The Political Economy of Collective Remittances: The Mexican 3x1 Program for Migrants

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Abstract

The 3x1 Program for Migrants is a matching grant scheme that seeks to direct the money sent by migrant organizations abroad to the provision of public and social infrastructure, and to productive projects in migrants' communities of origin. To this end, the municipal, state, and federal administrations match the amount sent by hometown associations by 3 to 1. This opens the door to the political manipulation of the program. We explore the impact of a particular facet of Mexican political life on the operation of the 3x1: its recent democratization and the increasing political competition at the municipal level. Relying on the literature on redistributive politics, we argue that an increase in the number of effective parties in elections may have two different effects. On the one hand, the need to cater to more heterogeneous constituencies may increase the provision of public projects. On the other hand, since under tighter competition smaller coalitions are needed to win elections, fewer public and more private (clientelistic) projects can be supplied. Using a unique data set on the 3x1 Program for Migrants for over 2,400 municipalities in the period 2002 through 2007, we find a *lower* provision of public projects in jurisdictions where a high number of political parties compete. This finding thus casts doubt on the claim that policy interventions such as the 3x1 Program actually improve public good provision at the local level.

Introduction[1]

Remittances in general and collective remittances in particular have recently attracted the attention of policy makers in developing countries. Given the absolute and relative weight of remittances in many such countries (World Bank 2006; OECD 2007), these flows are believed to have a great potential to promote local development. Parallel to the spread of this belief, policy makers have designed specific policies to secure the flows of remittances, and to influence the way in which they are used (Spector and de Graauw 2006).

In this paper, we explore the political economy of a particular policy intervention: the Mexican 3x1 Program for Migrants. Under this scheme, municipal, state and federal administrations multiply by three the amount of money sent by hometown associations (HTAs) abroad to their communities of origin. One of the stated objectives of the program is to target poor communities of high migration in need of public or social infrastructure. The program also tries to promote "productive projects", that is, projects that aim to create employment and to spur community development via improvements in productivity (de Graauw 2005). Productive projects provide private or club goods, which can be easily targeted to specific constituencies, whereas public and social infrastructure projects, to the extent that they constitute genuine public goods, benefit more dispersed or heterogeneous constituencies. Therefore, we argue that the different types of project sponsored by the 3x1 program are relevant to exploring the possibility of political biases in the allocation of the program resources.

To hypothesize about the patterns of project allocation under the 3x1 Program for Migrants, we rely on the literature on redistributive politics and clientelism (Cox and McCubbins 1986; Dixit and Londregan 1996; Calvo and Murillo 2004; Stokes 2005; Kitschelt and Wilkinson 2007). We follow the strand of the literature that posits a

distinctive use of both public and private projects to target either swing voters or core supporters. On the one hand, it could be the case that politicians use productive projects (i.e., projects that are excludable by nature) to target their core constituencies, while using public and social infrastructure projects to target more heterogeneous constituencies (Díaz Cayeros et al. 2007). To the extent that the allocation of funds is politically motivated, this would imply that localities where elections are more competitive should receive *more* public or social projects that provide public goods.

A second strand of the literature (Bueno de Mesquita et al. 2003; Chhibber and Nooroddin 2004) contends that in competitive multiparty political systems the size of the coalition of voters required to win elections is relatively small. Thus, election returns can be influenced by targeting private goods to the small constituencies required to secure a victory. Conversely, in less competitive venues relatively large winning coalitions are better secured through spending on public goods. The implication of these models is the opposite to that in the former strand of the literature: we should observe more spending on private projects in localities with highly contested races, and more public projects in localities with less competitive races. In other words, we should observe that increasing political fragmentation results in *lower* public good provision.

Using a unique data set on the 3x1 Program for Migrants that comprises over 2,400 Mexican municipalities and six years of operation (2002 to 2007), we put these contending predictions to the test. In line with the "size of the winning coalition" mechanism, we find that municipalities where political competition (proxied by the effective number of parties in local races) is more intense receive *less* public and social infrastructure finance per capita under the 3x1 Program for Migrants than municipalities with less competitive elections. The effect is particularly robust and sizeable when it comes to explaining the provision of public infrastructure projects.

This finding has important theoretical and public policy implications. From a theoretical point of view, the study has relevance for at least two important literatures. On the one hand, in democratic theory, increasing political competition in authoritarian settings, and the process of democratization that may ultimately result from it, are expected to translate into more accountability and less patronage in public spending. Yet, as mentioned above, this may not be the case. Indeed, increasing electoral competition may give politicians an incentive to cater to pivotal groups of voters by using private transfers (Stokes 2005). In Mexico, which underwent a process of democratization that culminated in the election of an opposition presidential candidate in 2000, there are few signs of improvement in public good provision at the municipal level (Cleary 2007; Moreno-Jaimes 2007).

This paper also contributes to the recent and growing literature that studies the political economy of migration in sending countries. Scholars report decreasing levels of political engagement among those left behind having connections with migrants, remittances being one of those connections (Bravo 2007; Goodman and Hiskey 2008). This finding questions the virtuous influence that the migrants' experience in their democratic host countries may exert upon returning home (Levitt 1998). Indeed, those with migrant connections seem to opt for non-electoral political participation (Córdova and Hiskey 2008; Pérez-Armendáriz and Crow 2010). Yet another study reports the optimistic outcome that clientelistic practices are less effective when households receive increasing remittances, as this extra source of income for households facilitates political change at the local level (Pfutze 2007).

Our research aligns with the "not too optimistic" literature: we find that policy interventions supposedly designed to target collective remittances toward developmental purposes are politically biased. Indeed, the evidence from the 3x1

Program for Migrants in Mexico points to *less*, not more, public good provision in high migration municipalities despite increasing political competition at the local level. In other words, we find strong evidence that the provision of public goods under the 3x1 Program serves to reward political strongholds.

The paper proceeds as follows. In the first section, we spell out the competing theories regarding redistributive spending and political strategies; and, based on this literature, we propose two competing hypotheses. In the second section, we provide an overview of the history of the 3x1 Program for Migrants in Mexico, and describe its main features and rules of operation. In the third section, we present our data and our empirical strategy. In section four, we discuss our results and their theoretical and policy implications. Finally, we provide concluding remarks in section five.

1. Redistributive Politics and Electoral Investment

There is a large extant literature on the politics of redistributive spending. How do politicians use redistributive spending and other public programs to affect electoral outcomes? Provided they can do so, what is the best way of swaying voters? Do broad-based transfers work as well as providing public or private goods? Should public spending target swing voters rather than core supporters?

On this key issue we have at least two competing responses. First, according to Cox and McCubbins (1986), if politicians are risk averse, discretionary transfers should be allocated to core voters. This is because politicians have an informational advantage in identifying, mobilizing, and monitoring their core voters. Therefore, the transaction costs they incur in effectively targeting transfers and in monitoring the expected return of those transfers in terms of votes are relatively lower for die-hard voters than for swing voters.

On the other side, Dixit and Londregan (1996) argue that core voters would vote for their preferred party anyway – they cannot credibly threaten the machine with not supporting it if they do not receive the transfers. Thus, politicians should target so-called swing or undecided voters, that is, those voters who are ideologically indifferent between political alternatives and for whom receiving the transfer can make the difference between supporting and opposing the incumbent. As Stokes (2005) suggests, only voters who are indifferent, undecided or weakly opposed to a party can credibly threaten to vote with their conscience if they do not receive a transfer. In empirical research, swing voters become pivotal in majoritarian electoral systems with close margins as well as in multiparty systems where the number of effective political parties is relatively larger.

These approaches portray politicians as confronting a clear-cut dilemma: either targeting spending to relatively low-risk core voters, or targeting swing voters and incurring a higher risk. However, other authors propose that politicians running for office will be better off if they diversify electoral risks by targeting different types of voters (core vs. swing) with different types of goods, namely, public vs. private goods (Bueno de Mesquita et al. 2003; Chhibber and Nooruddin 2004; Person and Tabellini 2003; Díaz Cayeros et al. 2007). Public goods can be as discretionary as transfers of private goods; but the latter are by definition excludable (that is, they can be targeted at the level of the individual) and reversible (they can be removed if the expected behavior in exchange for the transfer, that is, voter support, does not take place). This can hardly be done with public or locally public goods such as roads or health clinics.

Although the two lines of research agree that politicians will be better off diversifying their basket of political investments into public and private spending, there still may be different mechanisms at work that, ultimately, will lead to different

predictions and observable implications. To see why this is the case, consider first the approach of Díaz Cayeros et al. (2007). Here, the concern is about how a hegemonic party whose support declined over time (the Mexican Partido Revolucionario Institucional, PRI) used social policies to stay in power. According to the authors, politicians are better off diversifying their basket of investments in line with a simple premise: politicians cannot alienate their core voters by providing private transfers only to swing voters; yet, in their search to expand their support coalition, particularly in contested jurisdictions, politicians will provide public goods. In this framework, politicians' risk aversion is crucial to determining which type of project will be used to address different voters. Targeting private transfers to core voters is a very conservative strategy with low transaction costs: the machine knows loyal voters well and can monitor their behavior. However, the electoral returns of public good investment are more uncertain, the beneficiaries more diffuse, and the response to this type of transfer more difficult to observe. Still, public goods can serve the purpose of winning highly contested jurisdictions in which constituencies are more heterogeneous. In this theoretical framework, the empirical expectation is that

> H_1: spending on public goods will be targeted toward highly competitive municipalities, whereas partisan strongholds will receive relatively more private or clientelistic spending. Thus, jurisdictions with a larger effective number of political parties (i.e., no dominant political force) should receive *more public good* projects.

In their study of private vs. collective spending under the Mexican *Programa Nacional de Solidaridad* (PRONASOL), Díaz Cayeros et al. (2007) found that the bulk of clientelistic spending under this program went to municipalities that had been PRI

strongholds and where the PRI had been losing support at the fastest pace.[2] Thus, their finding gives strong support to the core supporter model. When the risk of losing elections increases, politicians appear to direct transfers to the voters who have consistently supported them and who present less uncertainty about the expected return in votes.

An alternative theory of redistributive transfers arrives at a different prediction as to how increasing political competition will affect the allocation of public spending. In their study on public vs. particularistic (pork barrel) spending in Indian states, Chhibber and Nooruddin (2004) rely on the concept of the "winning coalition" (Bueno de Mesquita et al. 2003) to demonstrate that in two-party systems political parties need the support of heterogeneous constituencies and thus provide public goods to win elections. Yet, in multiparty settings, candidates need only a plurality of votes to win. That plurality can be better secured with club or private goods used to mobilize and persuade the voters needed to secure an electoral victory. As the authors put it (p. 163), "[political] parties in a multiparty system, therefore need to make appeals to 'vote banks' and particular support groups. In other words, parties operating in a two-party system are more likely to provide public goods than those facing multiparty competition, which focus greater attention on distributing club goods." Using aggregate and individual data, the authors find that the provision of public goods is lower, and the individual perception of public good provision is weaker, in jurisdictions with several political parties competing in electoral races.

Note that according to this mechanism the expected impact of increasing political fragmentation on redistributive spending is the exact opposite of the one suggested in Díaz Cayeros et al. (2007). In the winning coalition framework, we should expect that

H_2: spending on private or clientelistic goods will be targeted toward highly competitive municipalities, whereas partisan strongholds will receive relatively more public goods. Thus, jurisdictions with a larger effective number of political parties (i.e., no dominant political force) should receive *fewer public good* projects.

As we explain below, the 3x1 Program for Migrants has some similarities with the PRONASOL program but also some important differences. As with PRONASOL, the 3x1 Program is demand driven: migrants' hometown associations have to approach SEDESOL with a proposal in the first place. As with PRONASOL, there are no objective criteria or formulae for approving or rejecting projects, which opens the door to the political manipulation of program selection or the types of project funded. Finally, the 3x1 Program for Migrants can finance either public good projects or private projects. Public good provision comes under "public or social infrastructure" projects, whereas the provision of private transfers occurs under "productive projects." As we discuss below, the nature and social impact of some of these projects are controversial, to say the least.

The main differences with PRONASOL have to do with the political context in which the 3x1 Program is operating. Whereas in Díaz Cayeros et al. (2007) the interest was in exploring how a hegemonic party used social policy to slow down electoral decline, we are more interested in determining whether a non-hegemonic party (the Partido Acción Nacional, PAN) may be using the 3x1 program to reward particular constituencies in high migration localities as a means to maintain or expand its electoral support.[3]

Our prior assumption about the Program is rather agnostic: it may be the case that, all else being equal, political competition or partisan differences do not affect program

allocation. But if we cannot rule out political biases in the program operation, then we would like to know which of the two mechanisms spelled out above – targeting public good projects either to competitive or to partisan strongholds – better explains the actual pattern of project allocation under the 3x1 Program for Migrants in the period 2002 to 2007.

2. The Mexican context and the 3x1 Program for Migrants

The international migration of Mexicans to the US at the start of the 21st century can be summarized in terms of three features: a common border more than 3,000 km long, a long-standing tradition of more than 100 years, and diversity of origins in Mexico and of destinations in the US (Durand et al. 1996). State relations with the Mexican diaspora also have a long history, albeit these relations intensified dramatically from the 1990s on (Cano and Délano 2007). In recent years migration has increased, its destinations have become more permanent, and its origins have become more urban and diversified (Leite and Acevedo 2006). Today, 96.2 percent of Mexican municipalities register international migration. Approximately 450,000 mostly young and male Mexicans migrate each year.[4] More than one million Mexican households benefit from remittance flows. For 40 percent of them, remittances represent their sole income (García Zamora 2005; Soto and Velázquez 2006).

The precedents of the current 3x1 Program for Migrants are found in the state of Zacatecas, which is the state with the strongest and oldest migratory tradition in Mexico. The Federation of Zacatecan Clubs started in the early 1960s to raise funds to help expatriates abroad (mostly in the event of illness or death) and to fund social and recreational projects back home.

Building on these spontaneous initiatives, in 1986 the 1x1 Program was born under the auspices of PRI state governor Genaro Borrego. In its initial design, the program envisaged support from the state alone to double the amount of money sent by migrant associations. Although just 28 projects were implemented under the program between 1986 and 1992, the initiative encouraged the Federation of Zacatecan Clubs to undertake more and more philanthropic activities. Parallel to President Carlos Salinas's (1988–94) interest in courting migrants, the Zacatecan initiative received further support under Borrego's successor, Arturo Romo, resulting in the program of International Solidarity among Mexicans, also known as the 2x1 Program. Under this scheme not only the state but also the federation matched the contributions of HTAs. Under Governor Ricardo Monreal, a member of the Partido de la Revolución Democrática (PRD), the program gathered momentum, in part in recognition of the crucial support of migrants for Monreal's platform. By 2002, in the state of Zacatecas a total of 868 projects had been funded with an aggregate investment of 464 million pesos (Burguess 2005). In the meantime, the initiative had been replicated by the state governments of Jalisco, Durango, and Guanajuato.

Initiatives to encourage the formation of HTAs multiplied under Carlos Salinas. In 1989 Salinas launched the Paisano Program and in 1990 the Program for Mexican Communities Abroad, which was based in the Foreign Ministry and operated through a network of Mexican consulates, institutes and cultural centers. In turn, the Program for Mexican Communities Abroad promoted the formation of State Offices for Mexicans Abroad. Among other things, these offices promoted the formation of HTAs and publicized schemes of collaborative partnership among HTAs and their communities of origin. It is no coincidence that during this period the number of migrant clubs abroad surged (Orozco 2003; Orozco and Welle 2005).

When Vicente Fox came to power in 2000, he restored federal support for the collaborative programs that Ernesto Zedillo had suppressed. Fox set up the Institute for Mexicans Abroad, and resurrected the matching-grant program with federal support. The 3x1 Program–Citizen Initiative was started in 2002, and later became the 3x1 Program for Migrants.

The purpose of the program is to increase the coverage and the quality of basic social infrastructure in localities a high proportion of whose populations suffer from poverty or social backwardness or experience high levels of emigration. It follows the investment initiatives of migrants living abroad (Soto and Velázquez 2006). This is not the only objective of the program, which also aims to strengthen the links between migrants and their communities through collaborative development projects and the organization of migrants abroad.

In its current design, the 3x1 Program for Migrants is administered by the Mexican Ministry of Social Development (SEDESOL) following the initiatives of hometown associations. A Committee of Validation and Attention to Migrants (COVAM), which includes representatives of the four parties involved (migrants and municipal, state, and federal governments via SEDESOL), prioritizes and decides on the technical viability of the projects. Each of these parties contributes 25 percent of the total cost of the approved project. The degree of participation of different government levels can vary: for instance, the federation can cover up to 50 percent of the project if its social impact justifies it.[5] However, this is rarely observed in practice. The formal requirements for participation are minimal, provided that the COVAM approves the project proposed by a migrant hometown association. Funding for projects is not granted according to any pre-established or objective formula or in light of any observable criterion. In our view, the

program design allows discretionary or political factors to influence program participation as well as the types of project being funded.

In a previous paper (author 2008), we studied the program from the perspective of its ability to target communities living in poverty and suffering from social backwardness as opposed to reaching only communities of high migration. Given that the program design gives the initiative to HTAs, it certainly prioritizes the areas with the highest migration traditions. However, the program objective of targeting the poorest communities cannot be achieved because the areas of highest migration are not necessarily among the poorest ones. To the extent that matching grant programs respond to the income distribution of the actors involved, it is expected that wealthier communities will be more likely to participate than poorer ones. Therefore, a program that *unconditionally* supports migrant and hometown associations' initiatives will not be progressive if poverty and migration are not directly correlated. Indeed, our evidence indicates that the self-selection bias of the program impedes the progressivity of the program.[6]

We also found a clear partisan bias in resource allocation: PAN strongholds are systematically more likely to participate in the program and to receive more projects than their PRI and PRD counterparts, although they did not receive more funds. Indeed, anecdotal and case study evidence suggests that the use of the Program as a rewarding tool in exchange for migrants' political and economic support has not been uncommon. This seems to be especially true in municipal politics, where HTAs' money can supplement the meager finances of local governments (Valenzuela 2006). Thus, migrants have been actively courted by municipal and state politicians, and migrants have been granted representation in local politics in return (Jiménez 2008). In her study of the municipality of Jala, in the state of Nayarit, Imaz (2003: 396) asserts that

"migrants always took positions and in each election they were requested to give their monetary support and exert their influence in favor of a particular candidate…They [migrants] were actively sought because they could mobilize people." In her account of the evolution of the 3x1 Program, Iskander (2005) explains that the momentum given to the program in Zacatecas after Governor Ricardo Monreal's election – which included cabinet-level positions for migrants – was, as mentioned above, part of the governor's reward to the HTAs for supporting his candidacy. All this suggests that remittances have empowered migrants and migrant organizations as strategic municipal political allies, both because of the resources they can bring to their communities and because they can mobilize the vote.[7] We contend that participation in the 3x1 Program is partly a reward for those activities.

Since we explored in our previous study the determinants of program participation, the total funds received and the number of projects funded, here we switch the focus to the *types of projects* financed by the Program. Therefore, in this paper we examine whether political factors influence the type of project funded (public vs. private), and the extent to which political competition affects public good provision under the program.

Following the theoretical revision above and Díaz Cayeros et al. (2007), we classified the expenditures funded under the 3x1 Program for Migrants into those providing "public goods" (i.e., non-excludable goods) and those rendering "private or club goods" (i.e., excludable goods). Within the public good category we distinguish between public infrastructure projects (ecological preservation, electrification, paving, urbanization, drinking water and sanitation, highways and roads, health and educational infrastructure) and social projects (community services, historical and cultural sites, sports infrastructure). We do so because social projects constitute a sizeable part of the

program, and yet the social or developmental impact of projects such as church restorations, town beautification, and sport centers is negligible. However, since their political impact may not be negligible, we are interested in establishing whether investments in social projects reflect a different political logic than investments in public infrastructure.

Within the private or club good category, we include projects that can be considered as private and excludable. Under the 3x1 Program, these are mostly "productive projects", that is, projects whose purpose is the "capitalization of a business or the purchase of tools, equipment, or machines that might enable or increase production" (de Graauw 2005: 21). Examples include funding to set up businesses (from boutiques to bakeries and craft shops), greenhouses, farms, and family mills. In line with the literature, we argue that this type of expenditure can be easily used for vote buying. Indeed, several analysts have shown concerns about transforming "a community program [the 3x1 Program] into an entrepreneurial one" (Moctezuma and Pérez 2006: 135) whose benefits are individually owned.[8]

Unfortunately, private projects funded under this program are too few to provide reliable estimations. Whereas under PRONASOL this type of spending amounted to 28 percent of total program spending, it amounts to a low five percent under the 3x1 program. Thus, although we report the results of our statistical models in the presentation of our findings, we focus on the effect of political fragmentation on the provision of public and social infrastructure in the discussion that follows.

3. Data and Empirical Methods

To test our hypotheses, we collected data from the 3x1 Program for Migrants for all Mexican municipalities that participated during the period 2002 to 2007 (SEDESOL).

The data set includes yearly information on whether a given municipality participated in the program, the total amount invested, and the number of projects awarded in any given year. Since we also have information on the number and types of projects awarded to each municipality, we constructed variables with the amounts per capita allocated for three different types of project (public, social or private). On average, we have data for more than 2,400 municipalities during six years of program operation, which amounts to more than 14,000 municipality-year observations. The percentage of municipalities benefiting from the program has ranged from 10 percent in 2002 to 20 percent in 2007 (487 municipalities out of 2,439).

To measure the effect of political competition, controlling for migration, poverty and other political covariates of participation in the 3x1 Program in Mexican municipalities, we estimate a series of regression models of the following form:

$$Pr(\text{NUMPROJECTS}_{ijt} = k \,|\boldsymbol{X}) = F(\beta \text{MIGRA}_{ij} + \chi \text{POVERTY}_{\mathbf{ijt}} + \delta \text{ENP}_{\mathbf{ijt}} + \mathbf{X_{ijt}}\phi + \mu_j + \nu_t) \quad (1)$$

$$\text{AMOUNT}_{ijt} = \alpha + \beta \text{MIGRA}_{ij} + \chi \text{POVERTY}_{\mathbf{ijt}} + \delta \text{ENP}_{\mathbf{ijt}} + \mathbf{X_{ijt}}\phi + \mu_j + \nu_t + \varepsilon_{ijt} \quad (2)$$

where the subscripts refer to the *i*-th municipality in the *j*-th state, and *t* refers to a given year. The dependent variable is measured in two different ways. First, NUMPROJECTS measures the total number of projects that were awarded to a particular municipality in a given year. Second, the variable AMOUNT measures the sum of resources per capita devoted to each of our three categories of projects (in constant 2006 pesos per capita) in a particular municipality as a result of program participation.

Our independent variables of interest are measures of electoral competition, and we control for migration intensity, poverty and other political covariates.[9] Our measure of political competition is the Effective Number of Parties (ENP), which we calculated using the Laakso and Taagepara formula ($ENP = 1/ \Sigma v_i^2$), where v_i is the vote share received by each party in municipal elections (CIDAC).[10] An ENP index of 2, for instance, implies that two political parties split the vote 50/50, whereas an ENP of 1.6 implies that one party won by a lopsided margin of 75 per cent to 25 per cent. Clearly, the margin of victory is in theory closely related to the ENP: larger margins usually imply smaller ENP values. However, in multipartisan systems the negative relationship between margins and ENP is nonlinear and is not defined one to one because there are many different electoral outcomes that may lead to close margins.[11] Thus, in our analysis we rely on the ENP, which we consider a more informative measure of electoral fragmentation.[12]

Measures of migration and poverty were obtained from CONAPO and INEGI, respectively. The MIGRATION INDEX is a principal-component score based on census data on the number of family members who live abroad, circulatory migration, and return migration in the household. The measure of POVERTY is the continuous POVERTY INDEX, which summarizes information on literacy rates, income levels, and social infrastructure in each municipality. Since migration is costly, there is a nonlinear or concave relationship between migration and poverty (author 2008): very affluent and very poor municipalities have the lowest migration intensity and the lowest percentage of remittance-receiving households. Given this curvilinear relationship, and the fact that the program is demand driven, we include the POVERTY INDEX and its square term in our specifications for program participation.

We control for other political factors. The **X** vector includes indicator variables that capture the party label of municipal and state governments (CIDAC). These variables were set to control for governments led by the PAN, the PRI or the PRD – the three main political parties in Mexico. Since the 3x1 Program has been implemented only under a PAN federal administration, we focus on PAN municipalities, and use PRI and PRD municipalities as the comparison group. SHARED PARTISANSHIP is a dummy variable that equals 1 when the municipality and the state are governed by the same political party, and zero otherwise. Our prior is that when this circumstance holds, municipalities receive more projects and more funds per capita. LOCAL ELECTION is a dichotomous indicator that controls municipal elections being held in a given year. Finally, μ_j and ν_t represent state and year fixed effects, respectively, which we use in our models to capture the time-invariant heterogeneity of the Mexican states as well as any systematic year-by-year changes in the size of the program or its rules of operation.[13]

Our estimation techniques vary according to the nature of the dependent variables. Since the NUMPROJECTS dependent variable is a discrete count measure, we estimate a maximum likelihood model. Our over-dispersion tests suggested that a negative binomial is preferred to a Poisson distribution. Furthermore, since only a fraction of all municipalities participate in the program, we fit a zero-inflated negative binomial model (ZINB) to estimate the number of projects that a particular municipality was awarded in a given year.[14] In the inflation equation, we use the MIGRATION INDEX and the POVERTY INDEX with a quadratic term to predict the cases with no projects awarded at all.

For the AMOUNTS per capita variables, we estimate three different models, which should give us confidence in the robustness of our results: (1) a two-way fixed effects OLS model, (2) a pooled OLS with a lagged dependent variable and a linear time trend,

and (3) a Heckman sample selection model which takes into account the incidental truncation of the data. The first stage or selection equation of the Heckman model estimates the likelihood of program participation using a probit model, which is then used in a second stage to estimate the amount per capita awarded while controlling for the program selection process. As stressed above, program participation depends on migrants' initiatives, which may create a bias in favor of municipalities with a high and long-standing migration tradition. Thus, we use the MIGRATION INDEX to identify the selection equation in the Heckman model. In order to obtain a more precise estimate of the effect of political competition in high migration municipalities, we include an interaction term between ENP and the MIGRATION INDEX, which also makes sense given that migrant organizations have to take the initial steps to participate in the program.

4. Results and Discussion

TABLE 1 presents descriptive statistics of our dependent variables in all the municipalities that participated in the program in the sample period. About 13 percent of all Mexican municipalities have participated in the program, with an average investment of US$140,000 on 3.4 projects. Public infrastructure projects take the lion's share of the program, with 66 percent of the program resources devoted to them, on average. Private projects, on the other side, comprise about five percent of total program spending, albeit with considerable variation from one year to another.

*** TABLE 1 about here ***

As we show below, our main finding is that amounts per capita devoted to public goods (in particular, to public infrastructure) follow the pattern anticipated in Bueno de Mesquita et al. (2003) and Chhibber and Nooruddin (2004): in contexts where various parties effectively compete, where the size of the electoral winning coalition is comparatively smaller, governments devote *fewer* resources to the provision of public goods under this program than in less competitive jurisdictions. In other words, it is uncontested jurisdictions, or party strongholds of high migration, that benefit most from the program. This indicates that a rewarding rationale underlies program allocation decisions.

As a first step, we need to determine whether political competition has any systematic effect on the number of projects awarded. To this end, TABLE 2, models 1 and 2 present results from a zero inflated negative binomial regression (ZINB) to estimate the number of projects awarded by municipality (equation 1). We use migration intensity and a poverty index (with a quadratic term) to predict program *non*-participation before estimating the count model. Thus, the second column in Table 2, which is the inflation equation, indicates that the probability of being awarded a project increases with migration but also that there is a nonlinear (inverse U shaped) relationship between poverty levels and program participation. We find that municipalities where the effective number of parties in local elections is higher are more likely to be awarded more projects (regardless of project type) conditional on migration levels, all else being equal. Moreover, we also find that municipalities in states ruled by the PAN tend to be awarded more projects than those ruled by the PRI or PRD. On the other hand, PAN ruled municipalities as well as those sharing the same party label with state governors, have no significant effect on the number of projects.

**** TABLE 2 about here ****

Since we have found evidence that political competition and partisan variables do have an effect on the number of projects awarded, our next task is to determine whether these effects differ as between public and private projects, as the competing theoretical models outlined above predict. We turn to this issue in TABLE 3, models 3 to 11, which summarize the results of a series of regressions for equation (2) for investments per capita in public, social, and productive projects under the 3x1 program.

Models 3 to 5 in TABLE 3 estimate the program's total investments per capita in public infrastructure projects in a given municipality. Model 3 presents OLS estimates for public projects with a two-way fixed effects specification. We find that the effective number of parties in local elections has a negative and significant effect in the amounts per capita devoted to public good provision, if we control for a host of covariates. This negative effect is stronger particularly in municipalities with high migration intensity, as indicated by the interaction term. As expected, results indicate that municipalities with higher migration receive significantly larger amounts of money per capita than those with lower migration because the former tend to participate more in the program. Party labels and shared co-partisanship do not have an impact in this model. We also find that poverty levels have a nonlinear effect on the amounts received, which is in line with our previous results. As an alternative to the fixed effects model, Model 4 estimates a specification with a lagged dependent variable and a linear time trend. Here, we again find that the effective number of parties has a negative effect on public goods spending in high migration municipalities, which are the main beneficiaries of the program.

Given that migration intensity is not randomly or evenly distributed in Mexican municipalities, it may be the case that our previous OLS results suffer from a sample

selection bias: if some municipal or state features influence both program participation and the amounts or types of projects awarded, OLS estimates may be biased. Moreover, since we observe only the amount of money awarded to participating municipalities, and zero otherwise, we need to correct for the incidental truncation of the amounts per capita variable. Model 5 in TABLE 3 addresses this issue with a Heckman sample-selection estimation, where we use the migration index as the key selecting variable for program participation. When controlling for the selection process, we confirm our previous finding that the effective number of parties negatively and significantly affects the amounts per capita devoted to public good provision (significant at the one percent level). The selection equation of the Heckman model also identifies a partisan effect: municipalities ruled by the PAN are indeed more likely to participate in the program, but once selected they do not appear to receive more funds toward public projects than other participating municipalities.

Models 6 to 8 turn the attention to so-called social infrastructure projects –sport centers, town beautification, community centers– which in many instances constitute the modal category for the projects supported by the 3x1 program (Aparicio et al. 2007). Our concern here is to establish whether this type of public project responds to political fragmentation in the same way as public infrastructure projects.

Model 6, a two-way fixed effects specification, finds that the effective number of parties in local elections also has a negative effect on the amounts devoted to social projects in high migration municipalities, although this result barely reaches statistical significance at conventional levels ($p = 0.12$). Model 7 estimates an alternative specification with a lagged dependent variable and a time trend, and confirms this result. The ENP is negatively and significantly related to the amounts per capita devoted to social infrastructure, regardless of the level of migration in the municipality. Model 7

also suggests that municipalities governed by the PAN tend to invest more resources in social projects than those governed by other political parties, which did not seem to be the case for public projects. Model 8 estimates a Heckman selection model and confirms our main finding that the effective number of parties is negatively associated with the amounts devoted to social projects. Moreover, comparing the results of OLS and Heckman models 5 and 8 further indicate that not controlling for the selection process results in a downward bias in the estimated effect for ENP.

Finally, models 9 to 11 replicate the analysis with amounts per capita devoted to private and club goods as the dependent variable. Recall that under the winning coalition framework these amounts are expected to increase in highly fragmented political contexts with smaller winning coalitions. Thus, for this type of project, the expected sign of ENP is positive, conditional on migration levels. Indeed, the interaction of ENP and migration intensity is positive in two of our three models; but it is not statistically significant. No doubt the lack of significance is in part due to the small number of projects (200 out of 2,226 funded projects) devoted to this category of expenditures. Taking this into account, we find it remarkable that the signs of the coefficients for public as opposed to private spending under the 3x1 program are perfectly in line with the theoretical expectations under the winning coalition mechanism.

In sum, we find evidence of systematic effects of political fragmentation in the number and types of projects funded by the 3x1 Program for migrants. The more competitive local elections are, as measured by the effective number of political parties, the fewer resources are devoted to public infrastructure projects. Put differently, the program seems to be used as a reward mechanism for strongholds rather than as a mechanism to win municipal elections with many contenders. These results are in line

with the predictions of the strand of literature on redistributive politics that anticipates that increasing political competition, which produces smaller winning coalitions in multiparty systems, result in *less* –not more – public good provision.

To test whether the effect of political competition varied between ruling parties, we included an interaction term between ENP and PAN-ruled municipality, which was not statistically significant. Therefore, the estimated effect of political competition – more public good projects devoted to strongholds– is not exclusive to the ruling PAN. To understand this result, it is important to keep in mind that 70 percent of all migrants' clubs are affiliated with the states of Guerrero (PRD), Zacatecas (PRD), Guanajuato (PAN) and Jalisco (PAN). Not surprisingly, in 2007, Zacatecas, Jalisco and Michoacán (also a PRD state) hosted 59 percent of the projects (Aparicio et al. 2007).[15] As the example of Ricardo Monreal (PRD) mentioned above suggests, and as the statistical results confirm, municipalities ruled by opposition parties appear to use the program to reward their high migration strongholds as much as the PAN does.

Figure 1 (based on model 5,TABLE 3) and Figure 2 (based on model 8, TABLE 2) illustrate our key finding, namely, that the negative effect of political competition on public provision is stronger in high migration municipalities, which by design are the main beneficiaries of the program. As the figures reveal, the negative effect of political fragmentation on the amounts per capita devoted to public projects is significant, and its magnitude increases with migration intensity. On the other hand, this negative effect is relatively weaker for social infrastructure spending under the program. In other words, we find strong evidence that political parties allocate public infrastructure under the 3x1 Program to high migration municipalities with low levels of political fragmentation.[16]

*** Figures 1 and 2 about here***

5. Conclusions

Remittances have become a crucial source of revenue in many developing countries. Some analysts (Durand et al. 1996) regard them as flows that can circumvent state intervention – which is treated as an advantage in poorly institutionalized and often corrupt political settings. Yet governments do intervene to influence the amount of remittances that arrive in sending countries, the channels by which they arrive, and their uses once they have arrived. Precisely because of this characterization of remittances as inmune from political intervention, political economy research on remittances is in its infancy (Bravo 2007; Goodman and Hiskey 2008; Pfutze 2007; Pérez-Armendáriz and Crow 2010).

In contemporary Mexico, a dramatic increase in migration and remittance flows has run parallel to an increase in political competition. We studied how these two phenomena interact when it comes to determining the beneficiaries of projects under the 3x1 Program for migrants. Based on the literature on redistributive politics, we explored two competing theories to explain the allocation of private and public transfers. On the one hand, a risk aversion mechanism would prompt politicians to invest in private transfers to secure the loyalty of core voters. This will be the case if the incumbent electoral track reveals declining support. Instead, public goods would be used to target heterogeneous constituencies in contested electoral settings. On the other hand, the size of the winning coalition mechanism suggests that in settings where a few political parties compete, and large constituencies need to be catered to, politicians will give priority to public good expenditures. In turn, increasing political fragmentation and smaller winning coalitions motivate politicians to focus on specific groups, decreasing the provision of public goods in favor of private or club goods.

The evidence from the projects awarded under the 3x1 Program for Migrants follows this last pattern when subject to several estimation methods: the provision of public and social infrastructure in high migration municipalities tends *to decrease* with increased political competition. Interestingly, this same result was found for the general provision of public goods following democratization in Mexico (Cleary 2007; Moreno-Jaimes 2007). Besides, municipalities ruled by the PAN – the political party under which the Program was launched nationally– are more likely to be selected into the program than municipalities run by the other two main contending political parties, other things equal. Thus, there is little reason to be optimistic about the alleged positive link between greater political competition and enhanced provision of public goods under this particular program. Instead, what our results suggest is a political use of the 3x1 Program to reward high-migration strongholds.

As some case studies have already pointed out, migrants claim that local politicians "*los politiquean* [manipulate them]" (Imaz 2003: 400), exchanging projects for their political and economic support. Thus, although ongoing research on *individual* remittances suggests that clientelistic practices may be less effective when families enjoy this extra source of income (Pftuze 2007), our research on *collective* remittances and public policy points to the emergence of an important political "partnership" between hometown associations and local politicians. Without disregarding the economic benefits that the projects may bring to the communities that receive them, we contend that the 3x1 Program for Migrants is used in part as an instrument for exchanging public infrastructure for political support and thereby rewarding a new, strategic clientele.

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TABLE 1

3x1 Program Descriptive Statistics by Municipality, 2002-07

Year	Number of projects	Amounts (million pesos)	Public ratio	Social ratio	Private ratio	No. of participating municipalities
2002	3.84	1.93	0.65	0.26	0.09	239
	(8.24)	(2.87)	(0.44)	(0.41)	(0.26)	
2003	3.44	1.67	0.73	0.24	0.03	260
	(4.81)	(2.17)	(0.40)	(0.38)	(0.17)	
2004	3.30	1.77	0.69	0.24	0.08	384
	(4.89)	(1.97)	(0.41)	(0.38)	(0.24)	
2005	3.75	1.95	0.65	0.29	0.06	446
	(4.52)	(2.14)	(0.42)	(0.40)	(0.21)	
2006	3.22	1.75	0.62	0.33	0.05	410
	(3.77)	(2.18)	(0.44)	(0.42)	(0.19)	
2007	2.91	1.53	0.65	0.31	0.04	487
	(4.30)	(2.15)	(0.44)	(0.42)	(0.17)	
2002-07	3.36	1.75	0.66	0.28	0.05	2226
	(4.99)	(2.22)	(0.43)	(0.41)	(0.21)	

TABLE 2. Political Competition and Number of Projects (Zero Inflated Negative Binomial)

	NUMBER OF PROJECTS	
	1	2
	NUMBER OF PROJECTS	INFLATION EQUATION
ENP	**0.036**	
	[0.056]	
Migration Intensity Index	**-0.084**	**-2.433**
	[0.107]	[0.130]***
ENP*Migration	**0.189**	
	[0.039]***	
PAN State	**0.660**	
	[0.073]***	
PAN Municipality	**0.016**	
	[0.076]	
Shared Government	**-0.031**	
	[0.068]	
Local Election	**-0.157**	
	[0.074]**	
Poverty	**-0.745**	**-1.281**
	[0.290]**	[0.281]***
Poverty^2	**0.082**	**0.277**
	[0.057]	[0.058]***
Log(population)	0.318	
	[0.031]***	
Constant	**2.235**	**1.222**
	[0.440]***	[0.285]***
Observations	10894	10894

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

TABLE 3. Political Fragmentation and Projects Funded by the 3x1 Program for Migrants in Mexican municipalities, 2002 – 2007

	PUBLIC GOODS PER CAPITA				SOCIAL GOODS PER CAPITA				PRIVATE AND CLUB GODDS PER CAPITA			
	3	4	5 (HECKMAN)		6	7	8 (HECKMAN)		9	10	11 (HECKMAN)	
	STATE AND YEAR EFFECTS	POOLED OLS	SELECTION	AMOUNTS PER CAPITA	STATE AND YEAR EFFECTS	POOLED OLS	SELECTION	AMOUNTS PER CAPITA	STATE AND YEAR EFFECTS	POOLED OLS	SELECTION	AMOUNTS PER CAPITA
ENP	**-8.676**		**0.008**	**-23.411**	**-1.182**		**0.010**	**-7.420**	**-0,539**		**0,007**	**-0,358**
	[4.740]*		[0.024]	[5.429]***	[1.980]		[0.024]	[2.648]***	[0.843]		[0.024]	[0.977]
Migration Intensity Index	**59.312**	**48.665**	**0.247**		**26.922**	**4.740**	**0.249**		**2,056**	**-2,014**	**0,241**	
	[19.663]***	[18.062]***	[0.021]***		[9.242]***	[9.687]	[0.021]***		[2.412]	[2.463]	[0.021]***	
ENP*Migration	**-12.305**				**-4.932**				**0,607**			
	[5.563]**				[3.126]				[0.766]			
ENP (Lagged)		**-5.343**				**-10.895**				**0,059**		
		[3.911]				[3.384]***				[0.644]		
L.ENP*Migration		**-8.879**				**0.612**				**1,392**		
		[5.129]*				[2.965]				[0.945]		
PAN State	**15.567**	**29.175**	**0.114**	**13.819**	**-1.159**	**-9.311**	**0.113**	**-1.987**	**-5,724**	**-4,374**	**0,114**	**-6,079**
	[13.550]	[7.507]***	[0.100]	[13.645]	[8.533]	[5.365]*	[0.100]	[8.431]	[5.227]	[2.160]**	[0.100]	[5.199]
PAN Municipality	**-1.682**	**-1.699**	**0.185**	**-6.499**	**9.967**	**12.468**	**0.185**	**7.631**	**-0,313**	**-1,477**	**0,185**	**-1,044**
	[8.018]	[8.832]	[0.041]***	[8.094]	[4.900]**	[6.325]**	[0.041]***	[4.997]	[1.638]	[1.859]	[0.041]***	[1.818]
Shared Government	**-7.692**	**-3.735**	**0.039**	**-9.511**	**-14.257**	**-12.780**	**0.039**	**-15.144**	**-2,625**	**0,53**	**0,041**	**-2,845**
	[8.229]	[7.587]	[0.035]	[8.282]	[4.018]***	[4.811]***	[0.035]	[4.074]***	[2.558]	[2.380]	[0.035]	[2.539]
Local Election	**-7.622**	**-10.472**	**-0.155**	**-2.613**	**4.591**	**-0.779**	**-0.154**	**7.051**	**-0,017**	**-1,291**	**-0,156**	**0,706**
	[7.493]	[7.095]	[0.040]***	[7.671]	[4.033]	[4.182]	[0.040]***	[4.137]*	[2.822]	[1.897]	[0.040]***	[2.813]
Poverty	**121.193**	**47.275**	**0.452**	**140.697**	**12.013**	**14.213**	**0.453**	**23.471**	**-6,483**	**-3,257**	**0,462**	**-3,337**
	[20.790]***	[16.816]***	[0.088]***	[20.144]***	[9.214]	[6.989]**	[0.088]***	[8.607]***	[3.652]*	[3.351]	[0.088]***	[3.339]
Poverty^2	**-19.482**	**-7.672**	**-0.096**	**-23.590**	**-0.283**	**-2.973**	**-0.096**	**-2.682**	**1,512**	**0,744**	**-0,098**	**0,87**
	[4.374]***	[3.941]*	[0.018]***	[4.135]***	[1.950]	[1.680]*	[0.018]***	[1.837]	[0.895]*	[0.842]	[0.018]***	[0.843]
Dependent Variable (Lagged)		**0.288**				**0.451**				**0,626**		
		[0.066]***				[0.096]***				[0.243]**		
Year		**-4.422**				**1.251**				**0,448**		
		[2.563]*				[1.205]				[0.545]		
Rho				**-0,213**				**-0,225**				**-0,113**
				[0.036]***				[0.038]***				[0.020]***
Sigma				**179.87**				**81.674**				**51.109**
				[23.360]***				[6.150]***				[12.608]***
Lambda				**-38.347**				**-18.415**				**-5.799**
				[6.920]***				[3.598]***				[2.379]**
Wald Test of Independent Equations				**32.44*** **				**31.91*** **				**30.00*** **
Constant	**-126.691**	**8.866**	**-0.542**	**-34.358**	**-12.473**	**-2.466**	**-0.552**	**29.127**	**3,895**	**-0,89**	**-0,541**	**11,217**
	[31.923]***	[5.144]*	[0.228]**	[29.774]	[12.682]	[2.414]	[0.228]**	[14.625]**	[4.374]	[1.090]	[0.228]**	[6.394]*
Observations	1995	1772	10894	10894	1995	1772	10894	10894	1995	1772	10894	10894

Robust standard errors in brackets

All especifications, except for the pooled OLS, include state and year effects.

* significant at 10%; ** significant at 5%; *** significant at 1%

Figure 1. Marginal Effect of ENP on per capita spending in Public Goods, as migration intensity increases

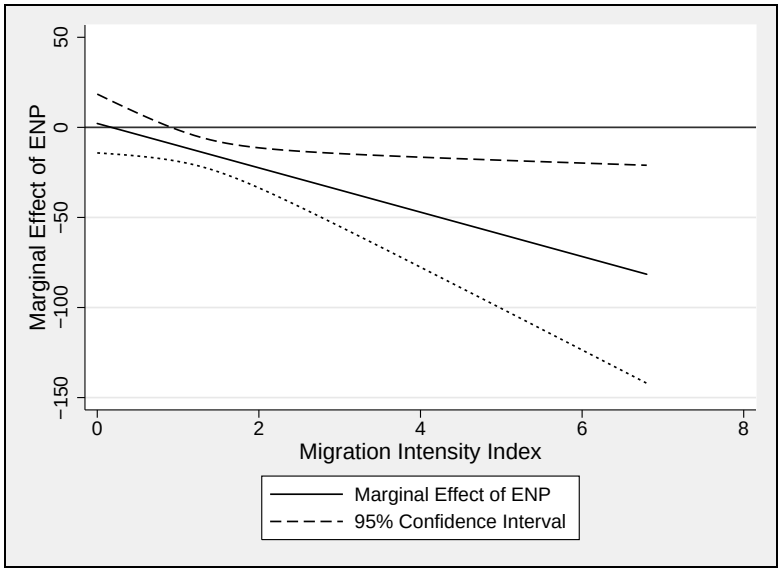
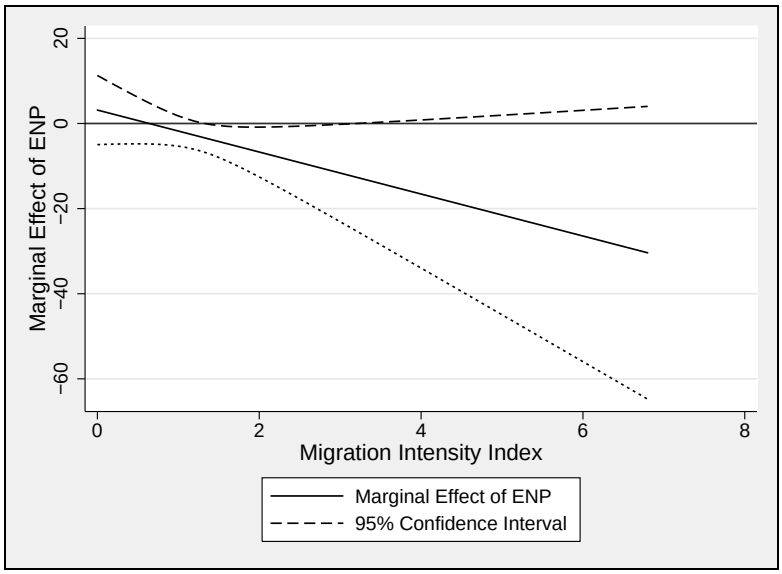


Figure 2. Marginal Effect of ENP on per capita spending on Social Goods, as migration intensity increases.



ENDNOTES

[1] A previous version of this paper was presented at the "Migration and Remittances" conference in Mexico City, 19-20 February 2009, at the Annual Meeting of the Midwest Political Science Association, Chicago, 6-7 April 2009, the 3rd INSIDE Workshop, Institute for Economic Analysis, Barcelona, 5-6 June 2009, and the Annual Meeting of the American Political Science Association, Toronto, 3-6 September 2009. We thank participants for their comments. We acknowledge funding support from CIDE, the research assistance of Brisna Beltrán, and the Mexican Ministry for Social Development (SEDESOL) for providing the data.

[2] See also Magaloni (2006), especially chapter 4.

[3] One difference is that under the 3x1 Program migrants are required to finance 25 percent of the project, whereas co-financing was optional under PRONASOL.

[4] Between 2000 and 2003 the Mexican population residing in the US grew by 14 percent. It represents 30 percent of total US immigration today.

[5] www.sedesol.mx

[6] For instance, in 2007 68 percent of the federal money was invested in municipalities of low and medium poverty, and only 24 percent was invested in poor and very poor municipalities (Aparicio et al. 2007).

[7] Burguess (2005) reports that in Zacatecas migrants pressed to have the rules changed so that only migrants belonging to a registered HTA – as opposed to any interested group or individual – could finance projects under the program.

[8] For instance, Shannon (2006: 90) states that

> …the productive nature of [productive] projects invites to an additional reflection about the use of governmental funds – that by their very nature should be devoted to

public welfare – to financing projects that, in case of being successful, would guarantee profits for particular investors, and not necessarily for the rest of the community.

And García Zamora (2006: 165) adds

> The transit (to productive projects) presents large problems to the Secretary [of Social Development] and to the Program, because the 3x1 was created and institutionalized to support and promote philanthropic and basic infrastructure projects, whose results belong to the community; however, productive projects translate into particular investments, and therefore the benefits are owned individually.

[9] Note that we consider migration intensity as a proxy for the number of HTAs (about which we do not have direct information). However, HTAs' capacity for collective action and their organizational skills are an important unobservable variable.

[10] In calculating the municipal ENP, we discarded the 412 municipalities in the state of Oaxaca that are run according to *usos y costumbres*.

[11] In our data set, the correlation between ENP and the margin of victory is minus 0.33, which suggests that these two variables indeed capture different traits of electoral competition.

[12] The average municipal ENP increased from 1.31 in 1980, to 2.02 in 1994, 2.30 in 1998 and 2.75 in 2000. It was 2.95 for municipalities participating in the 3x1 Program in the period 2002–2007. Thus, municipal elections in Mexico have changed from a hegemonic party system to something close to a three-party system (De Remes 2005).

[13] We included state rather than municipal fixed effects for several reasons. First, we had few time-invariant variables, which prevented us from using municipal effects. Second, and more important, states also have a strong influence on program

participation because they have to commit resources *ex ante* via agreements with SEDESOL. Moreover, since migration has been historically concentrated in certain regions, four states host almost half of the funds and projects.

[14] The number of projects awarded had a clear inflation of zeros because only a few municipalities participate in the program. A Voung test to decide between a standard negative binomial and a zero-inflated negative binomial favored the latter.

[15] To also understand this geographical allocation, it is important to keep in mind that migrants' demographic characteristics make them likely to hold anti-PRI political preferences (Bravo 2007).

[16] As a robustness test, we run all the models with the margin of victory as a proxy for electoral competition. Recall that the correlation between margin and ENP is low in our data set. Therefore, the two measures seem to capture different dimensions of the electoral system. The provision of public infrastructure under the program is unrelated to the margin of victory, which is in line with the results reported by other authors concerning the general provision of public goods following democratization (Cleary 2007; Moreno-Jaimes 2007). In just one of our three specifications was the provision of social infrastructure negatively related to the margin of victory. This finding implies that social infrastructure is assigned to competitive municipalities. In turn, this would suggest that social and public infrastructure might be allocated according to different political logics. The result, however, seems not to be robust to different model specifications.