and Hernandez 1992). Within the past fifteen years, widely publicized efforts to decentralize state responsibilities have, at the least, increased the political visibility of local governments (Rodriguez 1997; Nickson, 1995; Rodriguez and Ward 1995; Rodriguez 1993). As a setting for the study of the impact of the local political environment on development projects, then, Mexico provides one of the more dramatic cases of efforts to shift from extreme centralism to a more balanced federalism.

One of the more prominent examples of Mexico’s decentralization efforts is the widely publicized poverty alleviation program, PRONASOL. Upon entering office in 1988, President Carlos Salinas inherited an economic program that severely constrained the potential for any grandiose social welfare plan. The painful social consequences of the economic program, coupled with his widely disputed election in 1988, however, demanded some type of dramatic, highly visible response from Salinas to remedy both the political ills of his party and the social effects of its economic program. This combination of economic constraints, intense demand, and an increasingly vocal and vigilant civil society did not bode well for a social program seeking to satisfy all these objectives. It was exactly this combination, though, that provided Salinas the ingredients for the successful implementation of arguably the most widely recognized antipoverty program in Mexico’s history.

Drawing from his own doctoral dissertation research on how best to maximize the political rewards of social programs (Salinas 1982), and lessons from Bolivia’s demand-based Emergency
Social Fund (Graham 1995), Salinas implemented a program that targeted antipoverty funds directly to municipalities based in part on proposals received from community organizations and municipal governments. Salinas used the economic constraints he faced as a justification for this targeting approach that would theoretically bypass the budget-breaking bureaucratic morass characteristic of past social programs. He combined this feature with an explicit emphasis on citizen participation to make the emerging strength of civil society work for, rather than against, him. Finally, funding for the program would purportedly come from the privatization of state-owned enterprises, a central tenet of the neoliberal economic strategy. These features of PRONASOL proved critical for Salinas’ efforts at meeting the highly contradictory objectives of pushing through a highly disruptive economic reform package, mollifying the rising opposition, and reestablishing the electoral dominance of the PRI.

Evidence of this marriage of neoliberal fiscal responsibility and citizen participation seeps out of the mountain of PRONASOL publications espousing the program’s philosophy:

One of the biggest advantages is that the expenditures of the program do not cause inflationary pressures, fiscal deficit or excessive public spending . . . Community participation is the distinctive element of Solidarity; it is the pillar of a strategy that includes a new way of doing things. Its base is the confidence and co-responsibility between communities and government to realize projects for the benefit of the population living in poverty and extreme poverty (Sedesol 1994, 22-23).

It was this combination of fiscal responsibility and “helping the poor help themselves” through community participation that made PRONASOL and other similar social investment funds emerging during the late 1980s so appealing to so many of the domestic and international proponents of the neoliberal paradigm.

In the six years of full program funding (1989-1994), PRONASOL distributed more than $17 billion among Mexico’s 2,400 municipalities. Funding was divided among three principal programs–social welfare (52 percent of total spending), production support (15 percent), and regional development (20 percent)–with the remainder going to a wide array of miscellaneous projects (ranging from public education campaigns on violence against women to the renovation of a military airport in Baja California). More than 523,000 projects were carried out with the participation of more than 250,000 citizen “Solidarity committees.”

According to PRONASOL documents, the development legacy of the program included the delivery of potable water to more than 16 million people, sewer service provision for 13.7 million people, and more than 19 million students attending schools either constructed or renovated with the PRONASOL funds (SEDESOL 1994, 70-95). However boastful these claims may be, they do at least suggest a widespread PRONASOL presence throughout Mexico’s 31 states. As Rodriguez noted, PRONASOL was “Salinas’ ticket. Its visibility is evident to anyone visiting any part of the country; Solidarity slogans and the logo’s small flag can be seen everywhere” (Rodriguez 1993, 139). In this respect then, Salinas was successful in implementing a social welfare program that both remained true to the tight policy constraints of the neoliberal paradigm and achieved, at the least, the political objective of visibly responding to the demands of the citizenry.

During this same period, electoral competition for municipal and state level offices increased dramatically, as opposition parties began to challenge the virtual monopoly held by the Partido Revolucionario Institucional (PRI) across these levels of government for 65 years. Since its formation in 1929 (as the Partido Nacional Revolucionario) until 1989, the PRI had won all major national and state elections, and all but a handful of municipal elections. Since 1988, however,
significant changes in political leadership, particularly at the municipal level, have taken place. This study examines two states where these changes in electoral environments have been most prominent.

I look at the development impact of PRONASOL across the 237 municipalities in the states of Jalisco and Michoacán, Mexico. These states allow for a quasi-experimental design in the examination of the relationship between the local electoral environment and development project outcomes. In the past ten years, the electoral environments in roughly half of the municipalities have moved from complete one-party domination by the Partido Revolucionario Institucional (PRI) to competitive multiparty politics where opposition parties have been both able and allowed to win elections for municipal offices. In the remaining municipalities, the one-party rule of the PRI continues unabated. The application of a single demand-based antipoverty program in all 237 municipalities permits a comparative study of the effect of these distinct local political environments on project outcome.

These very disparate political settings provide optimum cases with which to examine the question—“Does democracy matter?”—while at the same time controlling for many of the social and cultural factors that may affect development processes. In the following section, I develop a classification strategy for these distinct electoral environments that will serve as the basis for an empirical test of the principal proposition of this study—demand-based development programs will work better in local electoral environments characterized by meaningful elections.

Classifying Electoral Environments

“Democracy is a system in which parties lose elections” (Przeworski 1991, 10). With these nine words, Przeworski taps a fundamental element found in most definitions of modern democratic political systems. The emphasis on losing elections is particularly important in the case of Mexico. Elections were always held on a regular basis, opposition parties existed and submitted candidates for the major elections, and voters were relatively free to vote their conscience, but the PRI almost never lost. It was this one fact that made Mexico’s regime, despite appearances, decidedly undemocratic.

Since 1988, the PRI has been losing elections, particularly at the municipal level. It is this monumental shift in the role of elections that provides the grist for this study’s mill. To reap the greatest analytical leverage from this side-by-side existence of largely similar municipalities with very distinct political environments, I first must construct categories that capture this critical difference.

To identify those municipalities in Jalisco and Michoacán that have experienced a shift from meaningless to meaningful elections I turn to research on state politics in the United States. Inter-party electoral competition is a concept with a long history in this literature (Schlesinger 1955; Dawson and Robinson 1963; Cnuedde and McCrone 1969; Ranney 1976; Patterson and Caldeira 1984; Holbrook and Van Dunk 1993). Struggles to adequately measure this concept tie the nearly four decades of research on inter-party competition together. From Schlesinger’s “two-dimensional scheme for classifying the states according to degree of inter-party competition” (Schlesinger 1955, 1120) to Holbrook and Van Dunk’s district-level “alternative indicator of competition” (1993, 955), a wide variety of measures of electoral competition have been proposed and critiqued over the past forty years. While my concept of meaningful elections differs somewhat from competitive elections as understood in the American context, the objective of identifying distinct electoral environments is the same.

Rather than rely directly on any of the number of competition indices created in the field of American state politics I will employ a measure that adopts the conceptual foci of Schlesinger and
Holbrook and Van Dunk but also takes into account the particular features of the Mexican electoral landscape. My measure of a competitive electoral environment is simply whether an opposition party is “allowed,” and able, to win local elections. A conventional party competition measure fails to capture the all important role of the PRI’s decision to recognize an opposition victory. In many cases, no matter how competitive elections are, the PRI always ends up in the mayor’s office. It is the distinct political context where everyone involved in electoral politics is uncertain about the outcome of elections that contains the dynamic that I argue has an impact on demand-based, participatory programs like PRONASOL.  

To capture both elements of a competitive electoral environment in Mexico, that of an opposition party being able and, as importantly, allowed to win, I include the average vote for the PRI in municipal elections and whether an opposition party has in fact won a municipal election. The average vote for the PRI in municipal elections is used to measure whether a credible opposition party exists at the municipal level. That is, does the PRI so completely dominate municipal elections that no opposition party has emerged that is able to win an election? For this component, I make an admittedly arbitrary cutoff point of an average 65 percent of the vote for the PRI in the relevant municipal elections to distinguish between those municipalities where opposition parties have demonstrated the ability to win and those where the PRI’s absolute grip on elections remains unchallenged.  

My threshold of 65 percent is higher than those commonly used in the inter-party competition literature. The most common criterion for “safe” districts in the American literature is 55 percent (Holbrook and Van Dunk 1993; Tidmarch, Lonergan, and Sciortino 1986; Mayhew 1974). Jacobson, though, found that a 60 percent cutoff produced similar results in models of the likelihood of incumbent loss in the subsequent election (1987). My choice of 65 percent takes into account the dramatic change in Mexican municipal elections that took place in the 1980s and 1990s. Prior to this period, the PRI normally received 80 percent or more of the vote in the majority of municipal president elections. In a context of such complete domination, the threshold of 65 percent seems appropriate to distinguish between municipalities where the PRI continues to rule unchallenged and those where an opposition party is beginning to pose a sustainable threat to such domination.  

A breakdown of the municipalities of Jalisco and Michoacán on the basis of this first condition reveals the contrast in the progression of competition in the two states during the PRONASOL years. The first row in Table 1 gives an indication of how widespread the opposition’s presence in Michoacán municipal elections had become by 1995. In only five municipalities was the average PRI vote in the 1989 and 1992 elections greater than 65 percent. Conversely, in Jalisco, the PRI received an average of 65 percent of the vote or more in 45 of the state’s 124 municipalities.  

Note that for Jalisco I include the 1995 elections, while for Michoacán I do not. The rationale for this difference in measurement lies in the timing of the 1995 elections in the two states. The 1995 elections in Jalisco took place in January, while those in Michoacán occurred in December. The election campaign in Jalisco began in the summer of 1994, overlapping somewhat with the PRONASOL years, therefore justifying inclusion of the 1995 elections in a measure of municipal electoral environments during this period. In Michoacán, on the other hand, the elections of 1995 were far enough removed from PRONASOL to suggest their exclusion from the electoral environment measure.
The second component in my measure of a competitive electoral environment is whether an opposition party is allowed to win. Assuming a viable opposition party, have the “PRI powers that be” allowed an opposition party to take control of the municipal presidency? In concordance with much of the literature on democratic theory, I argue that until there is alternation of power between opposing political forces, a competitive electoral environment cannot be said to exist. Particularly in the case of Mexico, where the ruling party has routinely overruled or invalidated election results, alternation of power is a necessary ingredient for the consolidation of a competitive electoral environment. The second row of Table 1 displays the number of municipalities where an opposition
party won at least one of the municipal elections held during the PRONASOL years. The addition of this criterion greatly reduces the number of municipalities eligible for the competitive electoral environment category.

Through the combination of these two components of electoral competitiveness, 63 municipalities in Jalisco and 69 municipalities in Michoacán meet the criteria for a competitive electoral environment. Before analyzing the effect of these distinct environments on PRONASOL project outcomes, I examine whether the competitive and non-competitive municipalities of Michoacán and Jalisco differ in characteristics other than electoral environments. The one factor with the most potential importance for the subsequent analysis of PRONASOL basic service projects is municipal development level. If the competitive municipalities are also significantly more developed than non-competitive municipalities, then this may affect the success rates of PRONASOL projects in the two groups of municipalities.

Figure 1 displays a comparison of the municipalities on the basis of the percentage of the population with all three basic services in 1990. It is clear from the figure that competitive municipalities in Jalisco are, on average, considerably more developed than their non-competitive neighbors. In Michoacán, however, competitive municipalities are slightly less developed than the non-competitive municipalities (although the difference is statistically insignificant).

This stark difference in the relative development levels of competitive and non-competitive municipalities in Michoacán and Jalisco allows for another point of analytical leverage in subsequent analyses. If PRONASOL projects in competitive municipalities had different outcomes than projects in non-competitive municipalities in both Michoacán and Jalisco, then the relatively higher development levels of competitive municipalities in Jalisco can be ruled out as a cause of these different outcomes because these higher development levels do not characterize the competitive municipalities of Michoacán.

An alternative approach to identifying other factors that may be correlated with my competitive and non-competitive electoral environments entails spatial analysis. It may be the case that some type of geographic or regional factor underlies my grouping of competitive and non-competitive municipalities in Jalisco and Michoacán that also affects the development outcome of PRONASOL projects.

To assess whether any geographic links exist between the competitive (or non-competitive) municipalities, I examine the distribution of competitive municipalities across the states of Jalisco and Michoacán. Figures 2 and 3 display the municipalities of Jalisco and Michoacán, respectively, with the lighter shade designating those classified as competitive. Competitive municipalities in both states are found in all regions but cluster together, suggesting a possible “demonstration effect,” the deterioration in the power of regional caciques, or another factor that reaches across municipal borders. In the northeast region of Jalisco it appears as if the competitive municipalities may be linked by a “culture of opposition” that dates back to the Cristero rebellion when this region, known as los altos, was home to the most ardent factions of the rebellion (Tuck 1982). Of the 20 municipalities in this region, 14 classify as competitive. These 14 municipalities, however, represent only 22 percent of the competitive municipalities in the state, so any connection between this regional factor and PRONASOL development outcomes statewide should be minimal. The northern-most region of Jalisco is also particularly intriguing because these municipalities are predominantly indigenous and have historically been dominated by the PRI. The fact, then, that three of the four competitive municipalities in this region cluster together is noteworthy. This possible demonstration effect of electoral competition could potentially spill over into community-based development projects but it is difficult to capture in statistical analyses. It does, however,
offer an appealing avenue of future research on the emergence of municipal-level democracy in Mexico.
Figure 3. The Competitive Municipalities of Michoacan

[Map of competitive municipalities in Michoacan]

Legend:
- Lake Chapala
- Michoacan - Competitive municipalities
- Michoacan - Non-competitive municipalities
Basic Service Provision in Jalisco and Michoacán

The next step in this analysis of Mexico’s demand-based antipoverty program is to compare the development legacy of the program in the competitive and non-competitive electoral environments of Jalisco and Michoacán. Most research on PRONASOL finds a very limited development impact due in large part to its explicit emphasis on small-scale projects and the political use of program funds (Dresser 1994; 1991; Fox and Aranda 1996). Furthermore, the potential for somewhat superfluous “antipoverty” projects like basketball courts and bandstands made the true antipoverty effects of the program decidedly uneven. To date, though, most evaluative research of PRONASOL has either lacked the proper temporal perspective and/or sufficient data to analyze adequately the development consequences of the program. With the availability of municipal-level data collected in 1995, after the termination of PRONASOL, the opportunity now presents itself to assess the development effects of PRONASOL.

The diversity and quantity of PRONASOL projects was impressive. Over 500,000 projects targeted such areas as health care, education, basic services, infrastructure, small business development and the subsidized provision of basic food and milk. This diversity of projects, however, makes evaluation of its development consequences difficult. As a result, I narrow the search for the development impact of PRONASOL to the provision of basic services (water, sewer, and electricity).

Basic service provision was a principal focus of PRONASOL planners. The sector received the largest share of funding among all PRONASOL programs (SEDESOL 1994a). Second, the area is one in which PRONASOL spending data specify by name the purpose of the project. This allows for the elimination of irrelevant project data from the analysis and assessment of the impact of only basic service projects on basic service provision. Third, data from the Mexican census bureau (INEGI) provide a basis to assess change in the provision of these services over the life of the program. Included in both the 1990 census and a 1995 “mid-decade” census are data on the number of inhabitants (at the municipal level) with access to water, sewer, and electricity services (INEGI 1991; 1996). These data allow for a relatively precise measure with which to evaluate the development effects of PRONASOL. The relationship between PRONASOL basic service projects and the change in the percentage of people with water, sewer, and electricity services is as direct as can be hoped for in modeling the development impact of PRONASOL. Finally, access to basic services is an important feature of the broader concept of development. The likelihood that people will be able to fully realize their human development potential will increase when the resource cost of obtaining basic services goes down. Thus, from a normative perspective, the questions of whether PRONASOL was successful in providing basic services, and what effect electoral competition had on the program’s success, are critical.

Throughout this analysis of PRONASOL’s development impact I will run parallel models of basic service provision in Jalisco and Michoacán to enhance the comparative leverage of the analysis. The political strategies behind PRONASOL spending in Jalisco and Michoacán were roughly similar in design, yet very different in the intensity with which they were carried out. Opposition municipalities in Jalisco generally received less money than their PRI counterparts, but only in the years following municipal elections. Opposition municipalities in Michoacán, however, were consistently denied funds throughout the life of the program (Hiskey 1999).

The difference in the severity of the PRONASOL strategies in Jalisco and Michoacán stems in large part from the distinct political climates of the two states. While both were home to strong opposition movements, the “breakout” year for the opposition in Michoacán was 1989, while for the opposition in Jalisco it was 1995. Furthermore, Michoacán is primarily a left-of-center PRD state,
while the principal opposition party in Jalisco is the right-of-center PAN. Since its inception the PRD has been a more overt threat to the PRI’s electoral base, and thus has generated a more proactive response from the ruling party than the PAN (Bruhn 1997). By running parallel models of the development impact of PRONASOL in these two states, the effects of these different political strategies and contexts can be analyzed. How these differences affect the dependent variable, change in basic service provision, remains to be seen.

Basic service provision in Jalisco and Michoacán expanded at similar rates between 1990 and 1995. Figure 4 indicates the progress that was made in both states in extending basic services to their respective populations. Just as evident is the similar pattern of service provision in the two states, where electricity is the most widely available service while sewer service was available to an average of only 50 percent of the states’ citizens in 1990. The remainder of this paper examines factors that help explain these changes in service provision at the municipal level in the states of Jalisco and Michoacán.

The Model

To model change in basic service provision I use the percentage of a municipality’s population with a particular service in 1995 as the dependent variable and the percentage in 1990 as an independent variable. The 1990 variable serves as a baseline with which to examine the factors affecting service provision levels between 1990 and 1995, as well as a control for the effect of a municipality’s level of development on service provision. The rest of the model consists of those variables hypothesized to have an impact on a municipality’s capacity to expand basic services provision during this period.

First, I include the percent change in a municipality's population between 1990 and 1995. While certainly an important factor in assessing change in service provision, the causal impact of this variable may run in both directions depending on the nature of the population change. Thus I refrain from providing any firm proposition regarding the effect of population change on basic service provision, including it merely for exploratory purposes.
Expectations for the next variable, average municipal budget per capita (1992-1993), are straightforward. The more money a municipality has available to it, the more likely that municipality will be able to extend the provision of basic services to its population.

I also include the percentage of a municipality’s population over the age of 15 with post-primary school education. This variable captures any potential effect a municipality’s stock of human capital may have on the success of demand-based projects. Since citizen participation is required for both the proposal and project implementation stages of demand-based programs, education levels may affect the ability of community groups to successfully implement PRONASOL projects.  

The last structural variable I include in the model is the number of localities with a population less than or equal to 1000 that exist within a municipality. This variable captures the geographical dispersion of a municipality’s population. I expect its relation with basic service provision to be negative. That is, the more small, isolated communities a municipality has within its borders, the more difficulties its leaders will face in expanding basic service coverage and the greater the probable transaction costs will be in linking these communities with the basic service infrastructure of the municipal center.  

To assess the impact of PRONASOL on the extension of the basic services of water, sewer, and electricity between 1990 and 1995, I use a PRONASOL spending per capita measure with only those funds specifically designated for basic service projects. Through this refinement of the spending data, the model is provided a more accurate measure of the impact of PRONASOL on service provision. Since the dependent variable draws from 1995 data, a year after the termination of PRONASOL, I use the total per capita amount spent on basic service projects during the six years of the program. Clearly, the expectation for this variable is that the higher the per capita spending level, the greater the expansion of basic services a municipality will enjoy between 1990 and 1995.

Finally, I include a dummy variable with a value of one assigned to those municipalities classified as competitive, and a value of zero to the remaining non-competitive municipalities. This variable alone, however, does not allow for a sufficient test of my principal hypothesis that PRONASOL funds worked better in competitive towns. In fact, given the financial punishment suffered by opposition municipalities during the PRONASOL years, it is likely that with all else equal, competitive municipalities were less successful than their non-competitive counterparts in expanding basic service coverage. The critical question of this study is whether those municipalities with competitive electoral environments were able to do more with their PRONASOL funds than neighboring non-competitive municipalities. A test of this proposition requires an interaction term that captures any difference between the development impact of PRONASOL pesos in competitive and non-competitive environments. Thus, the final model to be tested is as follows:
\[ Y = a + bX_1 + bX_2 + bX_3 + bX_4 - bX_5 + bX_6 - bX_7 + b(X_6X_7) \]

where:

\[ Y = 1995 \text{ percentage of population with service} \]
\[ X_1 = 1990 \text{ percentage of population with service} \]
\[ X_2 = \text{Municipality's average budget (1992-93), per capita} \]
\[ X_3 = \text{Percentage change in population between 1990 and 1995} \]
\[ X_4 = \text{Percentage population 15 and over with post primary school education} \]
\[ X_5 = \text{Number of localities with population less than 1000} \]
\[ X_6 = \text{Total PRONASOL basic service project spending per capita} \]
\[ X_7 = \text{Municipality's electoral environment (0 = non-competitive; 1 = competitive)} \]

Based on previous research PRONASOL water and sewer project funds were more susceptible to political manipulation than electricity project money. In both Jalisco and Michoacán, water and sewer projects were clearly funded on a partisan basis, with municipalities loyal to the PRI receiving higher levels of per capita funding, after controlling for level of development. Electricity project spending in Jalisco and Michoacán, by contrast, was predominantly need-based. Because of these different PRONASOL spending strategies that emerged for the three basic services, I regress 1995 service provision for each of these services separately on the above variables. Doing so allows for an assessment of the consequences of the different levels of political manipulation of funds for the development impact of PRONASOL projects.

The Results

Tables 4 through 6 display the regression results of the 1995 service models for Jalisco and Michoacán. Several of these results are critical in helping to answer the main questions of this study. First, support for the principal proposition that local democracy matters for development projects clearly emerges from the electricity service models. In both states, PRONASOL electricity project money that passed through competitive environments had a significantly greater impact on electricity service provision than PRONASOL money in non-competitive towns. While in the latter PRONASOL funds did have a positive effect on service provision, the development impact of PRONASOL was three times greater in competitive municipalities.

For example, in non-competitive Michoacán municipalities, every 1000 pesos per capita in PRONASOL money (approx. $330) produced an estimated .3 percent increase in the percentage of residents with electricity in 1995. In competitive towns, an equal amount of PRONASOL funds increased electricity service by a full percentage point. Despite the obstacles faced by competitive municipalities in Michoacán (as evidenced by the negative coefficient for the electoral environment variable), these municipalities were able to get three times the development value for their PRONASOL pesos than that obtained by their non-competitive neighbors.

Further evidence of the strength of this finding is the striking similarity of the Jalisco and Michoacán models. Given the very different political environments of the two states, and the consequent differences in PRONASOL spending strategies, the fact that for both states PRONASOL electricity projects worked better in competitive municipalities greatly enhances the robustness of the conclusion that meaningful elections are critical to the success of the demand-based development approach. Because my competitive category includes municipalities controlled
by all three major parties, and because a similar interactive effect between electoral competition and PRONASOL spending occurs in both Jalisco and Michoacán, party ideology can be ruled out as a spurious factor behind the greater success of PRONASOL projects in competitive municipalities.

### Table 4. 1995 Electricity Service Provision in Jalisco and Michoacán

<table>
<thead>
<tr>
<th>Variables</th>
<th>Jalisco</th>
<th>Michoacán</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (t-stat.)</td>
<td>b (t-stat.)</td>
</tr>
<tr>
<td>Constant</td>
<td>.24 (7.79)</td>
<td>.32 (6.54)</td>
</tr>
<tr>
<td>Population with electricity, 1990 (%)</td>
<td>.79** (22.97)</td>
<td>.71** (14.24)</td>
</tr>
<tr>
<td>Population &gt; 15 with post-primary education, 1990</td>
<td>-.0006 (-1.06)</td>
<td>-.04 (1.42)</td>
</tr>
<tr>
<td>Number of localities w/ pop. &lt; 1000</td>
<td>.00003 (.44)</td>
<td>-.0003** (-3.5)</td>
</tr>
<tr>
<td>Municipal budget per capita</td>
<td>.00000 (.01)</td>
<td>-.0001* (-1.95)</td>
</tr>
<tr>
<td>Percent change in population, 1990-95</td>
<td>-.01 (-.35)</td>
<td>-.02 (-.35)</td>
</tr>
<tr>
<td>Electoral environment</td>
<td>-.005 (-.60)</td>
<td>-.02 (-.27)</td>
</tr>
<tr>
<td>PRONASOL electricity project spending per capita, 1989-94</td>
<td>.0002** (4.69)</td>
<td>.0003* (2.24)</td>
</tr>
<tr>
<td>Electoral environment X PRONASOL spending</td>
<td>.0002** (2.43)</td>
<td>.0007** (2.77)</td>
</tr>
<tr>
<td>Adjusted R² (F-stat.)</td>
<td>.91 (147.80)**</td>
<td>.91 (142.09)**</td>
</tr>
</tbody>
</table>


To further illustrate the impact of a competitive electoral environment on PRONASOL electricity projects, Figure 5 displays the estimated effects of PRONASOL electricity project funds on service provision in competitive and non-competitive municipalities in Michoacán. The vertical axis depicts the estimated values of the dependent variable, 1995 electricity service levels. The horizontal is PRONASOL service spending. The graph assigns distinct intercept values to competitive and non-competitive towns based on the partial coefficient of the dummy variable. The difference in the slopes of the two lines reflects the strong interactive effect shown in Table 4. PRONASOL spending had more than three times as much of an effect in competitive towns as in PRI towns, suggesting that the benefits of PRONASOL electricity projects hinged directly on the nature of the local political context. This competitive advantage helped municipalities with multiparty political environments overcome the initial disadvantage they faced in obtaining development project funding from the PRI-controlled state and federal governments.
The water and sewer models reveal a decidedly darker picture of the development impact of PRONASOL. Focusing first on the direct effects of PRONASOL funds, the results for both states suggest that program funding had little, if any, positive effect on the provision of these basic services. Only for Jalisco water projects and Michoacán sewer projects do the PRONASOL spending coefficients even approach statistical significance, while for Michoacán water projects the sign of the spending coefficient is negative, although insignificant.

These results suggest that the political manipulation of funding in these areas may have been so overt as to completely corrupt PRONASOL’s development objectives. Previous research shows that sewer project spending in the state of Jalisco was strongly correlated with political support for the PRI, and negatively associated with a municipality’s level of need for sewer services (Hiskey 1999). It may be no coincidence, then, that the weakest spending coefficient among the six models appears in the sewer service provision model for the state of Jalisco.\(^{18}\)

Of course, myriad other explanations can also account for the minimal effects of PRONASOL spending on water and sewer service provision. First, both areas may require a substantially greater level of funding than PRONASOL was designed to provide. One of the more common critiques of PRONASOL, and other demand-based programs, is the purposefully small scale of the individual projects (e.g., Dresser 1994). The results displayed in Tables 5 and 6 may be an indication that the program’s project funding ceiling was incompatible with developmentally meaningful projects in areas like water and sewer systems.
### Table 5. 1995 Sewer Service Provision in Jalisco and Michoacán

<table>
<thead>
<tr>
<th>Variables</th>
<th>Jalisco</th>
<th>Michoacán</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.30 (8.22)</td>
<td>.21 (5.14)</td>
</tr>
<tr>
<td>Population with sewer service (%)</td>
<td>.77** (12.41)</td>
<td>1.04** (17.42)</td>
</tr>
<tr>
<td>Population &gt; 15 with post-primary education, 1990</td>
<td>.0006 (.44)</td>
<td>-.002 (-1.47)</td>
</tr>
<tr>
<td>Number of localities w/ pop. &lt; 1000</td>
<td>-.0005** (-3.81)</td>
<td>-.0003** (-2.50)</td>
</tr>
<tr>
<td>Municipal budget per capita</td>
<td>.0001 (.64)</td>
<td>.00009 (.63)</td>
</tr>
<tr>
<td>Percent change in population, 1990-95</td>
<td>.02 (.31)</td>
<td>.002 (.02)</td>
</tr>
<tr>
<td>Electoral environment</td>
<td>.001 (.05)</td>
<td>-.02 (-.82)</td>
</tr>
<tr>
<td>PRONASOL sewer project spending per capita, 1989-94</td>
<td>.00003 (.10)</td>
<td>.0008 (1.49)</td>
</tr>
<tr>
<td>Electoral environment X PRONASOL spending</td>
<td>-.00004 (-.01)</td>
<td>-.0007 (-1.04)</td>
</tr>
<tr>
<td>Adjusted $R^2$ (F-stat.)</td>
<td>.81** (64.69)</td>
<td>.81** (62.66)</td>
</tr>
</tbody>
</table>


It may also be the case that PRONASOL spending in these two basic service areas was focused more on improving the quality of the services already available in municipalities rather than on expanding service coverage. If this were the case, then the change in service provision models would not capture the effects of these PRONASOL projects. Evidence indirectly supporting this explanation emerges in the significant negative coefficients for the number of localities with populations less than 1000 in the sewer service provision models of both states.

The coefficients for this variable in the water service models also are negative and also approach statistical significance. What this pattern suggests is that the more isolated communities a municipality had, the less able it was to expand water and sewer services between 1990 and 1995. One possible consequence of this structural obstacle to service provision, combined with the funding ceilings for individual PRONASOL projects, is a tendency for municipal officials and community groups to focus their efforts on service improvements within the municipal center. Such a tendency would in turn produce PRONASOL projects with no discernible effect on the percentage of citizens with a particular service.

However valid these alternative explanations may be, the findings of Ward concerning the varying level of politics involved in water, sewer, and electricity service provision are worth recalling. When compared with electricity service, Ward concluded that the “domestic supply of
water and drainage is more likely to be affected by political criteria because decisions about which settlements are to receive a service, and in what order, are made primarily by officials whose concern is not simply one of technical efficiency” (Ward 1986, 106). Ward’s findings, along with research that shows PRONASOL spending on water and sewer projects was considerably more tainted by politics than was electricity project spending, suggest that the insignificant effects of PRONASOL spending on water and sewer service provision were at least in part due to the multiple political distortions involved in the planning and implementation of these development projects.

<table>
<thead>
<tr>
<th>Table 6. Water Service Provision in Jalisco and Michoacán</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jalisco</strong></td>
</tr>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>Population with access to running water, 1990 (%)</td>
</tr>
<tr>
<td>Population &gt; 15 with post-primary education, 1990 (%)</td>
</tr>
<tr>
<td>Number of localities w/ pop. &lt; 1000</td>
</tr>
<tr>
<td>Municipal budget per capita</td>
</tr>
<tr>
<td>Percent change in population, 1990-95</td>
</tr>
<tr>
<td>Electoral environment</td>
</tr>
<tr>
<td>PRONASOL water project spending per capita, 1989-94</td>
</tr>
<tr>
<td>Electoral environment X PRONASOL spending</td>
</tr>
<tr>
<td>Adjusted R² (F-stat.)</td>
</tr>
</tbody>
</table>

Sources: INEGI 1991; 1994; 1996; CEDE; SEDESOL 1995. * p < .05; ** p < .01. Jalisco N = 124; Michoacán N=113

Conversely, in the area of electricity, PRONASOL spending had a significant, positive impact on service provision across all municipalities in Jalisco and Michoacán, and three times that impact in electorally competitive municipalities. That this is the same area of basic services Ward found least affected by politics suggests that for a demand-based program to succeed, and reap the benefits of local-level electoral competition, not only should the program’s spending criteria be relatively free of political considerations, but the federal and state agencies under whose jurisdiction the project happens to fall need also be sheltered somewhat from the ubiquitous “politicrats” of the world.
Democracy and Demand-Based Development

Carol Graham concludes a review of several countries’ “safety net” programs with an account of the potential benefits of demand-based programs, “Demand-based programs that require community contributions or participation are best suited to creating the self-sustaining projects that are key to lasting poverty alleviation as well as to the enhancement of democratic government at the local level” (1995, 155). While mentioning the potential problems demand-based programs may face in the implementation stage, Graham’s positive assessment of these programs mirrors those of many international development agencies and developing country governments who continue to feed the “demand-based craze” in social policy. The World Bank, for example, contributed $350 million to Mexico’s “Municipal Solidarity Funds” program that funded demand-based development projects in the states of Oaxaca, Hidalgo, Chiapas, and Guerrero (Fox and Aranda, 1996). Among the Bank’s recent recommendations for developing country “infrastructure management reform” are the following:

1. Involve the participation of users in area-based infrastructure development;
2. Establish programs of collaboration with user communities for infrastructure provision, operation and maintenance;
3. Decentralize government-based processes of infrastructure management and open management functions to people’s participation (Schubeler 1996, 91).

At the core of this worldwide enthusiasm for demand-based antipoverty programs is the fiscally appealing promise of “helping the poor help themselves” (Graham 1995, 145), a promise that, if fulfilled, would relieve the state of at least some of its welfare burden. Missing from the discourse on such programs, however, is attention to the almost inevitable problems that emerge from the very features of the demand-based approach that make it so appealing to its advocates.

This municipal-level study of PRONASOL basic service projects in Jalisco and Michoacán has focused on one critical element in the demand-based approach that has yet to receive the full attention of the strategy’s proponents—the local political environment. The findings of this study provide quantitative support to numerous qualitative observations of the demand-based approach made by scholars working in a variety of settings (Dresser 1991, Fox and Aranda 1996; Echeverri-Gent 1992). The results in Table 4 show a PRONASOL electricity project impact three times greater in politically competitive municipalities than in non-competitive towns.

These findings are strikingly similar to what Fox and Aranda uncovered in Oaxaca where “[t]he key political factor correlated with positive project impact was whether municipalities had competitive political party systems, regardless of which party was in power” (Fox and Aranda 1995, 8). Due to the unique form of local governance in Oaxaca, where many municipalities are run by non-partisan community councils, the authors tentatively attributed this finding to intergovernmental relations, “One possible explanation is that municipalities governed by political parties, whether official or opposition, are more likely to have clout with state authorities. They would therefore have more access to both technical assistance and supplemental state government funds” (Fox and Aranda 1995, 9). This explanation, however, does not fully account for the findings from the states of Jalisco and Michoacán that are void of municipalities run by non-partisan community councils.

If municipal-state government relations did influence project outcomes, then competitive municipalities faced even greater obstacles in implementing PRONASOL projects, given that they were working in a PRI-controlled state in a PRI-controlled country. These towns apparently overcame these obstacles, times three. In a political system defined, for 65 years, by one-party rule,
the fact that a competitive political environment had even a marginal positive impact on project outcome is impressive. Even when faced with a stacked deck, the virtues of competitive politics emerged with a winning hand.

Perhaps a more relevant comparison for the findings in this paper comes from Isham, Kaufmann, and Pritchett’s cross-national analysis of World Bank financed development projects (1997). These authors find the most significant factor in successful development projects are the “extent of a country’s civil liberties” (237). The connection for these authors between development success and civil liberties is similar to that being explored in this study, where “increasing citizen voice and public accountability—through both participation and better governance—can lead to greater efficacy in government action” (237). It is my contention that this type of linkage is even stronger for a development program that is founded on the pillars of citizen empowerment and a strengthened role for municipal government.

The question remains, however, what exactly were the mechanisms that allowed competitive towns to extract so much more development bang out of their PRONASOL pesos than their non-competitive counterparts? Several alternative, not necessarily exclusive, explanations exist. First, the lack of accountability that comes with meaningless elections may affect the quality of projects funded through demand-based programs. Graham’s description of Senegal’s demand-based program, AGETIP, provides anecdotal evidence for this proposition:

In addition, as the opposition boycotted the 1990 municipal elections, the only proposals that AGETIP is funding are those from the mayors of the governing party. While some such proposals do aim at poverty reduction . . . others are pet projects of local notables, such as renovations to the town hotel . . . [that] has led to a widespread perception that it is a tool of the governing party (1995, 146).

With no fear of electoral reprisal, local politicians may monopolize the “demands” made on program planners, resulting in projects with limited antipoverty impact.

To compound this potential problem, PRONASOL planners were intentionally favoring funding requests from “PRI towns.” It is possible that the one-party municipalities had it too easy in obtaining PRONASOL funds, resulting in less qualified projects being funded. Conversely, the additional funding hurdles faced by groups in competitive towns may have served to weed out the weaker projects, thereby enhancing the aggregate impact of funded projects.

Meaningful elections may also affect how citizens and non-governmental organizations (NGOs) respond to a program that requires active participation and interaction with representatives of the political system. If such a program is the first step into a political system controlled by one party with no chance of change, citizen response may be either to “take the money and run” or outright rejection, both of which would produce inferior projects. When a demand-based program exists in an openly competitive electoral environment, citizens may fulfill all the expectations held by advocates of the demand-based approach. That is, if the program represents an invitation from political elites for previously excluded sectors of society to participate in the political system, and the system is one where citizen participation matters, then the quality of citizen involvement, and the impact of demand-based antipoverty projects, is likely to be higher.

This reasoning applies equally as well to NGOs working in PRONASOL municipalities. A comment by one NGO leader in Jalisco was typical of many I talked to in that state’s NGO community, “We never work in PRI municipalities. We tried it once but the mayor would just not listen to us.”

Do NGOs avoid working in PRI towns? If a selection bias does exist among NGOs working at the municipal level, and NGOs helped community groups design and implement
PRONASOL projects, this may be another factor contributing to the superior performance of PRONASOL projects in competitive municipalities.

The current widespread movement among developing (and developed) countries toward the decentralization of many state activities, in the context of distinct local political environments, suggests that considerably more attention be given to the role of the local political context in the development process. Most scholars of both democratization and development processes remain focused on the national level. What the story of PRONASOL projects in Jalisco and Michoacán indicates is that much of the impact of these processes must pass through the dense filter of the local political environment before it reaches the majority of a country’s citizens. This local political filter appears to play a critical role in determining the final shape and impact of these national level processes.
References Cited


Electoral Data for Michoacan and Jalisco municipal elections were gathered by the Centro de Estadística y Documentación Electoral de la Universidad Autonoma Metropolitana, Iztapalapa and supplemented with data provided to the author by the state election boards.

Geographic data were provided by the Center for International Earth Science Information Network at Columbia University (www.ciesin.org).
Endnotes

1. Jonathan Fox is a notable exception. In fact, much of the inspiration for this research came from Fox’s work on local politics in Latin America (1994b).

2. For the most comprehensive treatment of PRONASOL, see Cornelius, Craig, and Fox (1994).

3. The PRONASOL evaluative data are based on the questionable assumptions that the sole criterion for a “successful” project was if all funds were spent at the end of the fiscal year, and that the number of beneficiaries of a particular project corresponded with the total population of the recipient community.


5. As with the democracy-development question, the literature on defining and measuring democracy is enormous. Any effort to list all of the major works in this area would surely fall short. For this study I have relied most on the conceptualizations of democracy put forth in the works of Dahl (1956; 1971), and Przeworski (1991). On measuring democracy, the contributions to and reviews of the literature by Bollen (e.g., 1993) provided my point of entry into this literature.

6. Note here that when I use terms such as “permitted to campaign” and “relatively free to vote their conscience” I am well aware of the countless irregularities in Mexican elections and the assortment of pressures placed on voters to vote for a particular party. My point here is that on the surface, the Mexican political system appears to meet many of the criteria used in classifying regimes as democratic.

7. My use of the term “meaningless” to describe Mexican elections throughout much of the 20th century refers to their utility for citizens as a mechanism of political voice. I argue that in this sense elections have been essentially meaningless, particularly at the local and state level where the candidates selected by the PRI often had little grass-roots support within the communities. That said, I recognize the very meaningful role of elections in the maintenance of Mexico’s post-revolutionary political system. I concur with most observers that elections were a critical element in what Vargas Llosa described as the “perfect dictatorship.”


9. For an extensive critique of this literature see Stonecash (1987).

10. See Alonso (1993) for a review of local elections in Jalisco over the past fifty years. The work provides a superb account of the numerous techniques employed by the PRI to ensure that its candidate ended up in the mayor's office, regardless of the outcome of the election.

11. Given the pronounced trend of urban migration taking place in Jalisco and Michoacán, one effect of population change may have been to decrease the percentage of people without services. If the
population change consists of intrastate migration from rural municipalities with limited provision of basic services to urban municipalities with an established network of service provision, the impact would be bi-directional. The percent of the population with no services in the rural municipality would decrease with a decrease in its population, assuming an emigration of inhabitants who did not have access to those services in 1990. Conversely, the percent of the population with no services in an urban municipality would decrease with an increase in population if those entering the population base established themselves in areas with access to at least one of the three services in question. On the other hand, if those leaving a rural municipality in search of greater opportunity in an urban one were citizens with access to either water, electricity, or sewer, leaving behind those with no services, the decrease in population would result in an increase in the percent of the municipality’s population with no services.

12. Granted, the dangers of the ecological fallacy lurk behind the logic of such a measure. Education levels of a municipality’s population may or may not correspond with the education levels of members of community groups that received PRONASOL funds. A municipality where 80 percent of the population has a post-primary education does not ensure that members of PRONASOL groups will have post-primary education. It does, however, ensure that the chances of having at least some group members with post-primary education are greater.

13. I use the absolute number of localities with a population of 1000 or less, rather than their percentage of all localities, to more directly capture this proposed relationship. The proposition is founded on the logistical obstacle to service provision posed by communities separated from the municipal center—communities that are often only connected to these centers by dirt paths. Thus, it is the absolute number of these communities that defines the relationship, not the percentage of these communities with respect to the total number of officially designated communities.


16. That PRONASOL spending had a positive impact on basic service provision, regardless of the municipal political environment, is itself an important finding, given the numerous critiques of the program and the often times overt political use of program funds. I discuss the implications of this finding in the concluding section of this paper.

17. The interaction effect is determined by adding the spending per capita coefficient with the interaction coefficient to produce the effect of PRONASOL money in competitive towns. In Figure 8, the values for all other variables in the model are held constant at their means.

18. To further explore whether PRONASOL sewer and water spending had an independent effect on service provision, I ran separate models excluding the interaction term to determine whether any direct effects of the spending variables had perhaps been lost in the models discussed above due to collinearity with the interaction terms. The coefficients for the spending variables were again insignificant, at approximately the same level as in the previous models.

19. Author interview, March 1998