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## Political competition and the allocation of public investment in Mexico

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# **POLITICAL COMPETITION AND THE ALLOCATION OF PUBLIC INVESTMENT IN MEXICO**

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**Abstract.** We examine the role of political competition in local elections on determining the regional allocation of public investment. This study employs data on Mexican elections during the period 1990-1995 characterised by an increase in electoral competition, the loss of support of the single party running the government for more than seventy years and regions' claims for increased decentralisation. Evidence supports the hypothesis that regional allocation in public investment from the central government was driven by higher *sui generis* political competition.

*Key words:* Political competition, regional politics and public investment.

*JEL* :H3, H5 and R5.

## 1. Introduction

The Mexican local political spectrum in the early 1990s offers a “*unique*” example for public choice analysts to examine the influence of (the lack of) political competition in the allocation of public investment, especially due to the exclusive type of political competition found there. The Polity III data set on democracy catalogued Mexico as the least democratic country during practically the whole of the Twentieth Century. A single political party, the *Partido Revolucionario Institucional* (PRI) dominated the political spectrum more than 70 years. However, these mechanisms changed during the eighties and nineties with the initiation of a decentralisation process (Molinar and Weldon, 1994; Rodriguez, 1999). Decentralisation was a mechanism that brought political stability to the central government by providing an institutional basis for opposition groups to bargain instead of using a competitive opposition mechanism (World Bank, 1999), and thus to substitute the lack of formal political competition in the most traditional conception<sup>1</sup>.

Party competition is grounded on models of democracy markets where incumbent parties compete in order to govern with public consent<sup>2</sup>. Generally speaking, political competition is a non-co-operative arrangement where candidates compete to influence voter’s political preferences. The party in power, unlike the opposition candidates has the possibility to influence public policy in order to influence an electoral. Support for a political party may be the result of the comparison of candidates’ policies with voter’s ideal policy. Hence, support for a political party might be the result of the existing regional allocation being closer to the ideal allocation (*i.e* the maximum feasible allocation). As a result, public investment might influence the way individuals (and as a result, localities aggregately) perceive the “net

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<sup>1</sup> Examples of this in Mexico were the decentralisation programs conducted by De la Madrid (1982-1988) in the eighties which allowed the access to some local governments to opposition parties; the channelling process of fiscal funds to municipalities developed under Salinas (1988-1994) and the consolidation and fiscal co-ordination undertaken by Zedillo (1994-2000).

<sup>2</sup> This framework is build upon the Schumpeter (1942) approach where a political party is envisaged as a group in which members act in concert in a competitive battle to maximise their votes. That is, a team seeking to control the governing apparatus by means of electoral success which implies agreeing in some policy goals instead of between them (Downs, 1957).

outcome” of central government policies. Similar interpretations can be found in Ordeshook (1997), Coughlin (1982,1984), Enelow and Hinich (1984).

Several theoretical and some empirical contributions have found a positive link between political competition and government size (Buchanan and Wagner, 1977; Mueller, 1989; Rogers and Rogers, 2000). A stylised fact that appears in those studies is that when politicians compete for votes, public expenditure rises in response although the mechanisms aren't fully understood yet in a more general perspective. However, in a centralised country (*e.g* Mexico), a rise in political competition might influence the way public investment funds are allocated instead. This is because regions (or states in Mexico) have no power to increase expenditure. Public investment allocation decisions in Mexico during the nineties were centrally determined although a decentralisation process was going on simultaneously. In contrast to other countries (*e.g.* the US), regions – or, more formally Mexican states – the most of the public investment decisions are taken by the central government alone (Katz, 1999).

This paper aims at empirically testing whether political competition influences the allocation of public investment by examining the relationship between regional allocation of public investment and the support for PRI. Under the lack of typical political competition mechanisms, funds allocated to regions by the central government are *a priori* hypothesised to be the natural reactions to prevent loss of power of the PRI. We argue that (under a rational choice framework) the main political party (viewed as maximising votes) employed the allocation of public funds as an incentive to avoid the loss of support in those regions where political competition was rising.

The paper is structured as follows. The next section briefly reviews the conceptual background of political competition and fiscal decentralisation, especially to provide a framework to examine this particular empirical evidence. Section three, explores some relevant issues concerning the decentralisation process in Mexico that might matter in the empirical analysis. Section four, describes the empirical methods undertaken, we define the measure of political competition used in general the data employed. Section five provides results from the study and finally, section six concludes.

## 2. Political competition and the allocation of public investment

Under pure democratic games, political decisions are the outcome of a competitive battle to obtain people's votes, which in turn imply that individuals have the ultimate "power to decide, move and remove leaders from power" (Schumpeter, 1942). Consequently, those gaining power through the existent democratic system have incentives to adapt their behaviour to the rules of the game (Katz, 1986). As a result, political competition might be seen as favouring the electorate, as soon as it could lead to increases individual welfare in several ways (*e.g* involving "accomplished" promises of benefits to segments of population or regions during the political campaign). However, political competition could potentially reduce social welfare if electoral maximisation grounds (Mueller and Murrell, 1986) exclusively drive it. In these circumstances, the *no re-election of incumbent* governments acts as a way of signalling disapproving mechanisms, and politicians in power may try to influence voter's preferences with existent means.

### 2.1 Why public investment might increase with political competition?

Politicians in power might be interested on shifting individual's political preferences by using public expenditure under their control. As a result, public expenditure might rise the more the larger the perceived repercussion in the incumbent re-election probability Enelow and Hinich (1984), being the typical example expenditures associated with activities in the public welfare sector<sup>3</sup>. In this competition setting the incumbent party drives public policies to pursue electoral success (Mueller and Murrell, 1986), being the allocation of public investment determinant as soon as influences individual's welfare and its resulting vote. Thus, actions taken by rational politicians are supposed to be "accommodative", that is guided to maximise the net benefits of certain groups, those that the politician perceives as being more prone to change their political preferences in accordance with the benefits they receive from the government. In the Mexican example during the nineties, this group would correspond to those localities where support for opposition parties was larger. We suggest here that regional policies in the nineties Mexican representative democracy can be explained

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<sup>3</sup> If this is confirmed in empirical exercises, we might find a rise in the intensity of party competition to be associated with an increase in welfare expenditure (Dawson and Robinson, 1963).

under a interest group theory as a mean to facilitate public investment transfers to demanders that might change their voting behaviour as a result of it Becker (1983)<sup>4</sup>.

## 2.2 What drives individuals political preferences?

In an influential paper, Nordhaus (1975) proposed a trade off between elections and rates of unemployment and inflation, naming the process Political Business Cycle. Among the key assumptions there is one that voters are ignorant of macroeconomic trade-offs. Voters ignore the performance of policy makers relative to achievable possibilities. The lack of information leads them to rely then in past experiences to evaluate government actions, comparing then the governing party's behaviour with the usual behaviour<sup>5</sup> when deciding their vote preference. In this case, deterioration of real income will be blamed on the governing party. Then, government would make use of the budget tool to start its period with austerity, but increasing expenditure before elections<sup>6</sup>.

Opportunistic behaviour of incumbent parties is observed when the government decides on policies directed to maximise their votes, without considering past political or ideological references, economic results, or even the party's political platform<sup>7</sup> (Nordhaus, 1989). Its occurrence is however not an isolated phenomenon but it appears to be associated to the nature of the political decisions. Tight support will increase the likelihood of the party in power to undertake self-beneficial actions. However, opportunistic behaviour may well fail to meet its objectives if individual demands misinterpreted. Empirical evidence is found on Besley and Coate (1993) where they show that US governors that were ineligible to stand for re-election did undertake more expenditure programs and rise taxes more that the remaining.

A similar conclusion would be reached under the Buchanan and Wagner (1977) theory of fiscal illusion. According to the former theory, individuals overestimate net benefits

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<sup>4</sup> Becker (1983) posited a theory of pressure group competition in which such competition leads to the least-cost pattern and amount of transfers.

<sup>5</sup> In case that political platforms launched by parties are reliable then voters can decide among alternatives. Nordhaus also notes that this simple comparison of performance misses the persistent party line on different issues, implying that ideological components do not make any difference, introducing party affiliation.

<sup>6</sup> In the Nordhaus' model of "myopic voting", the memory of voters on economic issues decay over time, then recent events are more important than earliest problems. Under this backward looking behaviour the voter's evaluation only covers the length of the electoral period.

<sup>7</sup> In a rationalistic model, political business cycles take a short-run form, in which politicians find more rewarding to manipulate policy instruments around election (Alesina, Cohen, and Roubini, 1991).

of public expenditure increases - due to a higher visibility of benefits of expenditure than the associated costs, here being rises in taxes or future tax liabilities due to debt increases-. Thus as the expansion of regional public expenditure programmes influences governments political support, regional policy adapts to favour the incumbent political party. Political competition can influence the allocation of public investment by promoting regional policies that benefit the incumbent.

### **2.3 Why decentralisation influences the relationship between political competition and public investment?**

Modern theory on federalism assigns specific tasks to each level of government according to the criteria of economic efficiency in the delivery of public goods and services<sup>8</sup>. Traditionally, specific functions are related to particular government levels in federal systems (Oats, 1968; Musgrave 1969). For example, macroeconomic stabilisation is assigned to national governments because they have greater capacity to influence the community's level of output and income. Under the same line of thinking, the distribution policies are better performed by national governments in order to avoid individuals migrating to satisfy their tax and public services preferences (Tiebout, 1956). Also, it could be argued that local governments are better suited to deliver public goods and services as they are able to collect more information and understand local preferences.

In theory the federal structure must be consistent with the criteria of efficiency, and the degree of centralisation of government decisions depends on the negotiations between central and local governments. However, an excessive reliance on the grant transfer system with central control can be harmful to the extent that it can provoke inefficient outcomes (Oates, 1990). But the government can also be viewed as an aggregate centre of power competing in the delivery of public goods and services (Breton, 1996). In this sense, a vertical competition means specialisation of functions in each level of government, generating efficiency because of the rules of co-operation, satisfying a demand of public goods that it is revealed through the electoral process.

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<sup>8</sup> Economic efficiency in federalism can be better understood as the capability of each level of government to internalise certain externalities caused to a particular region by the actions of another. See Stevens (1993).



Nevertheless, Breton's arguments credit to interregional resource mobility the benefits of competitive federalism, rather than to competitive politics, failing to address an explanation when central government intervenes. In a more close approach to public choice with federalism, Migué (1997) argues that different levels of government compete for the same pool of voters when supplying similar services to territories. Then, there is an interest of both suppliers in the search to gain more voters in being the first in implementing public policies. As central government has a high monopoly power with political benefit potential, it can experience higher losses from uncontrolled political competition. The homogeneity of services can be considered by local administrators as forced commitments to restrain competition with federal programmes. Local administration can be coerced to embark in national programmes where central government formulates financing arrangements.

In this environment, negotiation can play a central role. If negotiation depends on who controls each centre of power, the fiscal terms obtained should reflect the political structure of that moment in time. In that sense, under a unitary government the fiscal arrangement between the centre and the regions could respond in intra-party negotiations. On the other hand, as opposition parties gained access to local government's negotiations become harder. Opposition governments' turns to obtain support and gain accountability, for which fiscal autonomy is required. Then, central government, likely to be restricted by an independent central bank<sup>9</sup> to increase spending and make political use of it, can use imperfect decentralisation and regional allocation of public investment in order to increase votes in the search for power control. This approach was delineated also by Hirschman (1958), who in his study about allocation of public investment at regional level suggest that the switching of policies can be used with political purposes.

There is also the so-called pork barrels approach in the regional allocation of public investment. In this sense, the allocation of public investment could be seen as an auction process in which central government assign investment according to localities sharing the same political party then central government, generating substantial campaign voters. In addition, as the local government may not generate more pressures on increasing federalism,

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<sup>9</sup> Some studies have found an inverse relation between central bank independence and inflation (Cukierman, 1992) as central banks tend to be more inflation averse than politicians (Kyland and Prescott, 1977; Barro and Gordon, 1983). This also can be seen as a tool through which politicians with conservative inclinations seeks to constrain left wing policies that generate expansion in budgets and inflation (Persson and Svensson, 1989; Alesina and Tabellini, 1990), based on partisan models of business cycles, as in Hibbs (1977, 1987).

as they have to subordinate to the central government political affiliation and then to the pattern of federalism that they dictate. These localities may be rewarded with more resources than areas where opposition parties hold power, which may be seen as opportunistic behaviour.

### **3. The Mexican federalism : “centralising the decentralised”**

This section deal with explaining the contexts that defined the decentralisation process that was going on in Mexico during the eighties and nineties. The relevance for this research is evident. In one respect, it clearly helps to understand the results achieved. In the other hand, the paper main argument is that political competition influences the allocation of public investment. However, as noticed political competition was of a very specific and clearly linked with the decentralisation process in the period analysed.

The current Mexico’s current federal structure has been the result of a series of central reactions to political and economic crises during the last two decades, leading to a process of regional decentralisation. Lujambio (1995) argues that decentralisation stabilised the Mexican political system because it allowed opposition parties to access government, changing the payoffs of a traditionally zero sum electoral game. Further, it provided an institutional environment that allowed for co-operation among parties and partially relieved the exclusion character of the presidential system.

Mexico has 31 states plus Mexico City (so-called Distrito Federal) embedded in a federal constitutional system. Nevertheless, centralisation has been the norm, and until 1980s central government started a process of decentralisation by drops-counter. Rodriguez (1999) argues that fiscal transfer rules in Mexico have been highly discretionary to the states and the municipalities. This implies that the resulting transfers to municipalities are left to political discretion. Under discretionary rules, the assumption that the bargaining power of each centre determines the fiscal arrangement becomes fully political.

Indeed, the origins of decentralisation in Mexico can be traced when opposition parties were allocated a proportion of congress seats in the early 1980’s. Further, the institution relates the winning of states and municipalities by the opposition to a loss of credibility on the PRI during economic and financial crises<sup>10</sup>. After that, the first half of the 1990’s experienced a rapid change in the Mexican “electoral geography”. As argued by Aguilar-Camin and Meyer (1993), the consequences of the crisis during De la Madrid’s

period translated into electoral losses for the PRI. This change in the relation between government and opposition parties can be framed in the evolving international context and the transformation of Mexican society in the previous last quarter of the century, which led to a changing context of Mexican policy since 1982 (Loaeza, 1995).

The loss of power increased dramatically in 1994 and 1995. In 1991 the PRI controlled 97% of the 31 states, plus the Federal District (Mexico City) given that the major was appointed directly by the President. By 1995 it had only lost 7% of the states. But the major change in the “electoral geography” took place amongst municipalities. The percentage of municipalities governed by the PRI fell from 71% in 1993, to 55% in 1995. The way in which the change in local politics was taking place was striking. In a few years the PRI has lost nearly half the municipalities that had taken decades for opposition to gain access to.

Although the opposition had been gaining access to government since a decade earlier, the fact that the PRI lost its majority in the dimensions discussed above allows for data analysis of the implications of change. During the decentralisation reforms the PRI was reluctant to cede fiscal autonomy. It did so by fixing central transfers that were tied to specific programs to be executed by the states and municipalities. However, as opposition parties gained access to real government, an increased demand for autonomy arose.

Intuitively, once opposition parties gain access to government under electoral competition, a change in the way fiscal co-ordination between the levels of government occurs. The reason is that opposition governments become accountable for their actions to the constituents, who elected them, while the official party governments are accountable to the party’s hierarchy. Thus, electoral competition must bring competitive governments with higher demands for autonomy. If such demands were satisfied, the result that we should expect is a redistribution of public investment to regions where such demands were more prominent. This may have strong consequences in the estimation of the determinants of public investment allocation.

To Rodriguez (1999), the PRI governments of De la Madrid and Salinas aimed to “centralise by decentralising”, that is to decentralise to keep the power as before. The fiscal

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<sup>10</sup> This tendency of loosing political spaces by the PRI has reached its peak in 2000 when the right wing Partido

redistribution mechanisms were kept centralised while other aspects of government were decentralised as far as they served the purpose of distributing political power albeit retaining financial control. Thus, decentralisation only helped to stabilise the political system by providing an alternative instrument for political competition, this one was the fiscal redistribution mechanism finance localities.

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Accion Nacional (PAN) won the presidential elections.

## 4. Empirical analysis

### 4.1 Data and summary statistics

We have collected data for the 32 Mexican federal units from 1990 to 1995. The only regional that was excluded was *Distrito Federal (DF)* as the mayor of the city was not directly elected but appointed directly by the President of Mexico. In a data appendix we provide a description and sources of variables. Data was extracted from the Statistical Annexes to the Presidential Address to the Nation, various years. The data of public investment corresponds to the total public investment effectively spent by the central government, not to the budgeted amount, and is in 1993 pesos. Table 1 shows the summary statistics of the variables.

#### INSERT TABLE 1

### The model

Now we turn to the explanation of the empirical model. For the sake of exposition clarity, an index  $j$  denotes states (or regions). We are testing the role of local government's political competition in the regional assessment of public investment by the central government. Let us model the distribution of public investment as follows:

$$(1) \quad g_j = \pi_{Aj} + Z_j$$

where  $g_j$  is the real per capita public investment allocated in state  $j$ ;  $\pi_{Aj}$  is the share of local municipalities affiliated to the central government's party in state  $j$ .  $Z$  is a set of characteristics of state  $j$ .

An equivalent empirical relationship was used in Molinar and Weldon (1994) to determine the relationship between electoral politics and the National Solidarity Programme in Mexico. However, as far as we hypothesise that the central government could use all the federal programmes to increase or maintain its political participation, in this empirical study we employ the total amount effectively spent by the central government in each region.

Moreover, to the extent that local government's political affiliation may determine flows of public investment, and these flows are considered by voters as an evaluation to reward or penalise the political party in power, there may be a functional relationship between both variables. Let us define the determinants of participation as:

$$(2) \quad \pi_{Aj} = g_j + X_j$$

where  $X_j$  is a set of additional characteristics which may affect the decision to vote for the same party in power. Then, the local support for the governing party is driven by public investment in the region and a set of other characteristics. As a consequence, we may parameterise the model as a system:

$$(3) \quad \begin{cases} \pi_{Aj} = g_j + X_j \\ g_j = \pi_{Aj} + Z_j \end{cases}$$

Where  $X_j$  and  $Z_j$  are a set of exogenous variables.

We estimate, in logarithmic form the system of equations (3) in a simultaneous equation system, given that as derived from (4), the OLS regressions applied to either  $\pi_{Aj}$  or  $g_j$  are inappropriate (i.e. biased or inconsistent) estimators for the unknown parameters. Taking logs and expanding the sets  $Z$  and  $X$ :

$$(4) \quad \begin{cases} \pi_{Ajt} = \alpha_0 + \alpha_1 g_{jt} + \alpha_2 S_{jt} + \alpha_3 RUR_{jt} + \alpha_4 g_{jt-1} + \alpha_5 GOV + \lambda_t + \varepsilon_{jt} \\ g_{jt} = \beta_0 + \beta_1 \pi_{Ajt} + \beta_2 GOV_{jt} + \beta_3 INE_{jt} + \beta_4 OIL + \beta_5 g_{jt-1} + \lambda_t + \mu_{jt} \end{cases}$$

Where  $j$  denotes the state,  $t$  the year,  $\lambda$  time effects and  $\varepsilon$  and  $\mu$  are error terms. Variable construction and their respective sources are explained in Annex 1, and summary statistics in Table 1.  $\pi_{Aj}$  is measured as the share of municipalities hold by the central governing party, the PRI. If the sign of this coefficient is positive determining the allocated public investment,  $g_j$ , we can suggest that to some extent there is regional opportunism or pork barrel. Public

investment in regions,  $g_j$ , is the per capita federal public investment effectively made. If the sign of the coefficient is positive determining  $\pi_{Aj}$  we can reinforce the hypothesis of opportunistic and pork barrel effects. We have included a lag in the public investment variable, this would allow to empirically test the existence of myopic policies. We hypothesise that if this variable is not significant, this is because voters might be myopic decision-makers when it comes to take into account past decisions. The lag variables of the endogenous variables have the characteristics of the exogenous variables in that they may affect current endogenous variables but are not reciprocally affected.

The rest of variables are taken as exogenous. We consider schooling (S) as a determinant of political elections. More educated people are rationally expected to vote not according to myopic vision, but to long term, looking behind, evaluation of government policies. Government of the state (GOV) is a dummy variable in which 1 is assigned to states with opposition party, and 0 for states with PRI government. OIL is a dummy variable for Campeche and Tabasco, states with high amounts of public investment due to the oil field exploitation, then its inclusion in the system helps to avoid overstatements in other variables.

The percentage of the rural population in each state (RUR) is to introduce the effect of the much-talked “green vote” that acted as support for the PRI during long time would show a positive coefficient. The variable INE is a variable reflecting the relative position of each state in the income scale, in such a way that states with positive sign are economically advantaged, and states with negative sign are economically disadvantaged. A negative sign of the coefficient determining public investment would suggest a redistributive effect of public investment.



## 5. Results

We have performed the equations in system (4) separately with Ordinary Least Squares in Table 2 and as a simultaneous system with Three Stage Least Squares in Table 3. In Table 2 the first two columns present results for the municipalities held by the PRI, while the third and fourth show results for the allocated public investment.

Regression (1) in Table 2 displays a strong and positive effect of public investment, while the lagged value of the same variable, although with negative sign, is not significant. This implies that public investment was useful to increase support for the PRI but consistently with a hypothesis of “myopic voting” is immediate public investment rather than past public investment what matters, additional lags were equally non-significant at the usual 5% level. This suggests that the higher per capital public investment allocated in a specific state, the higher the control of localities by the incumbent party.

### INSERT TABLE 2

The effect of schooling attainment (S) as expected is negative and significant. As education might be associated with a preference for political turnover, we find that the more educated the population in the state, the smaller the local support for the incumbent party. The share of rural areas in the state has a positive sign, although it is not significant. This might be due to some association with education. This variable is highly correlated with schooling<sup>11</sup>, which may cause this variable to be non-significant. When we excluded schooling in the regression in (2), we found that albeit other variables stand with similar results, the variable proxing rural areas becomes highly significant and increases its coefficient almost four times<sup>12</sup>. This reinforces the so-called “green vote” hypothesis as explanatory of the support for the PRI in Mexico. This hypothesis established that the incumbent party support relied on rural votes, which in turn tended to be less educated and lower-income individuals, and thus easy subject for political control. There is also a negative and significant effect of the governor of the state belonging to a different political affiliation than PRI.

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<sup>11</sup> The spearman correlation coefficient between both variables is  $-0.825$ , with 1% of significance.

We have first estimated the model using OLS regressions. One of the limitations of the empirical methods employed this far is that the explanatory power is rather low,  $R^2$  being 0.25 in explaining  $\pi_{Aj}$ . This might suggest that there are variables not being included in the regression which play a role in explaining support for the incumbent party. These variables popularity of the party and candidates, idiosyncratic elements of the voters, etc, that we do not have data on.

Similarly as before, model (3) and (4) in Table 2 display the outcome for the public investment per capita allocated in the state. We found the share of the municipalities' hold by the PRI as highly significant and positive confirming theoretical explanations. This reinforces findings for regression (1) and (2). Then, the more localities held by the PRI, the larger the amount of public investment per capita being allocated in a specific state.

The variable for the relative position of state in the income scale (INE) is positive, although non-significant. Although the diverse National Development Plans highlighted that public investment should be allocated in order to help lagged regions, empirical evidence here confirms that income inequality was not a significant determinant for the allocation of public spending at the regional level. In contrast to what we could expected, the governor of the state belonging to a different political affiliation than PRI does not show a significant relation, rather displays a negative sign. We drop in (4) the governor variable and results still hold for the other variables. Oil states (Campeche and Tabasco) receive higher amounts of public investment.

As we hypothesise there might be a causal relation between public investment and localities controlled by the PRI, and thus, we could expect the residuals to be correlated with  $\pi_{Aj}$  and  $g_j$  in such a way that the OLS set of coefficients might be biased and inconsistent. To account for this, we perform the three-stage least square (3SLS) estimation method for the simultaneous equation system in (4). Results are reproduced in Table 3.

### INSERT TABLE 3

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<sup>12</sup> We also ran the regression without the RUR variable, coefficient and significance are similar to those in (1).

Table 3 contains regression (5) and (6) that correspond to the system formed by (1) and (3) in Table 2, while regressions (7) and (8) correspond to (2) and (4) system in Table 2. What can be noticed from the results is that in general they show similar trend that the OLS results with some in differences that rise up the coefficients. The effect of political competition on public investment is about twice than in OLS coefficients, although with lower significance. Support of the RPI ( $\pi_{Aj}$ ) as determining public investment was almost double its coefficient and remains highly significant. Another remark to note is that the variable for the state's position on the income distribution (INE) becomes significant and displays a positive sign, which reinforce findings of public investment having a regressive effect (e.g. Rodriguez-Oreggia and Costa-Font, 2001). That is, benefiting more states with high income rather than low-income states.

Previous findings, although limited due to the aggregation level of the data, supports the evidence for the hypothesis that public investment was allocated in areas where political affiliation of the incumbent party was large. The objective of these public investment assessment criteria for the incumbent was to put political purposes to control localities, what in turn might also enable the central government to determine its own pace for decentralisation.

## 6. Conclusion

Mexico has had a *sui generis* political system during most of the Twentieth Century. A sole political party dominated the political arena since 1929 in all levels of the government. However, the changing political and economic environment during the 1980s led to an increase in the pressures for decentralisation and a rise in political competition. This feature has had strong economic consequences, especially in influencing government's decisions towards distributing public funds at the regional level. Regional policies during this period were explicitly setting equity objectives as policy targets. To this extent, Mexico offers a unique example of the economic impact of political competition when the incumbent party has the monopoly of public funds distribution.

This paper has shown that the allocation of public investment between regions did not pursue solely redistribution objectives as the national plans had suggested, but that political competition mattered as a means of influencing (or compensating for) support for the incumbent party. The central government spent, on average, more where more localities of the PRI had stronger political support, at least retaining political spaces, which allowed central government to establish a place for decentralisation. These results are consistent with models of political competition under several jurisdictions in the US as Besley and Case (1995). Public investment is influencing positively the proportion of localities where the majority party had a larger support. A possible concern here is whether geographic distribution of voters matters. Although voters were mobile between regions in the seventies and part of the eighties, migration was not remarkable during the period analysed and, consequently would not influence results. However, significance of regional dummies in explaining regional allocation of public investment when mobility is small can be explained by differences in weights that different regions have in the utility function of the party ruling the government, consistently with Petchey (2000).

Our findings are consistent with the hypothesis that public investment was used as a way to enhance support for the incumbent, or to compensate local governments for not changing their support to the opposition party. These results however have to be interpreted in a broad context of regional decentralisation. Decentralisation as noted, has been the natural consequence of the lack of political competition at the central level. Logically,

decentralisation has increased in a context in which an increasing political and electoral competition has taken place. Nevertheless, the central government apparently has used the control of local governments to impose a drop-counter decentralisation process.

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**Table 1. Summary statistics**

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
$\pi_{Aj}$	0.6595	0.1188	0.3482	0.9553
$g_j$	5.9959	0.7337	4.4373	8.3633
$g_{jt-1}$	6.0638	0.7023	4.4373	8.3633
INE	-0.1006	0.8233	-1.1566	2.7584
S	1.8747	0.1474	1.4350	2.2082
RUR	0.3146	0.1499	0.07	0.605
GOV	0.0483	0.2151	0	1
OIL	0.0645	0.2463	0	1

**Table 2. Determinants of local support for the PRI and public investment. Ordinary Least Squares (OLS)**

Variable	OLS			
	(1) $\pi_{Aj}$	(2) $\pi_{Aj}$	(3) $g_j$	(4) $g_j$
$\pi_{Aj}$			0.8583*** (0.2718)	0.8954*** (0.2628)
$g_j$	0.0552*** (0.0176)	0.0558*** (0.0178)		
$g_{jt-1}$	-0.0140 (0.0186)	-0.0188 (0.0186)	0.6798*** (0.0555)	0.6830*** (0.0551)
INE			0.0532 (0.0405)	0.0490 (0.0397)
S	-0.2104** (0.0990)	-		
RUR	0.0591 (0.0975)	0.2332*** (0.0534)		
GOV	-0.0942** (0.0370)	-0.092*** (0.0374)	-0.0823 (0.1490)	-
OIL			0.5548*** (0.1506)	0.5546*** (0.1503)
CONSTANT	0.7948*** (0.2115)	0.3713*** (0.0714)	1.2807*** (0.3614)	1.2319*** (0.3498)
$R^2$	0.2654	0.2468	0.6991	0.6985
F	9.19	9.77	59.07	0.6884
Prob F >0	0.00	0.00	0.00	0.00
N	186	186	186	186

\*\*\* Significant at 1% \*\* Significant at a 5% and \*Significant at 10%.  
Standard errors in parentheses. Time effects not reported.

**Table 3. Determinants of local support for the PRI and public investment. Three Stage Least Squares**

Variable	3SLS			
	(5) $\pi_{Aj}$	(6) $g_j$	(7) $\pi_{Aj}$	(8) $g_j$
$\pi_{Aj}$		1.7035*** (0.6192)		1.7216*** (0.5783)
$g_j$	0.1101** (0.0571)		0.0980* (0.0576)	
$g_{jt-1}$	-0.0607 (0.0494)	0.6654*** (0.0561)	-0.0542 (0.0496)	0.6627*** (0.0568)
INE		0.0941** (0.0379)		0.0911** (0.0378)
S	-0.1846** (0.0887)			
RUR	0.0725 (0.0868)		0.2257*** (0.0528)	
GOV	-0.0862** (0.0378)	0.0081 (0.1658)	-0.0848** (0.0340)	
OIL		0.4141*** (0.1438)		0.4298*** (0.1448)
CONSTANT	0.6953*** (0.1984)	0.8187* (0.4575)	0.3347*** (0.0844)	0.8223** (0.4206)
$R^2$	0.2253	0.6811	0.2233	0.6808
$\chi^2$	57.67	424.74	52.18	420.07
Prob $\chi^2 > 0$	0.00	0.00	0.00	0.00
N	186	186	186	186

\*\*\* Significant at 1% \*\* Significant at a 5% and \*Significant at 10%.  
Standard error in parentheses. Time effects not reported.

## Appendix

**Table A1. Variables description**

Variable	Source	Definition
$g_j$	A	The log of federal public investment per capita realised in each state. The definition of public investment comprises social investment, infrastructure and other investment.
$\pi_{Aj}$	C	The share of municipalities in the state governed by the PRI.
GOV	-	A dummy variable for states governed by a political party different from PRI.
OIL	-	A dummy variable in which a value of 1 is assigned to Campeche and Tabasco, 0 otherwise.
S	A	The log of average years of schooling of population aged 15 and over
RUR	A	The percentage of population living in rural areas in each state
INE	A,B	A measure for the relative position of each state on the income scale. It is calculated as: $V_i=(y_i-\bar{y})/S$ . Where $y_i$ is the per capita GDP for each state, $\bar{y}$ is the national average per capita GDP and S is the standard deviation for the whole set of regions.

A. Statistical Annexes of the Presidential Address to the Nation (various years)

B. Instituto Nacional de Estadística, Geografía e Informática (INEGI).

C. Banamex. Economic Studies Department.