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Particularistism in the Subnational Provision of Local Public Goods in Mexico and Argentina

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Introduction [1]

Are subnational governments in Latin America providing local public goods fairly, and according to impersonal, universalistic criteria, or are they making these determinations according to particularistic, partisan considerations? When allocating resources, are subnational governments targeting their core supporters, or are they aiming at independent or opposition voters? These questions take on added urgency in recent years, following important decentralizing reforms in Latin America and elsewhere in the 1980s and 1990s that transferred to an unprecedented degree the responsibility to tax, spend, and provide such basic public services as education, health, housing, drinking water, and infrastructure to lower levels of government. These reforms took place in a context of acute regional inequalities in economic and institutional performance; thus, such a restructuring of the state potentially has vast implications for the quality of life of the citizenry in these countries (O'Donnell 1993; Mirabella de Sant 2002; PNUD 2002; PNUD 2003). [2]

Proponents of fiscal decentralization anticipate that the decentralization of resources and decision making to local governments would encourage participation, bring about a more accountable democracy at the local level, and tailor public services to local tastes. They expect competition among local governments and greater accountability to have a positive effect on the quality of local services (Tiebout 1956; Oates 1972; Weingast 1995). Other, more pessimistic scholars anticipate that access to new resources at the subnational level might consolidate local authoritarian enclaves where public services go underprovided (Graham 1994; Cornelius 1999; Stepan 2001; Vilas 2003).

The research on decentralization has not resolved this debate. Case studies looking at local governments have not systematically explored the conditions under which the provision of local public goods and services is likely to be politically manipulated by local bosses or, on the contrary, provided on a fair basis, and the fragmentary research to date has

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[2] For example, in Mexico and Argentina, the per capita product of the wealthiest state is six times that of the poorest one (Mirabella de Sant, 2002); in some regions, democratic institutions and practices are vibrant and political parties contest for power and alternate in government; while in others, institutions are reformed to allow the same party, or even the same politician to remain in power with no opportunities for political turnover (O'Donnell 1993).

produced contested findings (Rodríguez 1997; Tendler 1997). Some of the general explanations for variation in performance across decentralized systems look at the institutional arrangements between central and subnational governments and account for cross-national variation, but fail to explore variation among subnational units within one country (Weingast 1995; Blanchard 2000).

More specifically, formal models on tactical manipulation of public spending predict opposite outcomes. On the one hand, Lindbeck and Weibull (1987; Lindbeck 1993) and Dixit and Londregan (1996) predict that the incumbent government would purchase votes by distributing money to regions in which there are many swing voters. In contrast, the prediction from the second model, put forth by Cox and McCubbins (1986), is that because of risk aversion, the incumbent government privileges regions where it already enjoys electoral support. Empirical tests of these two main hypotheses are divided and findings point in both directions. On the one hand, studies by Gonçalves (2007), Castells (2005), and Dahlberg (2002) find support for the model that predicts targeting of discretionary spending to swing voters. On the other, Larcinese et al (2006), Ansolabehere and Snyder (2006), and Golden (2003), analyzing spending by the United States Presidency, U.S state governments, and Italian Parliament respectively, find support for the second hypothesis, spendings favors loyal voters.

This paper makes two contributions. First, it proposes an original measure of particularism in the provision of local public goods. Second, it explores how particularistic allocations of local public goods target regions with both loyal, and opposition voters, but assigning local public goods with a different scope; and highlights the relevance of mayors' political alignment vis-à-vis the governor for being targeted with one or another type of local public good. To develop this study I gathered original information on the provision of local public goods since the mid 1990s in four states in Mexico and four provinces in Argentina.

The paper is organized in two sections. A first section develops a gap index of particularim in the allocation of local public goods. In designing this index I conceive particularism on procedural grounds as a deviation from universalistic modes of allocation of services. In so doing, I approach the problem from the perspective of the subnational government administrations, which are responsible for the provision of basic services in a

given territory and holds a program of government that sets parameters for a fair allocation of resources. The measure of particularism I develop assesses the extent to which the actual supply of these basic services deviates from a would-be fair distribution, i.e., the allocation of resources according to the program of government. The second section describes the allocation strategies of local public goods implemented by fifteen administrations in four states in Mexico and four provinces in Argentina. The results of a series of cluster analyses are presented to illustrate how local public goods whose beneficiaries are households are targeted to regions governed by mayors loyal to the governor, while local public goods with a community scope are primarily targeted to regions governed by opposition mayors.

A. Particularism in the Provision of Local Public Goods: A Gap Index

What constitutes a particularistic provision of local public goods? This paper addresses this question by developing an index to assess particularism, which will be later applied to the provision of local public goods by subnational governments in eight subnational cases in Mexico and Argentina.

The literature on distributive politics, pork-barrel politics, and clientelism offer homogenous conceptual answers to this question but a variety of measurement approaches, which I argue fail to grasp the conceptual definition. This work departs from two approaches to particularistic spending which either classify policy benefits as particularistic according to *who is served by a given public policy*, or define spending as particularistic when explained by political variables. A measure of particularistic spending should address the concept on procedural grounds, regardless of who benefits from the allocations and what explains them. What makes a policy benefit particularistic or not is the *basis of allocation*: benefits are allocated on a *universalistic basis* when they are assigned to individuals –or districts- that are entitled to them because they meet stipulated criteria, or on a *discretionary basis* when the allocation deviates from universalistic programmatic rules.

In order to overcome the limitations of the available operational definitions of particularistic spending, and to develop a valid measure, this paper proposes a "gap index of particularism" in the provision of local public goods. This index is calculated by

assessing the distance of the actual geographic distribution of spending in local public goods from the universalistic geographic distribution of these benefits.

1. Measurement of particularistic government spending

a. Approaches to particularistic spending

Particularism consists of discretionary deviations from universal rules (O'Donnell 1996). When referred to government spending, the concept of particularism is opposed to universalistic or programmatic modes of exchange between politicians and citizens. Under programmatic or universalistic modes of exchange, citizens receive policy benefits –or are excluded from them- as a matter of codified rules, regardless of other considerations. When particularistic modes of exchange rule government spending, allocation decisions are based on political discretion; citizens receive policy benefits not because they are entitled to them, but as a consequence of discretionary decisions that depart from the universalistic prescriptions of the program (Kitschelt 2000).

In measuring particularistic spending, part of the literature classifies policy benefits as particularistic in *teleological* terms according to *who is served by a given public policy* (e.g., a district, individuals, an interest group). In this sense, particularistic goods have been defined as those geographically targeted, benefiting a certain district (Baron 1987); or as club goods that favor rent-seeking special interests (McCubbins 1995); or as excludable private goods targeted to individuals (Estévez 2002; Kitschelt 2007; Magaloni 2007). These definitions operationalize particularistic discretion as excludability.[3] According to these definitions, public works assigned to a given district constitute pork-barrel politics or particularistic spending because the benefits are geographically circumscribed; or housing benefits would be clientelistic because they benefit single families. In this view, benefits that can be strategically targeted to one or another district, to one or another individual or family because they are excludable, constitute particularistic benefits.

Some kind of excludability is a condition for particularistic discretion, but it does not fully account for it. For a policy benefit to be discretionarily manipulated politicians must be able to threaten citizens with exclusion from the benefit. And in this sense, except for national public goods, almost any policy benefit satisfies this condition. Localities can

[3] "The discretional nature of particularistic transfers always implies a credible threat of exclusion, should the client renege on her political commitments to the patron." (Magaloni et al, 2007).

be excluded from productive or social infrastructure public works; families and individuals can be denied access to services, transfers, etc. However, public works that benefit a geographically circumscribed area, club goods that benefit a specific interest group, private benefits that benefit single individuals or families can all constitute benefits of programmatic policies if assigned to entitled districts, groups or individuals according to universalistic criteria, or particularistic benefits if assigned disregarding the programmatic criteria.

What makes a policy benefit a programmatic or a particularistic one is not whether it can be targeted but the procedure or the bases on which it is targeted. What makes a policy particularistic or universalistic is the procedure, the mechanism of allocation.[4] Policy benefits can be distributed on a *universal basis*, in the sense that everyone who meets some stipulated criteria is eligible to receive them, or on a *discretionary basis*, when the allocation deviates from a distribution according to universalistic rules. Whether a given policy's target population are individuals, interest groups, or the citizenry in broad terms does not matter; we cannot decide if it particularistic or universalistic only on the basis of who is the beneficiary of a policy.

A second approach to measuring particularistic spending consists of looking at the variables that explain the geographic distribution of public expenditure. If politicians were driven by policy considerations, such as economic efficiency or need, we should expect the distribution of spending to reflect each region's level of need. Hence, particularistic benefits, which represent government spending obtained through the use of political influence, can be determined by calculating the extent to which the resources allocated to a given region exceed the exceed the level it deserves. To do so, the approach develops models that account for expenditure by including variables that reflect policy considerations, e.g., indicators of poverty or economic performance, as well as such political variables as electoral outcomes and partisan affinities. If explained by political factors, expenditure is conceived as particularistic, and if explained by demographic or economic variables, expenditure is regarded as policy based (e.g., Alvarez 1997; Case

[4] In discussing the bases for distinguishing between clientelistic and programmatic linkages, Kitschelt (2000) introduces this distinction between teleological and procedural definitions, and favors the latter.

2001; Rodden 2004; Nazareno, Stokes et al. 2006). In this perspective, what makes expenditure particularistic is the weight of the political factors in its explanation.

This approach to particularistic spending has three weaknesses. First, this approach accounts for spending, not for political particularism, and political discretion enters the model as one possible motivation for spending decisions. Hence, within this framework, we are not explaining particularism; particularism explains spending, political variables account for the patterns of spending. Second, because of the structure of this definition of particularism, the possibility of political explanations for programmatic modes of exchange among citizens and politicians is excluded. Particularistic spending is that explained by political variables and programmatic allocations are those explained by policy variables. No room is offered to account for universalistic allocations on political grounds, as if politicians could never find political incentives to engage in universalistic rules. And third, in accounting for programmatic spending by introducing policy relevant economic or demographic variables, the models implicitly assume that all governments do or should place the same value on the same policy factors, regardless of party ideology or government priorities.

A good measure of particularistic spending in local public goods requires that it: (1) addresses the distinction between universal allocations and particularistic ones on procedural basis, (2) measures both particularistic and universalistic spending as part of the same variable, (3) reflects the distributive dilemmas faced by a government responsible for providing local public goods, and (4) is sensitive to variation in the priorities of different programs of government.

This paper endorses the distinction between programmatic and particularistic spending in local public goods on *procedural grounds*. Spending in local public goods is universalistic when resources are assigned according to the rules and criteria of the party platform or the program of government of the administration; conversely, the provision of local public goods is particularistic when allocation decisions deviate from the established rules and criteria. Ideally, having adopted the procedural distinction between universalistic and particularistic modes of exchange, measurement of particularistic spending would require information on each transaction, to assess if resources are being assigned according to codified rules or contrariwise as the result of discretionary mechanisms. Lacking this

kind of information, this work proposes an index which evaluates how universalistic or particularistic the provision of local public goods is by assessing the distance of actual allocation of benefits from a normatively universalistic pattern of allocation.

b. A gap index of particularism in the provision of local public goods

Local public goods are goods and services that offer locally concentrated benefits, and limited economies of scale. These policies have features of both private and public goods with a local scope, e.g., infrastructure, basic sanitation, education, health care, and so forth. Local public goods are distinguished from national public goods by their scope; the beneficiaries of local public goods are the local community. From a national perspective, these public goods with local scope are considered exclusive because they are geographically targeted; from the vantage point of the local community, they are non-exclusive and therefore public goods. Some local public goods are non-exclusive, public goods in a strict sense, and therefore available to the community, e.g., urban infrastructure, roads and highways; while others, are exclusive, private goods, and their beneficiaries are single individuals or households, e.g., housing, drinking water, electricity; and also private goods with positive externalities, whose primary beneficiaries are single individuals or households, and indirectly the rest of the community, e.g., immunization campaigns protect not only the immunized but also those who could get infected, should the former have an infectious disease (Samuelson 2001).

In order to measure how universalistic or particularistic spending in local public goods is, the gap index assesses how the observed geographic distribution of spending in local public goods deviates from the programmatic geographic distribution of these services. The programmatic distribution of local public goods is the normative distributions, should the government implement universalistic criteria. The observed distribution of local public goods measures the pattern of allocation of resources in a given jurisdiction. The closer the observed distribution to the programmatic one, the more universalistic the allocation of local public goods would be; the further one from another, the more particularistic the provision of local public goods. More specifically, the observed geographic distribution of spending in local public goods in a jurisdiction determines spending allocated to each district (municipalities, departments, or regions) in the following policy areas: (1) housing, (2) drinking water, (3) education infrastructure, (4) health

infrastructure, (5) roads and highways, (6) public works. The programmatic distribution of local public goods estimates the proportion of spending that should be allocated to each district according to the distribution of needs and potentials specific to each policy area and the programmatic priorities of the party in government. Thus, to assess the distance of a distribution of spending from the universalistic standard, two distributions should first be calculated: the programmatic distribution, which describes how resources should be allocated, and the actual distribution, which depicts how resources have been effectively assigned.

Programmatic Distribution

The programmatic distribution of local public goods can be estimated from two approaches: from an inside perspective, reflecting the viewpoint of the administration responsible for providing the local public goods, or from an outside, normative standard.

From an inside approach, the programmatic distribution is estimated by looking at the priorities of the administration, which can be explicitly expressed in formulas of allocation or inferred from general criteria in the program of government. If all government spending takes place guided by pre-established formulas, in assessing the level of particularism, we could just look at the distance of any given distribution of spending from the allocations prescribed by the formulas. However, the explicit specification of a program of government in precise formulas is rare. In the basence of these formulas, the programmatic distribution can be inferred from the priorities established by a given administration in its program of government. The main advantage of this procedure for estimating the programmatic distribution is that it allows for an evaluation of particularism of any administration against its own standards. Objections can be raised that this procedure would not work in three circumstances: first, if the administration has no program of government; second, if the administration explicitly commits to pursue particularistic rules of allocation; and third, if the particularistic rules of allocation are hidden in the formulas. In these cases, the programmatic distribution can only be developed from an outside perspective, with an independent conception of what is universalistic and what is particularistic. In this approach, the only feasible basis for designing the universalistic distribution would be normative standards. In response to the first two objections it can be argued that politicians are sophisticated citizens who find particularism morally

objectionable, even if they practice it. Politicians will always conceal their own clientelist practices, and voice a commitment to some normative programmatic mode of exchange with citizens (Kitschelt, 2000). Thus, it is unlikely that a politician would propose an explicitly particularistic program of government. To the third objection previous work seems to be divided on whether particularistic spending can occur in expenditure assigned according to formulas. For example, Stein and Bickers (Stein 1994) understand that particularistic spending does not take place in the realm of formulas, while Alvarez and Saving (Alvarez 1997) find support for a contrary view.

The procedure proposed in this paper to estimate the programmatic distribution of local public goods combines these two options. From an *outside perspective*, in order to guarantee comparability across cases, three criteria of allocation are considered. These normative criteria of allocation These three criteria of allocation, selected on theoretical reasons, are the following (Elster 1989; Elster 1992):

1. Pure Equality (PE): when a good can be infinitely divided without diminishing its worth, it can be equally assigned to all the potential beneficiaries or entitled individuals. A possible indicator to account for this criterion is population.
2. Economic Efficiency (EE): resources can be allocated where they are likely to produce more benefits. As proxies for how dynamic the economy is, I include indicators of labor force and employment.
3. Need (N): it often seems obvious that scarce resources should be assigned according to needs, to those who will benefit the most with them. The indicators included to account for needs in each policy area are the following: illiteracy, health insurance coverage, access to basic services (drinking water, WC, and electricity).

A program of government can consider different allocation criteria for different local public goods and combine different criteria in the programmatic distribution of each local public good. For example, one administration can take into account "need" as the only criterion for the programmatic allocation of health services, and combine "need" and "economic efficiency" when defining the programmatic distribution of electricity.

An administration responsible for the provision of local public goods within a jurisdiction –a state, a province- faces two distributive constraints: (1) a limited amount of resources to provide services in each of the policy areas; and (2) a certain distribution of

needs and capacities in education, health, infrastructure, etc, across the jurisdiction.[5] The different parts of the jurisdiction –districts, departments, municipalities, etc.- are affected by some level of deprivation or hold some capacity in each policy area. Were all the districts in the jurisdiction equally deprived in the relevant areas, the government should allocate the same amount of resources to all districts. If, as is more likely, the distribution of deprivations and potentials in each policy area is heterogeneous across the territory, the government has to assign spending in local public goods discriminating among districts. Given the two distributive constraints, any assignment of benefits to one district takes place at the expense of another one. Therefore, all the indicators included are measured as ratios, to grasp the share of need or capacities corresponding to each district as a fraction of total needs and capacities in the jurisdiction.[6]

From an *inside perspective*, each of these distributive criteria, *pure equality*, *economic efficiency*, and *needs*, is assigned a weight that reflects the priorities explicitly stated in the program of government of the administration. To assign the weights I rely on two complementary or alternative sources: (1) the program of government of each administration under analysis, and (2) responses to specific questions in interviews with current and former governors of the provinces and states included in the study. As already suggested in this paper, politicians should be expected to hide their particularistic practices and voice a commitment to programmatic modes of exchange with citizens (Kitschelt, 2000).[7] In addition, depending on party or personal ideology, these politicians would express loyalty to different normative orientation of their government programs will differ depending on party platform or their own personal ideology. In analyzing these two sources, the documents and interviews, I look for the presence or absence of each of the three criteria of allocation in the strategies proposed in each policy area. To compute the

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[5] The provision of social services can be targeted to individuals when individual-level data on deprivation are available or self-targeting them, by designing programs that appeal mainly to the poor. Otherwise, social services can be targeted to regions through geographic targeting, whose simplicity is an advantage when information or administrative capacity are limited (Schady, 2002).

[6] Measuring the distribution of resources and the distribution of need as shares reflects more accurately the distributive dilemmas faced by governments when allocating scarce resources among districts within a territory, and avoids the distortions of using per capita indicators when asymmetries or inequalities prevail.

[7] This can work to our advantage. Through the responses to questions, we can grasp the normative orientation of these governors and the programmatic orientation of their administrations.

weight of each criterion, I divide 1 by the number of criteria present and assign the corresponding equal fraction to each criterion in each policy area. For example, if a given program of government plans to allocate resources for housing to (1) the districts with housing deficit, and (2) to districts with high rates of growth because of economic development, I assign a weight of .5 to each of the two criteria, *need* and *economic efficiency*.

In sum, the programmatic distribution of local public goods establishes the share of spending that should be allocated to each district according to the three normative criteria of allocation weighted by the priorities of the program of government, and can be estimated through a composite index that can be written in the following general expression:

$$PD(i,j) = W_{PE}(j)PEI(i) + W_{EE}(j)EEI(i) + W_{N}(j)NI(i)$$

where the three weights W_{PE}, W_{EE}, and W_{N} are the same for all districts (i) within the same jurisdiction (j), PEI is the indicator of pure equality relevant to each policy area (e.g., ratio of district population to total population in the jurisdiction); EEI is the indicator of economic efficiency for each policy area (e.g., ratio of economically active population in the district); and NI is the indicator of need specific of each policy area (e.g., ratio of houses with no water connection to total houses lacking water in the jurisdiction), as a proxy for the need of spendig in driking water. Table TTT summarized the indicators proposed for each criteria of allocation in each policy area.

Table 1: Indicators for each Criteria of Allocation

Policy area	Pure Equality	Economic Efficiency	Need
Housing	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$ Ratio of district population to the total population in the jurisdiction.	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	$S_{NWC}(i) = 100\left(\frac{NWC_i}{NWC_j}\right)$ Ratio of houses with no WC in each district to total of houses without WC in the jurisdiction
Drinking water	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$ Ratio of district population to the total population in the jurisdiction.	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	$S_{NAW}(i) = 100\left(\frac{NAW_i}{NAW_j}\right)$ Ratio of houses with no water connection to total houses lacking water in the jurisdiction
Electricity	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$	$S_{NAE}(i) = 100\left(\frac{NAE_i}{NAE_j}\right)$

	Ratio of district population to the total population in the jurisdiction.	Ratio of economically active population in the district to total EAP in the jurisdiction.	Ratio of district houses with no access to electricity to total houses with no electricity in the jurisdiction
Educational infrastructure	$S_{POP6to14}(i) = 100\left(\frac{P6to14_i}{P6to14_j}\right)$ Ratio of the 6 to 14 district population to the total 6 to 14 population in the jurisdiction	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	$S_{ILL}(i) = 100\left(\frac{ILL_i}{ILL_j}\right)$ Ratio of district illiterate population to total illiterate population in the jurisdiction
Health Infrastructure	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$ Ratio of district population to the total population in the jurisdiction.	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	$S_{UNI}(i) = 100\left(\frac{UNI_i}{UNI_j}\right)$ Ratio of district uninsured population to total uninsured population in the jurisdiction
Roads	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$ Ratio of district population to the total population in the jurisdiction.	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	
Other Public Works	$S_{POP}(i) = 100\left(\frac{P_i}{P_j}\right)$ Ratio of district population to the total population in the jurisdiction.	$S_{EAP}(i) = 100\left(\frac{EAP_i}{EAP_j}\right)$ Ratio of economically active population in the district to total EAP in the jurisdiction.	

Observed Distribution

To measure the observed distribution of spending in local public goods, I consider the share of spending in each policy area in each district as a fraction of total spending in the jurisdiction (province, state) as a whole. More specifically, the actual geographic distribution of local public goods measures the share of spending allocated to each district in the following policy areas: (1) housing, (2) drinking water, (3) electricity, (4) education infrastructure, (5) health infrastructure, (6) roads and highways, and (7) public works. The Observed Distribution in each of the seven policy areas is measured as in the following expressions:

$$OD\text{Housing}(i) = 100\left(\frac{H_i}{H_j}\right)$$

$$ODWater(i) = 100\left(\frac{DW_i}{DW_j}\right)$$

$$ODElectricity(i) = 100\left(\frac{E_i}{E_j}\right)$$

$$ODSchools(i) = 100\left(\frac{Sch_i}{Sch_j}\right)$$

$$ODHospitals(i) = 100\left(\frac{Hosp_i}{Hosp_j}\right)$$

$$ODRoads(i) = 100\left(\frac{R_i}{R_j}\right)$$

$$ODPublicWorks(i) = 100\left(\frac{PW_i}{PW_j}\right)$$

Where H stands for spending in Housing and includes subsidies to buy land, buy housing; DW represents spending in drinking water, includes new connections, and water systems; E, the expenditure in electricity, includes investment in electric plants, facilities, and networks; Sch represent expenditure assigned to educational infrastructure, Hosp corresponds to that assigned to health infrastructure; R is spending in roads and highways, and PW is spending devoted to sports infrastructure, renovation of historical buildings, and other public infrastructure. All of these include spending on new facilities as well as improvement of existing infrastructure.

The index

The measure of particularism was designed as a gap index to indicate to what extent the actual geographic distribution of spending in local public goods across the jurisdiction deviates from the programmatic distribution. The Gap Index of Particularism is expressed as:

$$GIP(i) = OD(i) - PD(i)$$

Where Gap Index of Particularism measures the level of particularism in the allocation of local public goods in a specific district within the jurisdiction; OD is the Observed Distribution, which reflects the actual proportion of spending local services assigned to each district as a share of total spending in the whole jurisdiction in each policy area; and PD, the Programmatic Distribution refers to the fair share of resources that should

be allocated to each district according to universal criteria of the program of government. The Gap Index of Particularistic, defined as the subtraction of the Programmatic Distribution from the Observed Distribution of local public goods measures the distance of the actual allocation of resources to each district from the allocations to which it is entitled. A number of alternative ways of combining the data to develop a gap index of particularistic spending were considered, but this approach was judged to best reflect the distinction between universalism and particularism as procedures. Gap indices are built as ratios or differences (Sarker 2002; Kwok 2004). Besides the fact that ratios cannot deal with zeros, which are frequently present in the observed distributions of local public goods (often, districts are not allocated any resources in some policy areas in a given year), the idea of particularism as "getting more" or "getting less than deserved" is better addressed by a subtraction.

When the Gap Index of particularism in a given district equals zero we can infer that resources have been allocated fairly, according to the criteria established by the program of government. When the Gap Index of Particularism equals any non-zero value, the allocations are not universalistic but particularistic. Distributions are particularistic by undersupplying public goods, when the index assumes a negative value and by oversupplying, when the values are above zero. Translated into the language of politics, the negative values of the index, undersupply, reflect a particularistic manipulation of policy benefits as *punishment* strategies; zero, reveals *fair allocations*, distributions of local public goods according to programmatic criteria, and positive values of the index, oversupply, represent particularistic allocation of resources in either *reward* or *appeal* strategies depending on the target –loyal, opposition or independent voters.

B. Particularism in the provision of local public goods in Mexico and Argentina

1. Case selection and Methods

In this section, I present an application of the Gap Index of Particularism to the provision of local public goods by fifteen administrations, in four states in Mexico and four provinces in Argentina.

This paper is part of a larger project in which I work at three levels of analysis: two country cases, eight subnational cases, and the regions within the states and provinces.

The criteria applied in selecting the two country cases are fiscal decentralization and political centralization, and in selecting the subnational units, are fiscal dependence, partisan affinity between president and governor, and balance of power between government and opposition. These criteria of case selection intend to control for three alternative explanations, which ascribe restraining effects on particularism to: (1) political centralization, (2) fiscal incentives, and (3) opposition government, and to explore the consequences of the balance of power on the provision of these services. As a result of combining these criteria, the cases are two administrations in each of the following states and provinces: Oaxaca, Zacatecas, Jalisco and Sonora in Mexico, and Corrientes, Jujuy, Mendoza and Cordoba in Argentina, a total of fifteen administrations (See Table 2).

Table 2. Case selection

Political Centralization	Fiscal Dependence	Partisan Affinity Governor – President	Competition: Margin governor's election	Administration	Governor
High Mexico	High: cases within the quartile of higher vertical fiscal imbalance	Government	Low	Oaxaca 1992-1998	Diódoro
		Government	High	Oaxaca 1998 – 2000	Murat
		Government	Low	Zacatecas 1992 - 1998	Romo
		Opposition	High	Zacatecas 1998 – 2004	Monreal
	Low: cases within the quartile of lower vertical fiscal imbalance	Government	Low	Sonora 1991 - 1997	Beltrones
		Government	High	Sonora 1997 - 2003	López Nogales
		Opposition	High	Jalisco 1995 - 2000	Cárdenas
		Opposition	High	Oaxaca 2001 - 2004	Murat
In transition or just low centralization, Mexico after 2000	High	Opposition	High	Zacatecas 2001 – 2004	Monreal
	Low	Opposition	High	Sonora 2001 - 2003	López Nogales
	Low	Government	High	Jalisco 2001 - 2006	Ramírez Acuña
Low Argentina	High: cases within the quartile of higher vertical fiscal imbalance	Government	Low	Jujuy 1995 – 1999	Ferraro
		Opposition	High	Jujuy 1999 – 2001	Fellner
		Government	High	Jujuy 2001 - 2003	Fellner
		Opposition	Low	Corrientes 1994 - 1997	Romero Feris
		Opposition	High	Corrientes 2002 - 2006	Colombi
	Low: cases within the quartile of lower vertical fiscal imbalance	Government	Low	Mendoza 1995 - 1999	Lafalla
		Government	High	Mendoza 1999 – 2001	Iglesias
		Opposition	High	Mendoza 1999 – 2003	Iglesias
		Opposition	High	Córdoba 1999 – 2001	De La Sota
		Government	High	Córdoba 2001 - 2003	De La Sota

How do these governors distribute spending on local public goods distributed across the territory of the provinces they rule? Where does the particularistic oversupply spending go within the states and provinces? Which regions are treated in a programmatic way?

And which ones are denied the local public goods to which they are entitled? Which obtain additional benefits? What are the characteristics of oversupplied or undersupplied regions? Do regions that benefit from particularistic oversupply spending, or those that are punished by being undersupplied with local public goods, share any socio-economic or political characteristics? To answer these questions, we look at the regional; level and through a series of cluster analyses explore how the regions come together according to the strategy with which they were targeted. Once the regions have been classified according to the strategy of allocation, the groups are described in terms of the socio-economic and political characteristics of the regions.

A series of hierarchical cluster analyses were performed. The goals of this section are two-fold: (1) to explore how regions cluster together when jointly evaluated according to the allocation strategy implemented in the provision of different LPGs, and (2)to identify the socio-economic and political characteristics of the regions included in each cluster. In this stage, the units of analysis are the regions, which have been targeted by one of three possible allocation strategies in each policy area: programmatic allocations, undersupply, or oversupply.

To perform the cluster analyses, I proceed by [insert verb] pairs of policy areas, and by looking first at the distinction between programmatic and particularistic strategies; and second, at the distinction within particularistic strategies between undersupply and oversupply. The first pair of policy areas includes two LPGs whose beneficiaries are individuals or households, and the second pair includes two LPGs whose beneficiaries are communities.[8] The cluster analyses yield groups of regions, which are described according to: (1) the allocation strategy of local public goods with which the regions are targeted, (2) the socio-economic and political variables.

In the analysis of the Mexican cases, four cluster analyses were implemented. The variables included in the first two analyses are indicators of allocation strategies of two households-LPGs, housing and drinking water connections:

1.Type of allocation strategy in Housing: whether programmatic or particularistic.

[8] Optimally, it would have been preferable to perform the cluster analyses including strategies in all policy so as to explore how the strategies cluster together. Nevertheless, the available information on the provision of LPGs is not complete for all policy areas all years in all administrations. For this reason, in order to maximize the number of observations included in each cluster analysis I proceeded by pairs of policy areas.

2. Type of allocation strategy in Water: whether programmatic or particularistic.
and
1. Type of particularistic strategy in the allocation of Housing: which one of two strategies, undersupply or oversupply.
2. Type of particularistic strategy in the allocation of Water: which one of two strategies, undersupply or oversupply.

The second set of cluster analyses in the Mexico cases includes indicators of allocation strategies of two community-LPGs, schools and roads:
1.Type of allocation strategy in Schools: whether programmatic or particularistic.
2. Type of allocation strategy in Roads: whether programmatic or particularistic.
and
1. Type of particularistic strategy in the allocation of Schools: which one of two strategies, undersupply or oversupply.
2. Type of particularistic strategy in the allocation of Roads: which one of two strategies, undersupply or oversupply.

In the analysis of the Argentine cases, only two (?) cluster analyses were implemented, and they included indicators of allocation strategies of two community-LPGs, schools and hospitals:
1.Type of allocation strategy in Schools: whether programmatic or particularistic.
2. Type of allocation strategy in Hospitals: whether programmatic or particularistic.
and
1. Type of particularistic strategy in the allocation of Schools: which one of two strategies, undersupply or oversupply.
2. Type of particularistic strategy in the allocation of Hospitals: which one of two strategies, undersupply or oversupply.

Six hierarchical, agglomerative cluster analyses were implemented using Between-Groups Linkage (UPGMA, or unweighted pair groups method using arithmetic averages) based on a simple matching measure of distance. In this method, the distance between two clusters is the average distance between all inter-cluster pairs. UPGMA is generally preferred over nearest or furthest neighbor methods since it is based on information about all inter-cluster pairs, not just the nearest or furthest ones. I opted for simple matching

because among the measures of distance in cluster analysis for dichotomous variables, this is one of the most frequently used and is not sensitive to the direction of coding (Romesburg 2004). The criterion to determine the number of clusters was that the solution had to be parsimonious and conceptually relevant. Given the small number of cases, by inspecting the initial dendograms, which show the similarities/dissimilarities between each pair of observations, it was possible to identify the number of cases included in each cluster. When a cluster was composed by three cases or less, I decided to dissolve it in the following cluster. This procedure yields two clusters in each analysis.

Socio-economic variables

The thirteen indicators included assess the current level of provision of each local public good housing, water, electricity, education, and health. The indicators included measure: (1) the percentage of the population/houses uncovered by these basic services in each region and (2) the share of uncovered population/houses in each region with respect to the total uncovered population in the state/province. To reduce data dimensionality and to identify a lower number of independent socioeconomic factors that could be related with the allocation strategies, a principal components analysis (PCA) was used. The PCA is used to reduce a number of variables to a few factors that best explain the variation in the original set of variables (Bartholomew 2002).

The Principal Components Analysis results in two factors for the Mexican cases, and three factors for the Argentine ones. The results, presented in table ttt show that in both analyses, the first factor reflects the distribution of needs across the territory, and the second factor represents the socio-economic characteristics of the units. The dominating variables in the first factor are those that measure socio-economic deprivation in terms of shares, and the dominating indicators in the second factor are those that measure the percentages within each region. A third factor in the Argentine cases is specifically related to the coverage of health insurance. In the description of the socio-economic characteristics of the clusters, these two factors will be considered: size and level of supply/needs of LPGs.

Political variables

To characterize the clusters in terms of the political dynamics of the regions, I consider two sets of measures of political competition. The first three indicators consider the relative

strength of the ruling party and the opposition in the electoral arena. The first indicator accounts for the *electoral strength of the ruling party*, measured as the % vote of the ruling party in the latest local election. The second indicator is *partisan affinity*, which accounts for whether the winning party in the latest local elections was the ruling party or any opposition party. The third indicator is *electoral competitiveness* in the latest local election, measured as the ratio of the percentage obtained by the second party on the percentage obtained by the winning party in the latest local election. These variables intend to explore the type of regions –loyal, competitive, opposition- targeted with different allocation strategies –undersupply, programmatic, oversupply (Cox 1986; Lindbeck 1987; Dixit 1996).

The second set of variables focuses on the balance of power between government and opposition in the arena of intergovernmental relations between the provincial government and the municipalities. The first two indicators are the percentages of the regional population in municipalities governed by opposition mayors and loyal mayors. Two other indicators are the shares of the state or province population in municipalities governed by opposition mayors and loyal mayors. By introducing these four indicators I intend to explore whether there is any association between the political alignments of mayors vis-à-vis governors and the allocation strategies implemented.

At this level of analysis, the observations are nested twice: (1) over time, and (2) within administrations, and states. First, the available data include repeated observations of each region over time, which cannot be pooled together in a single cluster analysis (Maharaj 1999; Bartholomew 2002; Liao 2005). For the purposes of exploring how regions cluster together according to allocation strategies, I put aside trajectories and perform a cross sectional analysis selecting the observations that correspond to midterm election years.

Second, each region shares characteristics with the rest of regions governed by the same governor and moreover, from the point of view of the governor, the value assumed by each variable –size, wealth, political competitiveness, etc, in each region is relative to the values assumed by in the rest of the regions within a state. Each administration faces specific geographic distributions of structural socio-economic characteristics of the regions as well as the more dynamic political factors. For example, the most socio-economically

deprived region in the wealthy state of Sonora has better indicators than the most affluent region in the poor state of Oaxaca. In 1995, the highest percentage of houses without drinking water in Sonora is 17.2% in the Sierra Sur region, while the best figure in Oaxaca is as high as 40.2% in the Istmo Region. Likewise, political variables show important variation across states. For instance, in the 1995 gubernatorial election, the mean % of votes for the ruling party in Jujuy was 65.9% -with a minimum of 43.9% in Belgrano region, and a maximum of 84.4% in Santa Catalina region. In Mendoza instead, the mean % of votes for the ruling party was 43.3% -with a minimum of 33.8% in Mendoza Capital, and a maximum of 51.6% in Maipú. Having this in mind, and in order to be able to compare the regions regardless of the administration/state to which they belong, I developed a series of categorical variables that reflect the position of each region on each dimension, relative to the rest of the regions in the same administration. On the basis of the original continuous socio-economic and political variables each region-level observation was classified according to whether it is below or above the mean for the administration in which the observation is nested.

2. The allocation of Local Public Goods.

a. Household-LPGs: Allocation Strategies of Housing and Water in Mexico

The first cluster analysis of household-LPGs, housing and water, distinguishes between programmatic and particularistic strategies and yields two groups which significantly differ in the percentage of regions targeted with each strategy in both policy areas. The programmatic cluster includes all the regions targeted with programmatic strategies in the allocation of water and more than 70 percent of the regions not (?) programmatically treated in the provision of housing. The results of the second cluster analysis, which discriminates within particularistic strategies, are mostly driven by the distribution of housing benefits. The subgroups are completely different regarding allocation strategies of housing benefits, but allocation strategies of water converge with those of housing only in the case of undersupply.

Table ttt: Clusters of allocation strategies of Housing & Water. Mexico

	Particularistic vs. Programmatic				Oversupply vs. Undersupply			
	N	Particularistic	Programmatic	Phi	N	Oversupply	Undersupply	Phi
% Undersupplied regions in:								
Housing	60	70	30	.42***	42	0	100	-1***

Water	47	100	0	1***	45	28.89	71.11	-.20
% Programmatically treated regions in:								
Housing	22	27.27	72.73	.42***	-----	-----	-----	-----
Water	38	0	100	1***	-----	-----	-----	-----
% Oversupplied regions in:								
Housing	27	85.19	14.81	.42***	23	100	0	-1***
Water	24	100	0	1***	20	50	50	-.20
N	109	71	38		65	23	42	

The clusters systematically and significantly differ in the social and political indicators that reflect region size. Programmatic strategies seem to be predominantly targeted to small regions, and particularistic strategies do not "discriminate" by size. Specifically, the proportion of small regions in the cluster targeted with programmatic allocations of housing and water is above 80%, while the composition of the particularistic cluster is evenly divided between small and large regions. Interestingly, the clusters do not show varysubstantially with regard to the socio-economic characteristics of the regions. The second set of clusters, which distinguish between oversupplied and undersupplied regions, differ in the size but not in the socio-economic characteristics of the regions targeted with each particularistic strategy. In the undersupplied cluster, more than 70 percent of the regions are large ones, while in the oversupplied subgroup, small and large regions are present almost in the same proportion. And both strategies seem to be evenly distributed among deprived and wealthy regions.

Table ttt: Clusters Allocation strategies of Housing & Water. Socio-economic variables. Mexico.

	Particularistic vs. Programmatic strategies					Oversupply vs. Undersupply			
		N	Particularistic	Programmatic	Phi	N	Oversupply	Undersupply	Phi
Socio-economic deprivation share	Small	56	36.62	78.95	-.40***	24	56.52	26.19	.30*
	Large	53	63.38	21.05		41	43.48	73.81	
Socio-economic deprivation %	Low	56	49.30	55.26	-.06	34	52.17	52.38	.00
	High	53	50.70	44.74		31	47.83	47.62	
N		109	71	38		65	23	42	

In terms of political characteristics, the clusters that distinguish between programmatic and particularistic strategies significantly differ regarding partisan affinity and size of the electorate. The regions targeted with particularistic strategies are predominantly loyal to the ruling party, 76% of them are regions in which the ruling party

won the last local election, while the programmatic strategies are equally directed to both loyal and opposition regions. In turn, the regions targeted with programmatic strategies are distinctively small in terms of the contribution of votes for the ruling party, and the population in municipalities governed either by loyal or opposition mayors.

Within particularistic strategies, the most remarkable difference is that oversupply targets loyal voters and loyal mayors, while undersupply is distributed more evenly across regions with different characteristics. In the cluster of oversupplied regions there are larger percentages of large loyal municipalities and small opposition ones.

Table ttt: Clusters Allocation Strategies of Housing & Water. Political variables. Mexico.

		Programmatic vs. Particularistic				Oversupply vs. Undersupply			
		N	Particularistic	Programmatic	Phi	N	Oversupply	Undersupply	Phi
% party vote	Small	40	38.0	34.2	.04	22	34.8	33.3	.02
	Large	69	62.0	65.8		43	65.2	66.7	
Partisan affinity	Opposition	36	23.9	50.0	**-.26*** **	16	21.7	26.2	-.05
	Loyal	73	76.1	50.0		49	78.3	73.8	
Competitiveness	Low	50	43.7	50.0	-.06	27	39.1	42.9	-.04
	High	59	56.3	50.0		38	60.9	57.1	
% Population in loyal municipalities	Small	28	38.5	42.1	-.03	20	33.3	45.2	-.12
	Large	43	61.5	57.9		29	66.7	54.8	
% Population in opposition municipalities	Small	44	59.6	68.4	-.08	28	72.2	48.4	.23
	Large	27	40.4	31.6		21	27.8	51.6	
Share party vote	Small	71	50.7	92.1	**-.41*** **	32	43.5	52.4	-.09
	Large	38	49.3	7.9		33	56.5	47.6	
Share population in loyal municipalities	Small	45	47.3	86.4	**-.36** **	24	33.3	54.5	-.20
	Large	32	52.7	13.6		27	66.7	45.5	
Share population in opposition municipalities	Small	57	64.8	78.6	-.14	31	78.9	51.6	**.27***
	Large	25	35.2	21.4		19	21.1	48.4	
N		109	71	38		65	23	42	

Summing up, programmatic strategies in the allocation of housing and water aim at small regions, and particularistic strategies are predominantly focused in loyal regions. Oversupply is targeted to regions with high percentages and high shares of population governed by mayors aligned with the governor.

b. Community-LPGs: Allocation Strategies of Schools and Roads in Mexico

Each of the two cluster analyses of the two selected community-LPGs, schools and roads, yield two subgroups of regions, which significantly differ in the allocation strategies with

which they are targeted: a cluster of programmatically targeted regions is clearly different from another one of regions targeted with programmatic strategies, and likewise, a cluster of oversupplied regions is significantly different from a subgroup of undersupplied regions.

Table ttt: Clusters Allocation Strategies of Schools & roads. Mexico								
	Particularistic vs. Programmatic				Oversupply vs. Undersupply			
	N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
% Undersupplied regions in:								
Schools	40	87.5	12.5	.40***	35	62.9	37.1	.08
Roads	42	100	0	1***	38	100	0	1***
% Programmatically treated regions in:								
Schools	33	45.45	54.55	40***	-----	-----	-----	-----
Roads	30	0	100	1***	-----	-----	-----	-----
% Oversupplied regions in:								
Schools	36	80.6	19.4	.40***	29	55.2	44.8	.08
Roads	37	100	0	1***	26	0	100	1***
N	109	79	30			38	26	

Programmatic strategies in the allocation of these Community-LPGs –schools and roads- benefit small regions, while particularistic ones seem to be aimed at the large regions. The cluster of regions targeted with programmatic strategies is predominantly composed of small regions, and by a slightly higher percentage of regions with high deficits in socio-economic indicators. Conversely, particularistic strategies in the allocation of these two community-LPGs are targeted in similar proportions to both types of regions, large and small, as well as regions with high and low socio-economic indicators.

When we look at the variation in the composition of the two clusters within particularistic strategies, both subgroups –undersupply and oversupply- mainly consist of large regions, but significantly differ in the socio-economic profile: oversupply goes to wealthier areas, and undersupply strategies target depressed regions.

Table ttt: Clusters of allocation strategies of Schools & Roads. Socio-economic variables. Mexico.

	Particularistic vs. Programmatic strategies					Oversupply vs. Undersupply			
		N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
Socio-economic deprivation share	Small	56	41.77	76.67	-.31***	21	31.58	34.62	-.03
	Large	53	58.23	23.33		43	68.42	65.38	
Socio-economic deprivation %	Low	56	55.70	40.00	.14	40	73.68	46.15	.28*
	High	53	44.30	60.00		24	26.32	53.85	
N			79	30		38	26		

What are the political characteristics of these clusters? The first two clusters, programmatic and particularistic, differ in the indicators that reflect size of the electorate – loyal or opposition voters. More specifically, the cluster of regions targeted with programmatic allocations strategies of housing and water comprises small regions –small contributions of votes for the ruling party, and small populations in municipalities governed by loyal as well as opposition mayors. The cluster of regions targeted with particularistic strategies in these two policy areas is distinctive in that it mainly comprises regions loyal to the governor in the most recent local elections.

When we turn to the two particularistic clusters, the results are different from those found in the clusters of Household-LPGs –housing and water. Undersupply is targeted to regions aligned with the state government and oversupply to competitive and opposition ones. The cluster of undersupplied regions in schools and roads is composed of a higher percentage of loyal regions and, accordingly, the cluster of oversupplied regions registers a significantly higher proportion of regions with high percentages and high shares of populations governed by opposition mayors.

Table ttt: Clusters Allocation Strategies of Schools-Roads. Political variables. Mexico

	Particularistic vs. Programmatic					Undersupply vs. Oversupply			
		N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
% Party vote	Small	40	35.4	40.0	-.04	19	34.2	23.1	.12
	Large	69	64.6	60.0		45	65.8	76.9	
Partisan affinity	Opposition	36	29.1	43.3	-.14	19	18.4	46.2	**-.29***
	Loyal	73	70.9	56.7		45	81.6	53.8	
Competitiveness	Low	50	43.0	53.3	-.09	27	50.0	30.8	.19
	High	59	57.0	46.7		37	50.0	62.9	
% Population in loyal municipalities	Small	28	43.5	11.1	.22	23	37.0	56.5	-.20
	Large	43	56.5	88.9		27	63.0	43.5	
% Population in opposition municipalities	Small	44	56.5	100	**-.29****	27	70.4	34.8	**.35****
	Large	27	43.5	0.0		23	29.6	65.2	
Share party vote	Small	71	55.7	90.0	**-.32*****	32	44.7	57.7	-.13
	Large	38	44.3	10.0		32	55.3	42.3	
Share population in loyal municipalities	Small	45	55.4	75.0	-.14	26	40.0	60.9	-.21
	Large	32	44.6	25.0		27	60.0	39.1	
Share population in opposition municipalities	Small	57	62.5	94.4	**-.29****	29	71.4	39.1	**.32***
	Large	5	37.5	5.6		22	28.6	60.9	

Summarizing, in the Mexican cases, schools and roads benefits seem to be allocated in this way:

Programmatic strategies target small and socio-economically deprived regions.
Undersupply strategies predominantly go to regions that are loyal to the governor's party, and governed by mayors aligned with the state government.
Oversupply strategies in the allocation of schools and roads are targeted to regions that are electorally competitive, and with large populations governed by opposition mayors.

c. Household-LPGs: Allocation Strategies of Housing in Argentina[9]

In the Argentine cases, housing allocation strategies implemented in a region are significantly associated with socio-economic factors. Programmatic strategies, like in the allocation on household-LPGs in the Mexican cases, are concentrated in small regions, while particularistic strategies in general are equally directed to small and large regions, as well as to wealthy and deprived regions. In contrast, within particularistic strategies, undersupply is aimed at small regions with high socio-economic deprivation while oversupply goes to larger and wealthier regions.

Table ttt: Allocation strategies of Housing. Socio-economic variables. Argentina.

	Particularistic vs. Programmatic					Undersupply vs. Oversupply			
		N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
Socio-economic deprivation share	Small	84	52.8	90.5	-.26***	65	63.5	28.9	.32**
	Large	60	47.2	9.5		58	36.5	71.1	
Socio-economic deprivation %	Low	73	52.8	38.1	.21	65	42.4	76.3	-.31***
	High	71	47.2	61.9		58	57.6	23.7	
N		144	123	21		123	85	38	

The political variables linked to the allocation strategies in housing are those that reflect size of the electorate and strength of loyal or opposition mayors. In particular, programmatic allocations of housing benefit politically lightweight regions, e.g., those that provide small shares of votes to the ruling party; while particularistic strategies in general are more evenly distributed between different types of regions, in all political dimensions considered. In turn, the significant differences within particularistic strategies refer to size and partisan affinity. Oversupply is aimed at regions that provide a large share of votes to

[9] To describe the strategies in the allocation of Housing in Argentina, I did not carry out a cluster analysis A cluster analysis of the allocation strategies of two household LPGs would have dropped too many cases and relied on too few cases because the rest of the household-LPGs –water and electricity- are privatized in one or another province.

the ruling party, and undersupply is left to the small ones, which offer little shares of votes, and have small populations under loyal mayors.

Table ttt: Allocation Strategies of Housing. Political variables. Argentina.

	Particularistic vs. Programmatic					Undersupply vs. Oversupply			
		N	Particularistic	Programmatic	Phi	N	Oversupply	Undersupply	Phi
% party vote	Small	64	45.5	38.1	.05	56	42.1	47.1	.05
	Large	80	54.5	61.9		67	57.9	52.9	
Partisan affinity	Opposition	41	27.6	33.3	-.05	34	31.6	25.9	-.06
	Loyal	103	72.4	66.7		89	68.4	74.1	
Competitiveness	Low	65	45.5	42.9	.02	56	44.7	45.9	.01
	High	79	54.5	57.1		67	55.3	54.1	
Share party vote	Small	102	66.7	95.2	.22**	82	31.6	82.4	.49***
	Large	42	33.3	4.8		41	68.4	17.6	
% Population in loyal municipalities	Small	60	46.8	47.4	-.004	51	41.2	49.3	.08
	Large	68	53.2	52.6		58	58.8	50.7	
% Population in opposition municipalities	Small	79	62.4	57.9	.03	68	67.6	60.0	-.07
	Large	49	37.6	42.1		41	32.4	40.0	
Share population in loyal municipalities	Small	95	71.6	89.5	-.15	78	58.8	77.3	.19*
	Large	33	28.4	10.5		31	41.2	22.7	
Share population in opposition municipalities	Small	97	72.5	94.7	-.19*	79	64.7	76.0	.12
	Large	31	27.5	5.3		30	35.3	24.0	
N		144	123	21		123	85	38	

In sum, in the Argentine cases, housing benefits are distributed according to the following patterns:

Programmatic strategies target small regions.

Undersupply strategies go to small and socio-economically deprived regions.

Oversupply strategies reward regions that are large, socio-economically better off, and which provide large shares of votes to the ruling party.

d. Community-LPGs: Allocation Strategies of Schools and Hospitals in Argentina

The analysis of the provision of schools and hospitals in Argentina produced two clusters, which significantly and consistently differ in the allocation strategies implemented in the two policy areas.

Table ttt: Clusters Allocation Strategies of Schools & Hospitals. Argentina.

	Particularistic vs. Programmatic				Undersupply vs. Oversupply			
	N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
% Undersupplied regions in:								
Schools	73	74.0	26.0	.26**	54	100	0	.98***

Hospitals		100	0	1***	60	78.33	21.67	.31**
% Programmatically treated regions in:								
Schools	23	47.8	52.2	.26***	5	20.0	80.0	.98***
Hospitals		0	100	1***				
% Oversupplied regions in:								
Schools	23	82.6	17.4	.26***	19	0	100	.98***
Hospitals		100	0	1***	18	44.44	55.56	.31**
N	119	84	35			55	23	

Programmatic strategies in the provision of hospitals and schools are targeted to small and socio-economically deprived regions, while the cluster of regions subjected to particularistic strategies are comprises a higher percentage of large and wealthy regions. Within the particularistic strategies, there are almost no differences between the two clusters along the socio-economic factors.

Table ttt: Clusters Allocation Strategies of Schools & Hospitals. Socio-economic variables. Argentina

		Particularistic vs. Programmatic				Undersupply vs. Oversupply			
		N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
Socio-economic deprivation share	Small	68	40.48	97.14	-.52***	30	43.6	26.1	.15
	Large	51	59.52	2.86		48	56.4	73.9	
Socio-economic deprivation %	Low	62	69.05	11.43	.53***	54	69.1	69.6	.97
	High	57	30.95	88.57		24	30.9	30.4	
N		119	84	35		78	55	23	

In terms of political characteristics, the programmatic and particularistic clusters differ in several dimensions: strength of the ruling party, partisan affinity, electoral competitiveness, and size of the electorate. Programmatic strategies are targeted to small regions, with low levels of electoral competitiveness, and small percentages and shares of votes for the ruling party. In contrast, the cluster of regions targeted with particularistic strategies in the allocation of schools and hospitals comprises regions characterized by high percentages of votes for the ruling party, i.e., the governor's party, and also regions with high levels of electoral competitiveness. When we turn to the two particularistic clusters, the only political variable that is significantly associated with different strategies is the size of the loyal electorate. Undersupply in schools and hospitals goes to those regions that provide a small share of votes, and oversupply rewards regions that supply large shares of votes for the ruling party.

Table ttt: Clusters Allocation Strategies of Schools-Hospitals. Political variables. Argentina

		Particularistic vs. Programmatic	Undersupply vs. Oversupply

		N	Particularistic	Programmatic	Phi	N	Undersupply	Oversupply	Phi
% Party vote	Small	56	38.1	68.6	-.27**	31	38.2	43.5	.05
	Large	63	61.9	31.4		47	61.8	56.5	
Partisan affinity	Opposition	28	28.6	11.4	.18*	21	23.6	34.8	-.12
	Loyal	91	71.4	88.6		57	76.4	65.2	
Competitiveness	Low	54	39.3	60.0	-.19*	31	38.2	43.5	-.05
	High	65	60.7	40.0		47	61.8	56.5	
% Population in loyal municipalities	Small	49	43.2	58.6	-.14	27	40.8	36.8	.04
	Large	54	56.8	41.4		41	59.2	63.2	
% Population in opposition municipalities	Small	64	58.1	72.4	-.13	42	61.2	63.2	-.02
	Large	39	41.9	27.6		26	38.8	36.8	
Share party vote	Small	84	59.5	97.1	-.38***	45	67.3	34.8	.30**
	Large	35	40.5	2.9		33	32.7	65.2	
Share population in loyal municipalities	Small	77	64.9	100	-.36***	43	67.3	52.6	.14
	Large	26	35.1	0		25	32.7	47.4	
Share population in opposition municipalities	Small	76	68.9	86.2	-.18	47	65.3	78.9	-.13
	Large	27	31.1	13.8		21	34.7	21.1	
N		119	84	35		78	55	23	

In brief, the allocation of schools and hospitals in the Argentine cases could be outlined as follows:

Programmatic strategies target regions that are small, socio-economically deprived, non-competitive and political lightweights.

Undersupply strategies penalize small regions that provide little shares of votes to the ruling party, while oversupply strategies reward large regions that provide large shares of votes to the governor's party.

Conclusion

To answer the questions raised by this paper, we can say that governors are manipulating the allocation of local public goods based on political considerations, and that in so doing, they target regions governed by loyal and opposition mayors.

In the selected cases in Mexico, the programmatically treated regions in the provision of household-LPGs are the small ones, and in the allocation of community-LPGs are the small and socio-economically deprived. Undersupply of housing and water punishes small regions, while undersupply of schools and roads penalizes wealthy and loyal ones. Oversupply of household-LPGs benefits large regions with large shares of the

population in municipalities governed by loyal mayors, while oversupply of schools and roads is directed to regions with large populations in opposition municipalities.

In the Argentine cases, the regions benefited with programmatic strategies of allocation of household-LPGs are small regions. The fair share of schools and hospitals goes to regions that are small in demographic and political terms. Loyal regions, with low electoral competitiveness and that provide a small share of votes to the ruling party. Oversupply spending benefits regions that are better off in socio-economic terms and highly relevant for political matters. And the regions oversupplied with community-LPGs are those with high percentages and high shares of population in opposition municipalities. This oversupply takes place at the expense of other regions within the territory, undersupply of housing punishes small and socio-economically deprived regions, with small shares of population in loyal municipalities, and undersupply of community-LPGs penalizes politically lightweight regions, which provide small share of votes.

In short, in the Mexican cases, particularistic oversupply in household-LPGs targets large loyal municipalities, oversupply in community-LPGs benefits opposition mayors, and programmatic spending in both types of LPGs is left to the politically irrelevant regions, the small, and poor regions. In the Argentine cases particularistic oversupply benefits large, wealthier and/or politically relevant regions; undersupply punishes small regions, and programmatic allocation of LPGs is a residual strategy for small and deprived regions.

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Appendix. Sources of data

In both countries, local public goods are provided by the three levels of government: the federation, state/provincial governments and municipalities. After the decentralization processes since the late 1970s in Argentina and during the 1990 in Mexico, states are responsible for the provision of basic social services such as education, health, and basic social infrastructure, and concurrently with the federal government or the municipalities share the responsibility for the provision of productive infrastructure, drinking water and sewerage, electricity, and housing. The responsibilities of municipal governments include drinking water and sewerage, public lighting, cleaning, retail and wholesale markets, cemeteries, slaughterhouses, roads, parks and gardens, and public security. Thus, the provision of local public goods in a given state or province is a shared responsibility of all three levels of government. In this paper, I am interested in the provision of local public goods by the intermediate level of subnational governments, states in Mexico and provinces in Argentina.

To estimate the programmatic distributions of each administration, I relied on two types of information. First, to establish the geographic distribution of needs and economic resources across the regions of each the jurisdiction (state or province), I used census data. Second, to identify the importance that each criteria of allocation, pure equality, needs and economic efficiency has in the program of government of each administration, and assign a weight, I resorted to two sources of information, the state plan of development and interviews with former governors and high-ranking officials. At the beginning of each administration, Mexican governors produce a document called State Plan of Development, which describes their program of government and their agenda. This document describes the goals, strategies and activities that would be pursued and carried out during the six years of the administration in each policy area. For the Mexican cases, I drew the weight of each criteria of allocation from the strategies described in each policy area in the State Program of Development and complemented this with responses to specific questions regarding priorities in personal interviews with former governors or high-ranking officials.

In Argentina, governors do not produce a document describing their program of government. Thus, in order to identify the program of government regarding the provision of local public goods that each administration pursued, I carried out interviews with former governors and high-ranking officials in the policy areas included in the project and specifically asked them what their priorities were in the provision of benefits in the seven policy areas. This analysis of the criteria privileged by each administration shows that there is: (1) variation in the priorities of spending in local public goods among these fifteen governors, and (2) convergence by most of the administrations on *needs* as the privileged criteria of allocation –which is reasonable considering that the local public goods included are basic services.

The Observed Distribution of local public goods includes spending in the following areas: (1) housing, (2) drinking water, (3) electricity, (4) education infrastructure, (5) health infrastructure, (6) roads and highways, and (7) other public works. Among the different sources of resources, federal, state or provincial, municipal, and beneficiaries, only state or provincial government spending is included. In the four Mexican cases, the information needed to calculate the Observed Distribution of spending in local public goods is available in the Annual Government Reports, which offer a detailed account of government spending and services offered by region during the year. For the Argentine cases, since the data on the geographic distribution of government spending is not readily available, the information was collected from the secretariats of each policy area.

The information originally obtained from the annual government reports or directly from the offices of each policy area consists of lists of government actions, which report the following relevant dimensions: expenditure

- The government action (housing project, school repair, hospital construction, water system, etc.)
- The disbursement assigned to each specific action
- The origin of the resources (federal, state, municipal)
- Geographic location of the action.

Neither of these sources –the government reports or the reports obtained from provincial bureaucracies- reports the total geographic distribution of spending in each policy area by municipality or by department. Therefore, the geographic distribution of spending in each

policy area was determined by adding together the disbursements allocated to each government action. In order to obtain the geographic distribution of spending in each policy area by year I proceeded as follows:

1. Regardless of the program in which each action was included, each was classified in one of the policy areas (housing, water, electricity, educational infrastructure, health infrastructure, roads, public works) according to the substantive characteristics of the action.
2. The amount of spending corresponding to each policy area were geographically classified according to municipality in the Mexican cases (except for Oaxaca, were the information is available by region) or department (in the Argentine cases).
3. The amount of spending in each year in each policy area allocated to each municipality or department were added together by policy area, resulting in the geographic Observed Distributions of spending on housing, water, electricity, education infrastructure, health infrastructure, roads, and public works.

A. PROGRAMMATIC DISTRIBUTION:

To estimate the programmatic distributions of each administration, I relied on two main sources of information:

1. Demographic data:

For the Mexican states is available on SIMBAD website (municipal level dataset) of the INEGI (Instituto Nacional de Estadística y Geografía) (http://www.inegi.gob.mx/prod_serv/contenidos/espanol/simbad/default.asp).

For the Argentine provinces, the data from the 2001 census is available on the website of the INDEC (Instituto Nacional de Estadísticas y Censos) (http://www.indec.mecon.ar/webcenso/provincias_2/provincias.asp). The data of the 1991 census was collected from the INDEC offices in each of the provinces.

2. Criteria of allocation:

To assign weights to each of the criteria of allocation, I resorted to two sources of information, programs of government and interviews.

MEXICO

At the beginning of each administration, Mexican governors produce a document called State Program of Development, which describes their program of government. This document presents the goals, strategies and activities that will be pursued and carried out during the six years of the administration in each policy area. For the Mexican cases, I drew the weight of each criteria of allocation from the strategies described in each policy area in the State Program of Development and complementary from responses to specific questions regarding priorities in interviews with former governors or high-rank officials.

Oaxaca 1992-1998

Governor Diódoro Carrasco

Plan Estatal de Desarrollo 1992 - 1998

Interview with former governor Diódoro Carrasco, Mexico City, May 2004.

Oaxaca 1998-2004

Governor José Murat

Plan Estatal de Desarrollo 1998 - 2004

Zacatecas 1992 - 1998

Governor Arturo Romo

Plan Estatal de Desarrollo 1992 - 1998

Zacatecas 1998 - 2004

Governor Ricardo Monreal

Plan Estatal de Desarrollo 1998 - 2004

Jalisco 1995 - 2000

Governor Alberto Cárdenas Jiménez

Plan Estatal de Desarrollo 1992 - 1997

Interview with former governor Alberto Cárdenas Jiménez, Mexico City, July 2004.

Jalisco 2000 - 2006

Governor Francisco Ramírez Acuña

Plan Estatal de Desarrollo 2000 – 2006

Sonora 1991 – 1997

Governor Manlio Fabio Beltrones

Plan Estatal de Desarrollo 1992 - 1997

Interview with former governor Manlio Fabio Beltrones, Mexico City, July 2004.

Sonora 1997 – 2003

Governor Armando López Nogales

Plan Estatal de Desarrollo 1997 - 2003

ARGENTINA

In Argentina, governors do not produce a document describing their program of government. In order to identify the program of government regarding the provision of local public goods that each administration pursued, I carried interviews with former governors and high-rank officials in the policy areas included in the project and specifically asked them what their priorities in the provision of benefits in the six policy areas.

Corrientes 1994 - 1997

Governor Raúl Romero Feris

Interview with former governor Raúl Romero Feris, Corrientes, November 2004.

Corrientes 2002 – 2006

Governor Ricardo Colombi

Interview with Graciela Rodríguez, local deputy and advisor to the governor, Corrientes, October 2004.

Jujuy 1995 - 1999

Governor Carlos Ferraro

Interview with former governor Carlos Ferraro, San Salvador de Jujuy, December 2004.

Jujuy 1999 - 2003

Governor Eduardo Fellner

Interview with former Minister of Health and Social Welfare, 1999 – 2003, Héctor Téntor, San Salvador de Jujuy, December 2004.

Mendoza 1995 - 1999

Governor Arturo Lafalla

Interview with former governor Arturo Lafalla, Mendoza, September 2004.

Mendoza 1999 - 2003

Governor Roberto Iglesias

Interviews with former and current local deputies: Sergio Bruni (UCR), Héctor Parisi (PD), and Daniel Nieto (UCR), Mendoza, September 2004.

Córdoba 1999-2004

Governor José Manuel De la Sota

Interviews with Marcelo Falo, General Secretary, . Córdoba, August 2004.

B. OBSERVED DISTRIBUTION:

MEXICO

For the Mexican cases the data on spending in each policy is documented in the annual government reports that governor present to the legislature. Some of these reports are available on the Internet and other had to be collected in government offices in the states.

Jalisco:

The Annual Government reports of the two administrations included in this project are available in the webpage of the Jalisco Government: www.jalisco.gob.mx/informes. However, for some of these reports, the information posted in this website is incorrect. The missing or incorrect information was kindly provided or replaced by the Office of Government Transparency of the COPLADE in Guadalajara.

Sonora:

Three reports from the Administration of former Governor Lopez Nogales are available in the webpage of the Sonoran government (www.sonora.gob.mx). Photocopies of the rest of

the annual government reports from former governors Beltrones and Lopez Nogales were kindly provided by the Office of Government Transparency in Hermosillo, Sonora.

Oaxaca:

Hard copies of the most recent annual government reports (governor José Murat 1998 – 2004) are available at the Oaxaca government office in Mexico City. The rest of the information was collected and photocopied at the library of the state government office in Oaxaca.

Zacatecas:

Photocopies of the annual government reports for the administration of governor Arturo Romo Gutiérrez (1992 – 1998) were provided by the Library of the state congress in Zacatecas, and the excel files of the annual government reports for the administration of governor Ricardo Monreal were obtained at the Office of COPLADEZ in Zacatecas.

ARGENTINA

In Argentina, provincial governments do not produce reports accounting for spending during the administration. Therefore, the information on spending was collected from the offices of each policy area.

Corrientes:

- Ministerio de Obras Publicas
- Ministerio de Educación
- Instituto de Vivienda de Corrientes INVICO
- Direccion Provincial de Energia DPEC
- Direccion Provincial de Vialidad
- Ministerio de Salud

Jujuy:

- Ministerio de Obras Publicas
- Ministerio de Educación
- Instituto de Vivienda de Jujuy IVJ
- Agua de Jujuy
- Direccion Provincial de Vialidad

- Ministerio de Salud
- Promin Hospitales

Mendoza:

- Ministerio de Obras Publicas – Subsecretaria de Infraestructura
- Ministerio de Educación
- Direccion Provincial de la Vivienda
- Direccion Provincial de Vialidad
- Ministerio de Salud y Desarrollo Social
- Unidad coordinadota provincial educación
- Unidad coordinadota provincial salud

Córdoba

- Ministerio de Educación
- Unidad coordinadora provincial educación
- Dirección Provincial de la Vivienda
- Ministerio de Salud y Desarrollo Social
- Unidad coordinadora provincial salud
- Empresa Provincial de Energía Eléctrica EPEC