Paving the electoral way: Urban infrastructure, partisan politics and civic engagement

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Abstract

This paper analyses the incidence of political factors and social capital on the allocation of public investment in the Santiago Metropolitan Area, Chile. Considering panel data on a decentralized investment program distributed through local governments and a program that is geared directly to citizen organizations, the paper explores whether investment is equally subject to electoral concerns and rent seeking under different program designs. Our estimations show that decentralized investment favours aligned municipalities where competition is stronger, but long-lasting local leaders also seek their own benefits. By contrast, transfers directly channelled to beneficiaries are free from political clout and, additionally, there is no sign of capture by organized interests. Based on these results, the paper discusses the implications for metropolitan governance, highlighting the potential role of the local social capital and a two-tier governance scheme to retain the gains from decentralization, acquire economies of scale in metropolitan service provision and reduce the margin for pork barrelling.

Highlights

Investment varies across municipalities depending on mayoral political alignment

Pork-barrelling is due to the electoral interests of the central government

There is no electoral motifs when investment is administered to citizen committees

Social capital reduces the margin for arbitrary allocations of investment

The implications for grant design and metropolitan governance are discussed

Introduction

The allocation of public resources within different city areas is a key question for urban governance because it affects the provision of local infrastructure and shapes the urban growth pattern. General explanations place this issue somewhere between the metropolitan governance structure, the ideology of incumbents and technical considerations imposed by bureaucratic decision standards, but different social and political factors may mediate investment decisions. The recent wave of decentralization has strengthened the role of local governments as service providers, introducing questions about the distribution of responsibilities between different government tiers and the adequate transfer system to finance urban infrastructure. Decentralization favors flexible ways of providing services (Ahmad & Brosio, 2009; Kahkonen & Lanyi, 2001); yet, local governments may pursue their own electoral aims in the distribution of public goods (Livert & Gainza, 2018). As the literature on distributive politics stresses, since politicians are motivated by their wish to retain public office (Golden & Min, 2013), local governments may allocate urban infrastructure bearing in mind their re-election chances.

In a similar vein, the delegation of powers to local authorities has motivated participatory reforms to include citizens in decision-making. Civic engagement in public affairs is a quest for deepening democracy and improving the quality, accountability and flexibility of services because social capital increases citizen control over public goods (Gaventa & Barrett, 2012). However, associations can also capture local resources if organized groups free ride the public good for their own advantage (Platteau, 2004).

This paper explores the influence of political factors and social capital in the allocation of investment from the central government to the municipalities of the Santiago

Metropolitan Area (Chile), and its impact on the urban dynamic. The paper focuses on three potential determinants for urban investment distribution. First, we analyze if partisanship mediates intergovernmental transfers, in particular, if distribution favors areas ruled by mayors aligned with the central government. The aim is not only to test the existence of 'pork-barrel' politics, but also to understand the sources of such a political bias. Theoretically, distribution could be driven by the electoral aspirations of the national government or, instead, may be due to the capacity of municipal governments to put pressure on central policymaking, encouraged by their electoral results. Second, we examine the role of social capital interceding in grant allocations. As mentioned, the participation of community organizations in urban governance can improve responsiveness and accountability by reducing the margin for pork barreling. However, it runs the risk of capture and rent seeking. Third, we evaluate tactical distribution under different transfer systems. We contrast if political interests and the local social capital are likewise to influence redistribution when mayors are the intermediaries or when beneficiaries administer grants directly. Based on the results, the paper discusses the impact of these potential determinants over urban governance.

The analysis draws on a unique panel dataset that includes information on electoral results, the local social capital, municipal finance, area characteristics and investment from the central government to the 52 municipalities of the Santiago Metropolitan Area (SMA) over the period 2009-2017. Two investment grants are scrutinized as dependent variables: a decentralized program channeled through local governments and another geared directly to self-organized citizen committees without the intervention of local governments. The intention is to test whether different institutional designs are equally tied to capture by electoral concerns and interest groups. The identification strategy relies

on fixed-effects considering heteroskedasticity and autocorrelation robust estimation, and generalised method of moments (GMM), to control for potential endogeneity.

We follow the assumption underlying the literature on distributive politics that politicians hold electoral goals when allocating collective goods. However, different causal mechanisms may drive the distribution of investment in the two programs we inspect. In one case, the rationale is highly partisan, i.e., the links between the central government and aligned mayors mould the distributive pattern to raise the outcomes of the party in national or local ballot. By allocating a disproportionate proportion of funds in localities controlled by their co-partisans, incumbent governments can boost the reputation of aligned mayors, which, in turn, is likely to enhance the expectations of the party on national elections (Tavits, 2009). Yet, if voters associate political credit spillovers with municipal governments, a bottom-up logic to support the electoral strategy of mayors would prevail.

When investment does not go through different government tiers, though, the procedure is rather indirect. Incumbents may strive to please the constituency concentrating assets where they obtain electoral advantage. We expect, thus, stronghold areas to be benefited even when users themselves administer funds.

This research adds four important contributions. First, despite a burgeoning research on larger scales, the literature has paid scant attention to tactical distribution on a city level, albeit having profound implications for urban governance. Second, the paper sheds light on whose electoral prospects are furthered from the distribution of intergovernmental grants. Most studies implicitly assume a top-down agency to benefit the central government, but our estimations point also to local strongmen's power at attracting funds for their constituents. Third, the paper evinces the role of community-based organizations reducing the margin for parochialism in the distribution of public goods. The literature

has not sufficiently addressed how societal engagement can limit electoral motivations in the allocation of collective resources, and this article attempts to fill this gap. Finally, the paper discusses the margin for tactical arbitrariness under different metropolitan governance frameworks. For the authors, the latter is a particularly relevant contribution as it yields significant policy implications.

The remainder of the paper is organized as follows. In the next section, we summarize the academic literature on the two main issues we address: the electoral motifs in the distribution of intergovernmental transfers and the potential role of community organizations to foster civic commitment or capture public resources. After the theoretical framework, the research hypotheses are displayed. Next, we characterize the SMA in terms of its governance framework and the local political context. Section five presents the data and the methodology for the empirical analysis, and section six summarizes the main results. In section seven, we explore the implications for urban governance. The paper concludes with some reflections about the analysis and venues for further research.

Literature review

Intergovernmental transfers and tactical distribution

Over the last two decades, several studies have documented how politicians use their control over intergovernmental transfers to reinforce their electoral prospects. Golden & Min (2013) give an exhaustive overview of research on distributive politics. In some cases, the tactics include over financing co-partisan local strongholds (Lara & Toro M.,

2018; Luca & Rodríguez-Pose, 2015; Timmons & Broid, 2013), or punishing unaligned mayors (Brollo & Nannicini, 2012). Another strategy to persuade undecided voters consists in increasing transfers as the electoral race approaches, the so-called political budget cycles (Corvalan, Cox, & Osorio, 2018; Livert & Gainza, 2018; Veiga & Veiga, 2007). One further type of manipulation is to favor the electoral expectations of fellow politicians by concentrating investment in either core (Kauder, Potrafke, & Reischmann, 2016; Tavits, 2009) or swing (Johansson, 2003; John & Ward, 2001) constituencies. Although not particularly tied to the urban arena, this research provides useful insights for understanding how urban governance is shaped by electoral aims, since most metropolitan areas are governed by a complex mishmash of municipalities that rely on transfers from senior levels to complement their own revenues (Bird & Slack, 2007). In the end, *intergovernmental fiscal transfers constitute a powerful instrument that politicians use to win, exercise, and retain power* (Bonvecchi & Lodola, 2010, p.179).

Parochialism is often associated to authoritarian regimes or new democracies of the Global South, but there is ample evidence of government discretion in mature democracies of the Global North. In general, the literature shows that local incumbents politically aligned with the center obtain higher levels of discretionary grants, but there is no clear-cut pattern depending on the geographical context, the electoral system, the type of good delivered, the allocation mechanism or the institutional source for political coercion (see Golden & Min (2013), Kramon & Posner (2013) and Livert & Gainza (2018) for inventories).

Some argue that electoral systems influence distributive policy outcomes. In single-member systems, the linkages between elected authorities and the constituency are very tight because a sole representative reaps the merits for a given project brought to the district; on the contrary, in multimember districts, several representatives can claim the

credit, so voters do not know whom should they reward (Ashworth & Bueno de Mesquita, 2006; Lancaster, 1986). Although this discussion refers to national electoral rules, to some extent, metropolitan governance can be seen through the lens of a single-member system. Each municipality within a metropolitan area elects one representative (the mayor) that will try to attract government expenditure on public goods toward its constituency. Consequently, mayors have strong incentives for engaging in political opportunism as they can claim the credit for the new infrastructure.

One of the hottest debates is what procedure yields the highest electoral advantage, concentrating goods in core areas or targeting swing districts where fellow politicians confront stronger competition. Theoretically, two alternative hypotheses are derived from electoral competition models. Assuming that swing voters are riskier investments, Cox & McCubbins (1986) argue that an optimal strategy for risk-averse candidates is to redistribute to core supporters. On the other hand, Dixit & Londregan (1996) predict that if political parties are equal in their abilities to allocate redistributive benefits, they will support those that are most willing to switch their votes. Empirical research has found support for both hypotheses. Tactical distribution to core areas has been documented in the U.S. (Ansolabehere & Snyder, 2006), Mexico (Costa-i-Font, Rodriguez-Oreggia, & Lunapla, 2003), the Nordic countries (Tavits, 2009) and Greece (Rodríguez-Pose, Psycharis, & Tselios, 2016), whereas evidence in favor of swing municipalities include Brazil (Brollo & Nannicini, 2012), Sweden (Johansson, 2003) and Portugal (Veiga & Pinho, 2007).

Another factor that shapes the distributive pattern is the nature of the resource transferred. As Kramon & Posner (2013) show, the answer to the question who benefits from distributive politics varies depending on the patronage good. In broad terms, the resources local governments obtain from senior levels can be sorted in either transfers or purchases

of goods and services (grants, investment programs, etc.). Transfers complement the fiscal resources of local governments: since municipalities have limited revenue-raising capacity, they rely on senior levels to close the gap between revenues and expenditures. Apart from central-to-local, most countries have horizontal equalization transfers to tackle the differences in revenue rising among areas (Bird & Smart, 2002).

Compared to transfers, public goods are rather exposed to targeting along geographical lines because they can be used to please the residents where they are located while excluding those outside the district (Milesi-Ferretti, Perotti, & Rostagno, 2002). Following the discussion above around electoral systems, these authors argue that the incentives for politicians to rely on transfers or public purchases depends on electoral rules, proportional systems being more prone to higher spending on transfers, while majoritarian to public good spending.

The distribution criteria and the institutional design of the allocation mechanism affect the structure of opportunities too. A general distinction is between programmatic vs. non-programmatic. Specific purposes earmark programmatic assignments, whereas in non-programmatic transfers the incumbent government has full discretionary power. Likewise, distribution can follow a pre-arranged formula based on local features or not[1]. As a rule, earmarked and formula-based distribution reduces the margin for the arbitrariness that allows politically motivated targeting, but technocratic allocation schemes are not free from tactical politics. Banful (2011) and Timmons & Broid (2013) attest that even under a formula, intergovernmental grants can be handed out according to partisan criteria. Looking at the source of political interferences, Litschig (2012) shows that in Brazil the population estimates entering the formula were manipulated.

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[1] Formula-based allocation schemes usually include demographic and socioeconomic conditions. In some cases, municipal fiscal efficiency indicators are also considered to provide incentives to local governments.

One final key issue is to understand whose electoral prospects are furthered, central or local incumbent's. In much of the literature the prevailing assumption is that, since the central government decides on disbursement, distribution follows its interests. Veiga & Veiga (2013), for instance, showed that the Portuguese central government used transfers to the municipalities along the electoral cycle to secure votes in legislative elections. From a theoretical approach, Borck & Owings (2003) propose an explanation that follows a similar storyline: according to their model, grant distribution is partly determined by the lobbying efforts of interest groups and local governments, but then the central government transfers money across areas pursuing its re-election expectations.

The above-cited research assumes, albeit implicitly, a top-down agency following the electoral plans of the central government. However, Migueis (2013) found evidence that aligned local leaders increased their vote share in municipal elections as a consequence of the extra-transfers they managed to get from the central government, whereas municipal incumbency did not report any reward in national elections. A similar result was reported by Livert and Gainza (2018), who showed the importance of vote margin in municipal elections, whereas the vote margin in national ballot was not significant. These authors go even further and hypothesized that local leaders' lobbying capacity over central policymaking is the key source to attract funds, rather than national disburser's electoral prospects.

Social capital, civic engagement and capture

Recent literature on urban governance has stressed the positive outcomes of civic engagement for deepening democracy and extending accountability and control in the

provision of public goods. Collective decision-making fosters the construction of citizenship, harbors empowerment and inclusion and improves the performance and the quality of public services (Gaventa & Barrett, 2012; Andrews, 2012). The cooperation between local governments and the civil society yields different advantages. By playing an active role, citizens and local governments are able to engage into a synergetic relationship that is not to be found in centralized, hierarchical governance forms (Ostrom, 1996). Community organizations develop expertise and capacities for addressing social problems too, hence matching users' preferences and lowering production costs. Last, collective engagement improves responsiveness and accountability as it entails wider forms of control and influence over public service providers (Ackerman, 2004).

Civil society organizations can also attract resources to the community since, in several discretionary grant programs, eligible groups apply to secure funds from the central government. In this regards, Lowry & Potoski (2004) found evidence of a positive relationship between the associational density and the grants attracted, implying that organizations have the capacity of influence discretionary spending from senior levels. A similar conclusion is drawn from Lowe, Reckhow & Gainsborough (2016), but in this case, the authors warn about the asymmetries across organizations. The capacity of developing a competitive application varies widely because some civic actors lack the necessary resources and the levels of involvement in grant seeking differ. In spatial terms, these authors found that competition for federal awards could exacerbate disparities between and within regions (Lowe, Reckhow & Gainsborough, 2016).

There are further cautions. Under some circumstances, citizen engagement can have negative consequences stemming from disempowerment and a reduced sense of agency, lack of accountability and representation in networks, denial of state services and resources, and reinforcement of social hierarchies and exclusion (Gaventa & Barrett,

2012). One reason for the inaccuracy of the outcomes is that very different items tend to be gathered under the participatory governance umbrella. For instance, the seminal work by Putnam, Leonardi, & Nanetti (1993) that links institutional performance with the presence of networks of formal and informal associations and the accompanying norms of generalized trust and reciprocity involves both, social structures (networks, formal and informal associations) and the intangibles steaming from these (trust, reciprocity). However, each dimension is likely to have a different impact (Andrews, 2012). In fact, Knack (2002) found that, while generalized reciprocity and social trust improve government performance, there is no effect for aspects of social capital identified with participation, such as activity in associations. This is so because the beneficial effects of membership depends not only on its purpose, diversity and inclusiveness, but on the intensity of activities (Stolle and Rochon, 1998, cited in Knack (2002)).

Moreover, civic engagement may impose risks in terms of capture and institutional underperformance (Sidel, 2005). Organizations can free ride the public good and place particularistic ambitions before the collective aim. Although capture may occur in different government tiers, proximity and the institutional design of the local state may aggravate it because local level politics suffers from less scrutiny and politicians find stronger pressure for coercion. On this point, Bardhan & Mookherjee (2000) assemble a formal model of the determinants of capture, including the greater cohesiveness of special purpose groups and the higher level of voter influence at the local level. According to these authors, if local governments have no capacity to raise resources on their own and spending depends on intergovernmental transfers, pressures for patronage would be greater because local institutions do not have to pay the cost of their own outlays (the *moral hazard* argument).

Following this line of enquiry, Khemani (2010) argues that grants-financed spending at the local level enables politicians to target benefits to organized groups in exchange for political support. The capture of public resources not only affects the provision of public goods, but it influences the institutional design of intergovernmental transfers too. When higher tier politicians face increasing participation by swing voters, they will have incentives to decentralize spending because it enables them to win elections by dividing swing voters and targeting core supporters on the local level (Khemani, 2010).

Research hypotheses

Based on the above theoretical framework, we posit the following research hypotheses:

Hypothesis 1: Municipalities ruled by mayors aligned with the central government will receive more investment.

Hypothesis 2: The greater the electoral power of the mayor, the greater the investment obtained thanks to the lobbying efforts of local strongmen.

Hypothesis 3: The greater the presence of specific-purpose organizations[2], the greater the investment attracted to the municipality as they try to capture resources for their own benefit.

Hypothesis 4: The institutional design of the transfer system moulds the distributive pattern. Decentralized investment is rather exposed to capture by strong local mayors,

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[2] We define specific-purpose organizations as entities created to fulfill a common goal on specific issues. In the analysis, specific-purpose organizations stand for neighborhood associations.

whereas specific-purpose organizations will attract more investment if transfers are directly geared to eligible groups.

The Santiago Metropolitan Area

The multilevel governance framework

The Santiago Metropolitan Area is made of 52 municipalities (*comunas*) that inhabit over 7.3 million people. It is by far the largest urban agglomeration of Chile as it stands for 40% of the population and 49% of the national GDP. Like other Latin American metropolises, the SMA is characterized by high levels of inequality and residential segregation (Jordán, Rehner, & Samaniego, 2010).

The political geography of the SMA is formally organized in three scales (local, regional, central), but in real terms decision-making is confined just to the local and the national level. The regional government has limited power because the governor (*intendente*) is appointed by the national cabinet and follows its guidelines. Moreover, unlike in many other OECD countries, the regional government does not have financial autonomy and, besides, subnational government expenditure and revenue are concentrated at the municipal level (OECD, 2017). Below the regional scale, there is no metropolitan authority and *comunas* are responsible for basic duties, such as planning and regulation, local ordinances, community development, urban service delivery and so on. Following Slack's (2007) typology, the SMA's governance can be characterized as one-tier and

fragmented, in which 52 autonomous governments deliver services within their own boundaries.

Since Chile is a highly centralized country, local governments have limited competencies and subnational revenue and spending is very low compared to other OECD countries[3]. Municipalities generate their own revenues through commercial licenses, property taxes, circulation permits and other fees, but they barely cover the local expenditure responsibilities (OECD, 2013). Consequently, municipal governments suffer from limited financial maneuver and have to rely heavily on grants and subsidies from the central level[4] (OECD, 2017). A horizontal transfer mechanism works as an equalization fund to tackle the strong disparities in revenue raising across *comunas*, but this mechanism does not compensate for the large income disparities (OECD, 2013).

Central government transfers include grants for education and health, current transfers for operational spending and investment transfers. There are several regional funds and grants by different ministries, and most programs follow a similar scheme: municipalities submit project proposals and these must surpass a technical evaluation and a complex set of filters and intermediaries. This framework has been criticized on different fronts (OECD, 2017). On the one hand, it favors the fragmentation of projects and deters local governments from designing strategic proposals that involve the coordination of various actors. On the other, most grants are awarded to projects that follow the guidelines from the national government, but these do not necessarily meet local demands.

There is a further risk. Although earmarked, these programs do not follow a pre-established formula and are appointed by central institutions, thus, leaving room for

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[3] In 2014, subnational spending accounted for 13.1 of total expenditure and 3.0% of GDP, compared to 40.2% and 16.6%, respectively, for the average OECD countries. Concomitant, local revenue is among the weakest: 3.2% of GDP compared to 16% OECD average (OECD, 2017).
[4] Grants and subsidies account for 51.1% of municipal revenue vs. 38% for OECD average (OECD, 2017).

tactical targeting. In fact, recent research has focused on electoral motivations in the allocation of investment from the central government to Chilean municipalities (Corvalan, Cox & Osorio, 2018; Lara & Toro M., 2018; Livert & Gainza, 2018). Using national level data, these studies have found evidence of political budget cycles and distributive distortions to benefit partisan mayors. However, we lack understanding if urban investment is also tied to capture by political ambitions and about the role of social capital reducing the margin for arbitrariness.

The political context

Electorally, the SMA is divided along the traditional right wing/left wing axes. In national elections, political parties of both ideological spectrums go together in party coalitions, *Concertacion* on the left and *Alianza* on the right, because a "binomial" electoral rule[5] encourages major parties to include their candidates into larger inter-party agreements (Valenzuela, Somma, & Scully, 2018). Moreover, coalitions are stable over time and opponents do not swap from one block to the other, which means there are permanent links between allied parties. Our sample covers two national elections won by the right (2009 and 2017) and one by the left (2013).

Vote concentration around the two coalitions splits in municipal polls and several contenders compete. Parties that join for presidential elections do present their own choices; hence, the highest vote share in municipal ballot does not usually exceed 20%. Additionally, local politics depends more on *comunas'* particular circumstances and the

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[5] The "binomial" electoral formula created districts that elected only two representatives, forced partisan lists to run only two candidates per district and assigned both sits to the winning list only if obtained twice the vote of the runner up list (Valenzuela, Somma, & Scully, 2018, p. 136).

specific nature of indigenous competition. In Chile, municipal dispute tends to be rooted more in the personal appeal of the candidates and less in programmatic and partisan commitments (Luna, 2014). As such, the local arena does not fully reproduce national level rivalry: national parties cannot easily control the organizat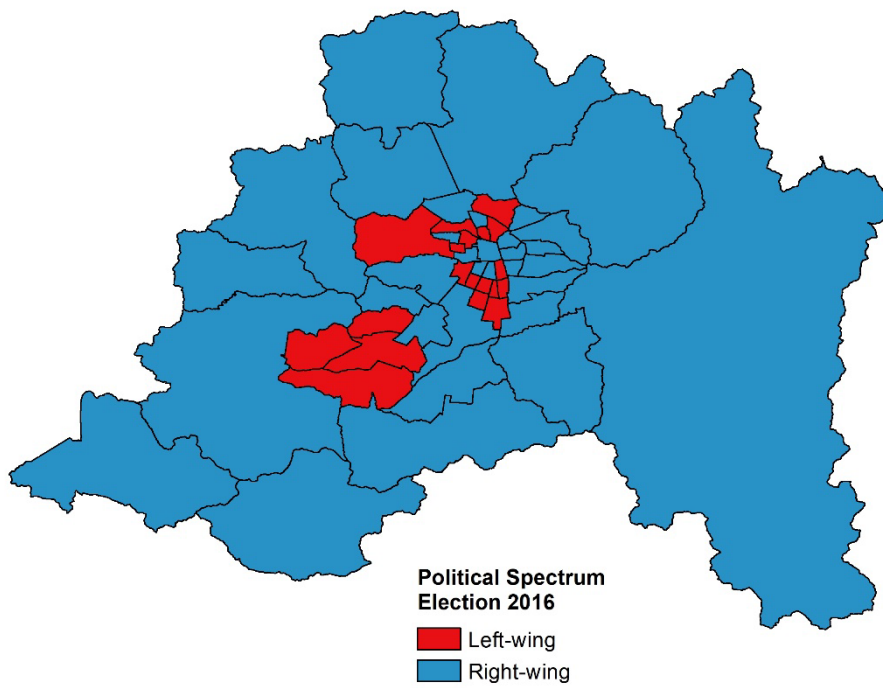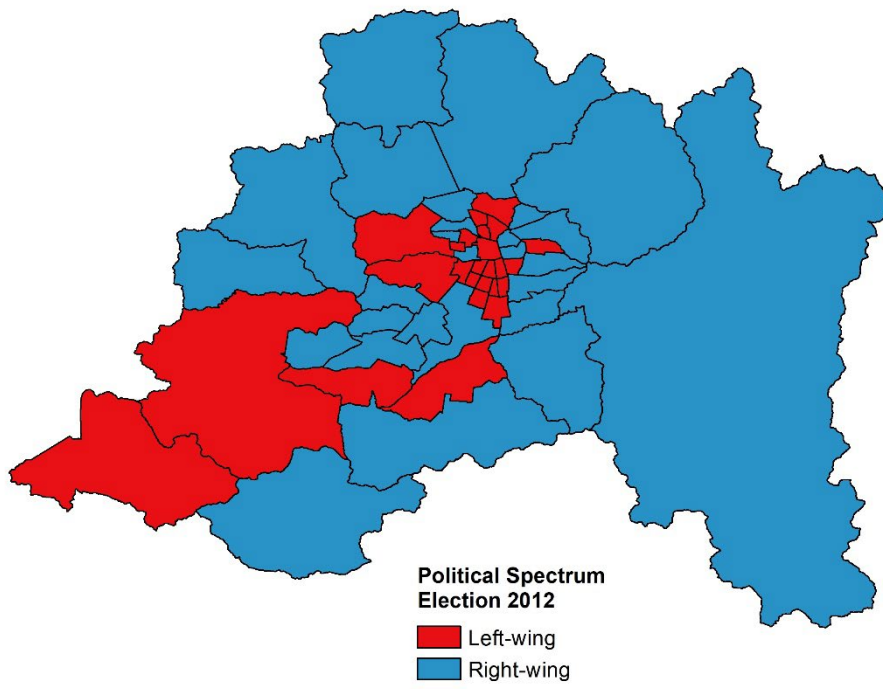ion, local groups and independent candidates contend, and powerful mayors exert their dominance (Suárez-Cao & Muñoz, 2017).

In spite of the local party diversity, *comunas* can be sorted into right or left depending on organizations' support for one or the other block in presidential disputes. Figure 1 captures the electoral map in the three municipal elections that make our sample. The vote for leftist candidacies tends to concentrate in the city centre, the south side of the inner ring and some southwest *comunas*, while traditionally the northeast cone, the north and the south supports right-wing parties. To some extent, the electoral cartography reproduces the socioeconomic divide across areas: the poorer *comunas* of the southern inner ring and the west are bulwarks for the left, whereas the right dominates the wealthy northeast and the periphery. Taken as a whole, the right holds the greatest municipal power, especially when local elections coincide with its victory in national elections.

Figure 1. The political spectrum in 2008, 2012 and 2016 municipal elections

**Political Spectrum
Election 2008**

Left-wing
Right-wing

**Political Spectrum
Election 2012**

- ■ Left-wing
- ■ Right-wing

**Political Spectrum
Election 2016**

- ■ Left-wing
- ■ Right-wing
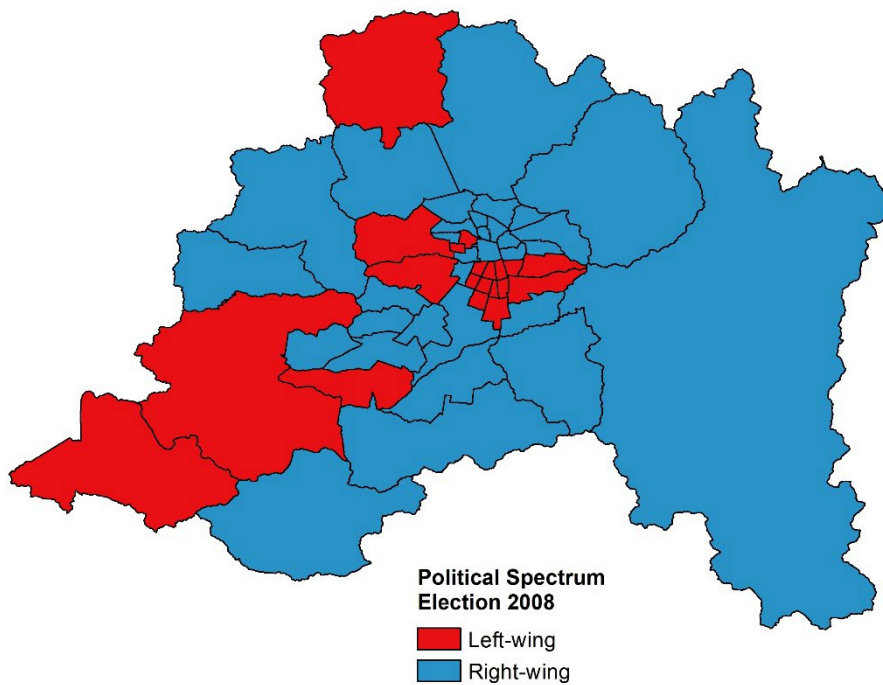
Urban investment programs, data and methodology

In order to test any potential bias towards electoral tampering and capture, we examined the distribution of two urban investment programs from the central government to the 52 *comunas* of the SMA over the period 2009-2017: the Urban Improvement Program (UIP) and Participatory Paving (PP)[6]. The programs are comparable in size, aims and scope. The average investment per capita is 4.4 and 3 thousand Chilean pesos in UIP and PP, respectively (a chart of the mean investment by year can be found in Annex 1). In addition, both intend to improve the standard of living of the vulnerable population by concentrating on neighborhoods that lack basic infrastructure, although the UIP finances social equipment (health infrastructure, street lightning, paving, parks, green areas, sports grounds, community centers, etc.), whereas PP focuses on street paving. A final point, the assignment process follows a similar path; in both procedures, the National Investment System evaluates projects on a technical and socioeconomic basis. Nevertheless, a striking difference between them ensures an appropriate case selection to test the hypothesis outlined above. While municipalities present proposals to regional institutions for UIP funds, in the case of PP ad-hoc created citizen committees submit proposals directly to the Ministry of Housing and Urbanism, without going through local governments. Committees have to co-finance between 5 and 30 percent of the construction costs, except for the most vulnerable committees and for 50 municipalities with the highest poverty rate.

These two programs were selected as dependent variables, whereas data on political outcomes, the presence of community-based organizations and a set of local

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[6] In Spanish, *Programa de mejoramiento urbano* and *Pavimentos Participativos*, respectively.

characteristics were included as independent variables. We did consider seven political determinants. First, since the *Intendente* is appointed by the central government, we calculated a dummy that is equal to 1 if the mayor is from the regional government political party, and 0 otherwise. Second, we incorporated mayor's *Periods* in charge as a measure of the possible capacity of mayors re-elected to exercise power. Previously, Pribble (2015) evinced that the mayor's length of tenure had a significant effect on local institutions' administrative capacity because re-elected mayors that seek a political career get involved in a more effective institutional performance. We further analyzed the interaction between *Intendente* and mayor's *periods* since, hypothetically, long-lasting strongholds were to be benefitted whereas powerful rival mayors have damaged. Fourth, we included the *Victory margin* in municipal and national elections to evaluate whose electoral prospects were backed through tactical distribution. The vote margin in municipal elections was selected to show mayors' pressure over central policy-making supported by their electoral results, whereas the victory margin in national elections would illustrate the central government's strategic behavior. We covered the interaction between *Intendente* and the *Victory margin* in municipal and national elections too, i.e., the influence of vote margin in those municipalities politically aligned with the regional governor. The latter was introduced to signal which areas should result benefitted. If investment appeared to be channeled where the victory margin is higher, that would be indicative of core municipalities being compensated for their support, whereas a negative sign would indicate central disburser's strategy to support loyal localities where competition is stronger.

The results of local and national polls were taken as exogenous to investment decisions since polling dates are fixed and decided aside the wishes of local and national authorities. In Chile, mayors are elected by simple majority and councilors by a proportional

representation system. Municipal elections are held on the last Sunday of October once every four years and the newly elected authorities take office on the 6th of December. National polls also take place in the last Sunday of October, but a distance of a year separates local and national ballots. The sample includes the results of three local (2008, 2012 and 2016) and three national elections (2009, 2013, 2017).

Since the second purpose of the research strategy was to test the potential consequences of social capital, we examined four indicators associated with social cohesion: two for the presence of community-based organizations (total number of *Associations per capita* and *Neighborhood associations per capita*) and two that reflect the absence of social cohesion (the *Crime rate* and the *Homicide rate*). While *Associations per capita* is a proxy for the local social capital as it brings into a single variable the organizational density in the *comuna*, *Neighborhood associations per capita* shows the presence of institutions on specific urban issues. From the theoretical discussion, we hypothesized that a dense network of associations could increase accountability and reduce incumbents' margin for tactical distribution, whereas the presence of neighborhood associations could be indicative of interest organizations trying to attract urban investment. The *Homicide rate* gathers the number of homicides per 100,000 inhabitants and the *Crime rate* encompasses various forms of crimes of greater social connotation per 100,000 inhabitants, including aggravated assault, murder, rape, robbery, burglary, motor vehicle theft, etc. Past research in Chile has considered these two indexes to be negative indicators of social cohesion (Calo-Blanco, Kovárík, Mengel & Romero, 2017). Accordingly, we deemed they could potentially explain adverse collective behavior and perform as proxies for negative social capital.

We entered a set of controls related to the socioeconomic conditions of the *comuna* and the urban environment: *poverty,* i.e., the percentage of people below the poverty line;

municipal revenues per capita; and *professional employees per capita.* The latter stands for local governments' technical capacity to formulate projects when competing for funds. Lastly, we added the *new housing space* constructed since both programs intend to finance urban infrastructure. We calculated values in logarithmic terms to control for non-linear relations.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
UIP	468	237,477.3	191,125.3	0	1,218,681
UIP per capita	468	4.40554	6.768986	0	56.97124
PP	468	236,530.7	379,809.2	0	3,444,969
PP per capita	468	2.917823	6.85489	0	59.68391
Intendente	468	0.2200855	0.4147474	0	1
Period	468	2.309829	1.464845	1	6
Margin winner Municipal election	468	21.19012	15.88665	0.03808	68.09021
Margin winner Presidential election	468	11.60561	21.6133	-61.53358	61.17464
Neighbourhood associations per capita	468	0.000866	0.0009194	0.000007	0.006077
Associations per capita	468	0.002104	0.0015477	0.000191	0.010791
Crime rate (per 100,000 inhabitants)	468	3,333.56	2,505.376	940.8053	19,223.22
Homicide rate (per 100,000 inhabitants)	468	2.144666	2.368386	0	21.72968
Municipal revenues per capita	468	94.96581	100.9248	7.95	542.91
Professionals per capita	468	0.002764	0.0461981	0.000065	0.004015
New Housing Space	468	78,709	116,592.3	0	762,233

Note: All fiscal variables were adjusted to thousand pesos of 2017 and these are found to per capita level to compare between *comunas.*

In order to test the influence of these variables, the following econometric model was designed for each of the two urban investment programs:

$$Log(UI\ per\ capita_{it}) = \alpha + \beta\ X_{it} + \gamma Z_{it} + \delta W_{it} + Y V_{it} + \sigma_i + \tau_t + u_{it} \qquad (1)$$

Where *UI* represents urban investment and X_{it}, Z_{it}, W_{it}, V_{it} are vectors that bring together, respectively, the variables related with political factors, the presence of community-based organizations and negative social capital, local socioeconomic conditions and urban characteristics.

For analytical purposes, we estimated two econometric models for each investment program, one that accounted only for main political variables and another that included the interactions between key variables too. The models adopted a two-way fixed-effects (FE) heteroscedasticity and autocorrelation robust estimation with municipal and year time effects. Robust standard errors were estimated clustering them at the municipality level to control for serial and spatial correlation.

Although a FE strategy provides a sound methodological basis, we conducted an extra test to check the robustness of estimations. FE results could be biased if investment is endogenous to past compromises, i.e., if higher or lower investment at period *t* depends on previous decisions because several infrastructure projects extend over one period. Consequently, we relied on difference-GMM (Arellano & Bond, 1991) to check the strength of every model, treating investment variables as endogenous to past performance.

Result section

The results of the econometric analyses are set out in Table 2. According to estimations, UIP is exposed to different forms of electoral influence, whereas PP lacks political clout. The significance of the variable *Intendente* signals that municipalities aligned with the political party of the regional governor got 66% more UIP

funds than foe municipalities (Model 1). This result is consistent with the partisan bias reported in the academic literature and endorses the first hypothesis. Besides, there is a significant negative relation between mayoral *Periods* in charge and the urban infrastructure attracted to the *comuna* as investment decreases by 26% per additional term. Although this outcome may seem contradictory, we should understand it along with the political affiliation of the mayors because it is likely that the effect of periods in charge varies depending on partisan alignment.

Model 2 gives additional evidence of how tactical politics is displayed across partisan lines, encompassing the influence of time and the vote share in those municipalities ruled by mayors belonging to the regional governor party. The *Margin of Victory* in presidential elections affects the funds directed towards loyal municipalities (the interaction between *Intendente* and *Margin_presidential*), whereas the vote share in local elections is not significant. This is a striking evidence for partisan favoritism, but it also highlights which areas are targeted through grant allocations. The negative coefficient shows investment goes towards aligned municipalities where the regional governor party won by a lower share, i.e., towards those aligned municipalities that confront stronger competition. Therefore, our results side with the empirical research supporting a tactical distribution in favor of swing areas.

One important question is to depict whose electoral prospects are furthered though distributive politics. We hypothesized that the greater the electoral power of the mayor, the greater the investment obtained thanks to its lobbying efforts. We found partial support for this hypothesis. The length in office positively affects fund allocations, but the vote share in local elections is not significant, indicating that mayoral electoral prospects are not credited. In other words, tactical distribution is the result of a top-down agency to support the electoral outcomes of the central government, but long-lasting local

mayors campaign for grant allocation. Beware that the negative sign of the variable *Periods* turns into positive when it is combined with mayoral affiliation to the political party of the regional governor (the interaction *Intendente* and *Periods*). So, enduring, aligned local strongmen attract funds for their constituents backed by their electoral support, but rival, abiding mayors are penalized. These results seem to disclose an empirical basis to Borck & Owings' (2003) model in which distribution is partly determined by the lobbying efforts of local governments, but then the central government makes the final decision bearing in mind its own re-election chances.

Equation 2 accounts for the total effects of the above-mentioned interactions. In the case of *Intendente* and *Periods*, estimations attest that in those *comunas* governed by mayors aligned with the political party of the regional governor, an additional period of governance will result, on average, on 3% increase of investment funds. Regarding the distributive tactic among strongholds, a 1% decrease in the vote margin in aligned *comunas* will lead to 1.26% increase as a way to benefit disputed municipalities.

$$Log(UIper\ capita\ ) = 0.4035(Intendente) - 0.3531(Periods) +$$

$$0.0197(Margin\ National) + 0.3226(Intendente * Periods) -$$

$$0.0323(Intendente * Margin\ National) + \gamma\ Z_{\{it\}} + \sigma_i + \tau_t + u_{it} \qquad (2)$$

Another research goal was to unravel the role of social capital. Since municipalities present project proposals to UIP funds, associations could pressure local incumbents to attract grants for the community. As a result, hypothetically, a greater presence of local social capital would lead to higher investment. Nevertheless, our estimations show no influence by organizations as both variables for the associational density are not significant. Relatedly, the two variables that summarize negative social capital turn out to be not significant.

In sharp contrast to UIP, PP program is absent from strategic targeting. Not a single political variable was found to be significant (Models 3 and 4). Moreover, no statistically significant relation was detected for the four indicators that accounted for the local social capital. This result is somewhat counterintuitive since we considered as a working hypothesis that if transfers were to be geared directly to eligible groups, the presence of associations on specific urban issues would help attracting funds because these would work to secure grants for the community. Interestingly, no sign of rent seeking is observed. On the other hand, there is no statistically robust association for the two variables we used to approach negative social capital. We foresaw these indexes to be inversely connected as they are proxies for a collective inability to organize around a common goal, but they did not report any meaningful influence.

Given these results, we conducted an additional test to contrast further the potential influence of community organizations. In this case, we created dummy variables for different associational density thresholds. Dummies adopted the value 1 if the density of associations in the corresponding *comuna* was equal or below 20%, 40%, 60% and 80% of the *comuna* with the highest density, respectively. Estimations can be found in Annex 2-5. Results match those observed in the previous exercises for every variable: incumbent affiliation, the number of mayoral periods and the margin of victory in presidential elections remain indicative of a partisan bias in the allocation of UIP funds, whereas when beneficiaries administer funds, no sign of appropriation by the local social capital was found. There is just a slight variation in the coefficient for a density of neighborhood associations above 80%, which turns to be negative and significant for the distribution of UIP, although not for PP. This result seems to indicate that in those *comunas* in the highest associational density quintile, a greater presence of neighborhood organizations is beneficial for attracting investment when mayors manage funds. However, if users run

investments programs, a greater presence of associations remain not significant. Overall, these results are consistent and corroborate the influence of political factors when mayors act as brokers, though no indication of free riding by community associations is observed. These results also bring to light how the institutional design of the transfer system moulds the distributive pattern, supplying an empirical underpinning to our fourth hypothesis.

Control variables produced similar results for the two programs. UIP is positively related with poverty rate, a reasonable link since it is intended to improve the conditions where vulnerable citizens live, but no statistically significant correlation is reported for *professionals per capita*. The latter is a remarkable outcome since municipalities differ strongly in their capacity to develop competitive project proposals and UIP allocates funds based on technical considerations. Consequently, we expected *professionals per capita*, a proxy for the technical capacity of local governments, to be positively related, but no influence is observed.

Table 2. Fixed Effects estimation results

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Intendente (Dummy)	0.6624**	0.4035	-0.0128	0.3388
	(0.23)	(0.56)	(0.14)	(0.24)
Period	-0.2640**	-0.3531**	-0.0466	-0.0051
	(0.09)	(0.11)	(0.07)	(0.08)
Margin municipal election (%)	0.0035	-0.0005	-0.0007	0.0009
	(0.01)	(0.01)	(0.01)	(0.01)
Margin presidential election (%)	0.0112	0.0197	-0.0001	-0.0017
	(0.01)	(0.01)	(0.00)	(0.00)
Intendente x Period		0.3226*		-0.1270
		(0.15)		(0.09)
Intendete x Margin_municipal		-0.0026		-0.0077
		(0.02)		(0.01)
Intendente x Margin_presidential		-0.0323*		0.0080
		(0.01)		(0.01)
Associations per capita (ln)	0.0785	0.1356	-0.1318	-0.1523
	(0.17)	(0.21)	(0.09)	(0.09)
Neighbourhood associations per capita (ln)	-0.1040	-0.1541	0.2027	0.2077
	(0.19)	(0.20)	(0.17)	(0.17)
Crime rate (per 100,000 inhabitants)	-0.0001	-0.0001	0.0003	0.0003
	(0.00)	(0.00)	(0.00)	(0.00)
Homicide rate (per 100,000 inhabitants)	0.0289	0.0223	-0.0055	-0.0006
	(0.03)	(0.03)	(0.03)	(0.03)
New Housing Space	0.0156	-0.0197	0.0021	0.0108
	(0.07)	(0.06)	(0.05)	(0.05)
Municipal revenues per capita (ln)	-0.1333	-0.1549	0.2962	0.2370
	(0.43)	(0.43)	(0.29)	(0.28)
Professionals per capita (ln)	-0.0443	-0.0132	-0.0671	-0.0962*
	(0.08)	(0.08)	(0.04)	(0.04)
Poverty (ln)	0.5869*	0.6029*	0.3435	0.3210
	(0.25)	(0.25)	(0.18)	(0.18)
Cons	-0.9672	-0.3889	1.3185	0.5059
	(2.48)	(2.45)	(2.14)	(2.11)
N	466	466	280	280
R-Squared (within)	0.2234	0.2521	0.2988	0.3122
Number of id	52	52	43	43
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES

Note: Robust standard errors are in parentheses. ** p<0.01, * p<0.05.

Table 3 supplies the difference-GMM results. As discussed, this strategy allows us to contrast the scores when taking investment as endogenous to previous decisions. The

Arellano–Bond tests for AR1 and AR2 reports no second-order serial autocorrelation, whereas the Hansen test indicates that instrumental variables are valid. Overall, GMM provide additional robust support. For every model, the distribution of UIP is mediated by the same political factors identified in FE estimations: fellow mayors are systematically over financed, the results of presidential elections are credited but municipal ballot makes no difference and, finally, experience is significant for aligned local leaders. GMM estimations confirm there is no sign of capture by civil society organizations in any of the investment programs analyzed. There is just a slight variation in the performance of the vote margin in presidential and municipal elections for PP, which turned to be significant. Nonetheless, main political variables remain non-significant, indicating there is no interference when users handle funds.

Table 3. GMM estimation results

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Dependent Variable Lagged	0.2949**	0.2563*	0.2626**	0.2725*
	(0.11)	(0.11)	(0.09)	(0.11)
Intendente (Dummy)	0.7451***	0.3343	-0.0243	-0.0299
	(0.20)	(0.52)	(0.13)	(0.27)
Period	-0.1381	-0.2059	0.0469	0.0464
	(0.08)	(0.11)	(0.04)	(0.05)
Margin municipal election (%)	-0.0056	-0.0075	-0.0052*	-0.0056
	(0.01)	(0.01)	(0.00)	(0.00)
Margin presidential election (%)	0.0177**	0.0259***	-0.0046	-0.0067
	(0.01)	(0.01)	(0.00)	(0.00)
Intendente x Period		0.3266*		-0.0542
		(0.16)		(0.12)
Intendete x Margin municipal election		0.0120		-0.0007
		(0.02)		(0.01)
Intendente x Margin presidential election		-0.0359**		0.0115*
		(0.01)		(0.00)
Associations per capita (ln)	0.2445	0.1551	0.0690	0.0406
	(0.13)	(0.17)	(0.11)	(0.12)
Neighbourhood associations per capita (ln)	0.1442	0.1223	-0.1081	-0.0556
	(0.19)	(0.19)	(0.11)	(0.11)
Crime rate (per 100,000 inhabitants)	0.0000	0.0000	-0.0001	-0.0001
	(0.00)	(0.00)	(0.00)	(0.00)
Homicide rate (per 100,000 inhabitants)	0.0038	-0.0073	-0.0039	-0.0009
	(0.03)	(0.02)	(0.02)	(0.02)
New Housing Space	-0.1589***	-0.1720**	-0.0896	-0.0871
	(0.04)	(0.06)	(0.05)	(0.06)
Municipal revenues per capita (ln)	0.0303	0.0707	0.2619**	0.2457*
	(0.14)	(0.15)	(0.10)	(0.10)
Professionals per capita (ln)	0.2551	0.3119	0.1145	0.1175
	(0.24)	(0.29)	(0.17)	(0.17)
Poverty (ln)	0.5076***	0.6790***	0.2985	0.3423
	(0.15)	(0.18)	(0.19)	(0.19)
Cons	265.6200*	252.8407	-360.1091***	-354.9148***
	(107.87)	(130.75)	(89.75)	(54.54)
N	414	414	211	211
Number of id	52	52	38	38
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES
AR (1)	-2.46	-2.38	-2.86	-2.77
	0.014	0.017	0.004	0.006
AR (2)	1.54	0.66	-0.45	-0.44
	0.123	0.508	0.649	0.66
Hansen	32.58	29.51	22.2	24.09
	0.113	0.58	0.567	0.193

N. of instruments	40	38	40	38

Note: Robust standard errors are in parentheses. ** p<0.01, * p<0.05.

Implications for metropolitan governance

These results have important implications for the institutional design of grant transfers and the governance of metropolitan areas. Decentralized urban investment that goes through mayoral control is influenced by partisan and electoral concerns, whereas direct grant allocations to beneficiaries have no political interferences. Constituencies voting for the party of the regional governor are systematically over financed to back the re-election possibilities of the incumbent when transfers are channeled through local governments. The electoral tactic that seems to yield the highest returns is to concentrate urban goods where competition is stronger, since municipalities where the vote margin in presidential elections was lower were the most benefitted amongst strongholds. This strategy is consistent with previous research reporting a tactical distribution to favor swing districts.

Nevertheless, not every investment flow seems akin to distributive politics. Although there might be alternative political mechanisms that our research strategy was not able to identify, estimations imply that a program designed to distribute funds straight to beneficiaries is not hampered by partisanship. We believe there are two reasons why decentralized programs are subject to political influence, whereas direct grant allocations are not. First, although pork barrel politics is primarily used to cement the electoral prospects of the national government, long-lasting local chiefs seek their piece of the cake. This intuition is based on the significance of the variables related to presidential

elections results (and the insignificance of local polls), but also on the influence of the mayoral periods in charge. On the contrary, transfers to users are not mediated by tactic concerns, even though, hypothetically, the central government could conduct a strategy to maximize its own electoral utility favoring stronghold constituencies. A major conclusion is that, when mayors act as strongmen knocking the central government's door, a decentralized investment program is rather exposed to political duress.

A second reason for direct assignments to be free from political distortions is the role of community-based organizations. Since citizen committees apply for PP funds, strong local leaders have no chance to lobby the central distributor. Besides, there is no signal of capture, as the variables related to social capital remain non-significant for both programs. Recall that rent seeking could potentially result under the two program designs, in the case of decentralized investment by compelling mayors to attract investment, and in the case of direct transfers by reaping public goods for the sake of their community. Our results hence provide additional evidence of the importance of community-based organizations for accountability and control. Regarding the program design, results point to a stronger involvement of the civil society in the provision of public goods to back the positive outcomes discussed earlier, since no risk of particularistic appropriation is appreciated.

The indications above bring forward important implications for the governance architecture of the metropolitan area. Similar to other cities around the world, the SMA is administered by a fragmented political geography. Mayors and local councils are selected in competitive polls but, above them, there is no elected, metropolitan authority. Contrariwise, the regional governor does not have to compete in the ballot as it is appointed by the central government, which is to open the door to favouritism in the distribution of public goods. An elected metropolitan authority would not be fully absent

from political motivations but it would introduce another mechanism of checks and balances, hence limiting the scope for partisan politics.

Furthermore, the current governance framework faces important limitations. First, although decentralization brings decision-making closer to citizens and improves the responsiveness of services to local demands, it also leads to large fiscal disparities among local governments. In fact, the current vertical and horizontal transfer system barely compensates for imbalances between the revenues that municipalities generate on their own and their expenditure responsibilities. Second, municipalities held strong administrative, economic, social and environmental interdependencies that cannot be properly accommodated in a decentralized framework. Third, there are issues that have a metropolitan-wide nature, such as transportation, urban services, or strategic urban planning.

Alternatively, a two-tier governance framework made of a democratically elected metropolitan authority and *comuna*-level local governments could take advantage of the agglomeration benefits of the upper tier, while retaining the flexibility of the bottom tier for urban service provision. Obviously, a two-tier structure raises concerns about the obligations of each level, the efficiency loses that may be engendered and the lack of transparency as duties are diluted. The distribution of responsibilities should be clearly defined to avoid duplication and general confusion about who citizens are paying for and which tier is responsible when providing services (see Bird & Slack (2007) for a tentative distribution of responsibilities in a two-tier model). Nevertheless, if responsibilities are clearly demarcated and taxes correctly specified among different government levels, a two-tier system is likely to render benefits by acquiring economies of scale at the metropolitan level and retaining the flexibility of local service delivery. Regarding fund distribution, it will reduce the margin for electoral motivations in the distribution of

resources, although it may well happen that total investment in the entire metropolitan area diminishes if the newly elected metropolitan authority is not aligned with the national government.

Conclusions

This paper has addressed the consequences of political factors in the distribution of local investment from the central government to the municipalities of the Santiago Metropolitan Area. Considering one decentralized urban investment program mediated by municipal governments and another one that transfers resources directly to self-organized citizen committees, the paper has shed light on how fund distribution follows partisan criteria to favor aligned localities against foes. The electoral tactic of the central disburser is to over finance loyal municipalities where competition is stronger, that is, riskier areas that are likely to swing in the next presidential race.

We believe our research contributes in four major ways to a better understanding of governance processes. In the first place, there is scant evidence on how partisan alignment shapes the distribution of funds across city areas, in spite of the implications it has for urban governance. This piece of work has bridge this gap in the literature showing that accountability problems do not circumscribe to intergovernmental relations within a country, but also hold on a city scale. We believe understanding the redistributive consequences of political discretion deserves further research. If goods are not allocated in an equitable manner but instead particular areas get excessive shares, the urban policy aim of reducing territorial imbalances is certainly undermined. While being a general

concern, this issue is particularly pressing in cities of the Global South characterized by population concentration and strong socio-spatial disparities.

A second lesson to be learned is how political pressure is exercised in the distributive game. The central government benefits loyal areas looking for its own electoral returns, a result consistent with the prevailing assumption of a top-down agency to increase the re-election intentions of the central disburser. However, several-times elected mayors lobby to attract funds supported by their political experience, whereas long-lasting rival mayors are punished. This bottom-up influence helps explaining why decentralized investment is rather subject to political interferences, whereas there is no meddling when grants are administered to beneficiaries.

A third interesting result is the potential benefits of community-based organizations reducing the margin for a politically motivated, discretionary distribution of intergovernmental transfers. As discussed throughout the paper, the literature on participatory governance has signalled the benefits of civic engagement over the democratic process, the performance of public services and the responsiveness and accountability of local governments, although it also involves threats to local governance associated with the risk of capture by specific-purpose associations. Our analysis suggests no sign of appropriation, hence, social capital is able to act as a control mechanism to confine the influence of local governments over an arbitrary spatial allocation of funds. We believe the latter is a contribution to the literature since, to the best of our knowledge, no research has determined the potential role of the local social capital limiting pork barrelling. This outcome also opens a productive venue for future research: what is the boundary between citizen involvement and patronage? What institutional conditions allow participation to strengthen government accountability?

Finally, the paper has approached the implications for the governance of the metropolitan area, discussing the benefits of a two-tier governance system. The actual scenario has to come across important planning and accountability problems because the national cabinet appoints the regional governor. Although not completely free from political leanings, a system made of an elected metropolitan authority and a network of local governments is likely to improve metropolitan governance by taking advantage of economies of scale in urban service provision, retaining the benefits of a decentralized system and reducing the margin for partisanship in the distribution of intergovernmental transfers. A two-tier scheme also encounters several bottlenecks, particularly when the two government levels are in gridlock or the upper tier cannot co-ordinate efficiently local authorities. Nonetheless, an elected metropolitan body will improve democratic practices while introducing a counterweight between mayors and the central legislator.

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Annex 1. Mean investment by year
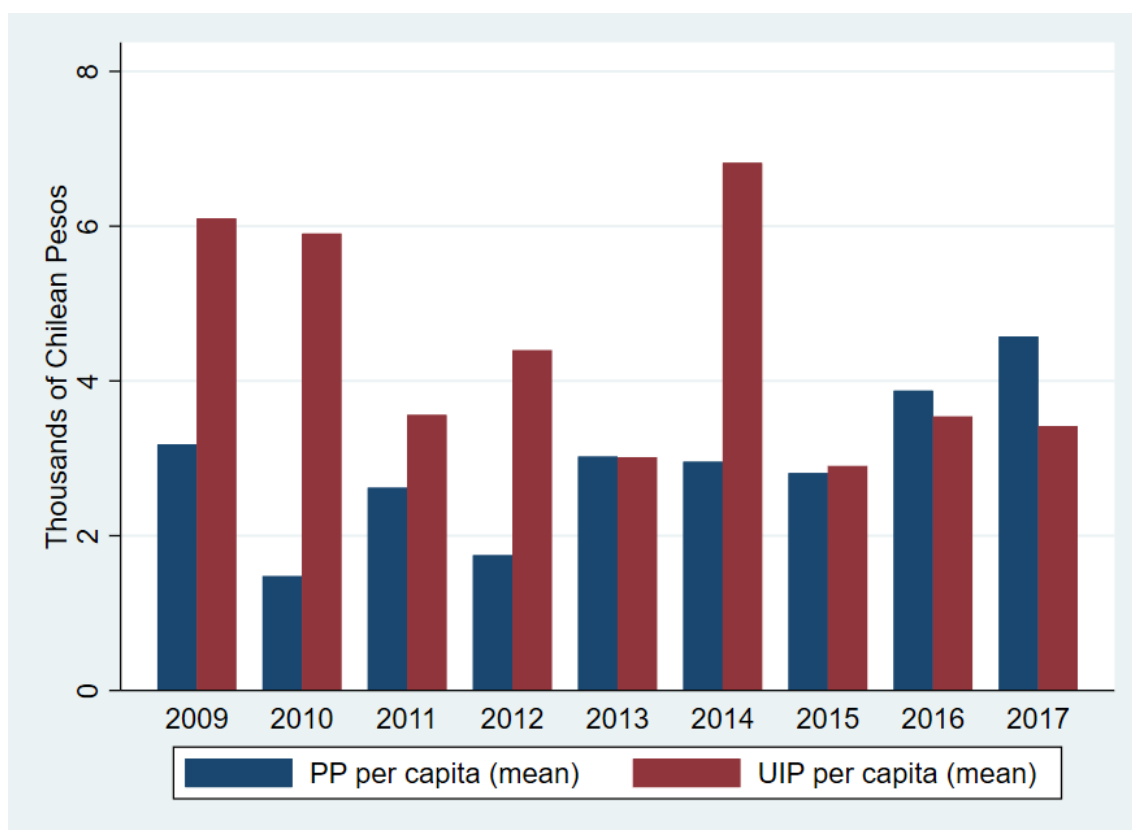
Annex 2. FE estimations for associational density equal or below 20%

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Intendente (Dummy)	0.6640**	0.4210	-0.0076	0.3311
	(0.23)	(0.56)	(0.14)	(0.25)
Period	-0.2685**	-0.3614**	-0.0395	0.0039
	(0.09)	(0.11)	(0.07)	(0.08)
Margin municipal election (%)	0.0032	-0.0007	-0.0007	0.0005
	(0.01)	(0.01)	(0.01)	(0.01)
Margin presidential election (%)	0.0113	0.0198	0.0004	-0.0011
	(0.01)	(0.01)	(0.00)	(0.00)
Intendente x Period		0.3294*		-0.1324
		(0.15)		(0.09)
Intendete x Margin_municipal		-0.0039		-0.0063
		(0.02)		(0.01)
Intendente x Margin_presidential		-0.0325*		0.0077
		(0.01)		(0.01)

	-0.0001 (0.00)	-0.0001 (0.00)	0.0003 (0.00)	0.0003 (0.00)
Crime rate (per 100,000 inhabitants)	-0.0001 (0.00)	-0.0001 (0.00)	0.0003 (0.00)	0.0003 (0.00)
Homicide rate (per 100,000 inhabitants)	0.0288 (0.03)	0.0220 (0.03)	-0.0049 (0.03)	0.0004 (0.03)
Associations (Dummy P20)	-0.1573 (0.23)	-0.1615 (0.20)	-0.0578 (0.25)	-0.0099 (0.27)
Neighbourhood associations (Dummy P20)	0.2261 (0.15)	0.3328 (0.18)	0.0436 (0.19)	0.0191 (0.17)
New Housing Space	0.0177 (0.07)	-0.0167 (0.06)	0.0017 (0.05)	0.0101 (0.05)
Municipal revenues per capita (ln)	-0.1098 (0.42)	-0.0994 (0.42)	0.3105 (0.27)	0.2422 (0.26)
Professionals per capita (ln)	-0.0416 (0.08)	-0.0095 (0.08)	-0.0786* (0.04)	-0.1081* (0.04)
Poverty (ln)	0.5736* (0.25)	0.5810* (0.25)	0.3674 (0.19)	0.3500 (0.18)
_cons	-0.6893 (2.67)	0.0093 (2.71)	1.0545 (2.24)	0.2878 (2.20)
N	466	466	280	280
R-Squared	0.2241	0.2533	0.2921	0.3049
Number of id	52	52	43	43
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES

Annex 3. FE estimations for associational density equal or below 40%

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Intendente (Dummy)	0.6705** (0.23)	0.4053 (0.55)	-0.0105 (0.14)	0.3195 (0.24)
Period	-0.2667** (0.09)	-0.3552** (0.11)	-0.0420 (0.07)	0.0028 (0.08)
Margin municipal election (%)	0.0038 (0.01)	-0.0002 (0.01)	-0.0008 (0.01)	0.0004 (0.01)
Margin presidential election (%)	0.0114 (0.01)	0.0196 (0.01)	0.0006 (0.00)	-0.0011 (0.00)

Intendente x Period		0.3195* (0.15)		-0.1342 (0.09)
Intendete x Margin_municipal		-0.0022 (0.02)		-0.0059 (0.01)
Intendente x Margin_presidential		-0.0319* (0.01)		0.0079 (0.01)
Crime rate (per 100,000 inhabitants)	-0.0001 (0.00)	-0.0001 (0.00)	0.0003 (0.00)	0.0003 (0.00)
Homicide rate (per 100,000 inhabitants)	0.0297 (0.03)	0.0229 (0.03)	-0.0045 (0.03)	0.0009 (0.03)
Associations (Dummy P40)	0.0498 (0.25)	0.0483 (0.26)	-0.0321 (0.11)	-0.0391 (0.12)
Neighbourhood associations (Dummy P40)	-0.1885 (0.23)	-0.1749 (0.25)	-0.0545 (0.20)	-0.0425 (0.21)
New Housing Space	0.0150 (0.07)	-0.0202 (0.06)	0.0018 (0.05)	0.0101 (0.05)
Municipal revenues per capita (ln)	-0.1591 (0.43)	-0.1695 (0.43)	0.2775 (0.29)	0.2148 (0.28)
Professionals per capita (ln)	-0.0415 (0.08)	-0.0085 (0.09)	-0.0768* (0.04)	-0.1058* (0.04)
Poverty (ln)	0.5818* (0.25)	0.5927* (0.25)	0.3683 (0.19)	0.3513 (0.18)
_cons	-0.9912 (2.67)	-0.4277 (2.66)	0.8321 (2.39)	0.1139 (2.33)
N	466	466	280	280
R-Squared	0.2238	0.2521	0.2925	0.3055
Number of id	52	52	43	43
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES

Annex 4. FE estimations for associational density equal or below 60%

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Intendente (Dummy)	0.6680** (0.23)	0.4141 (0.55)	-0.0057 (0.14)	0.3417 (0.24)
Period	-0.2672** (0.10)	-0.3559** (0.11)	-0.0448 (0.07)	-0.0032 (0.08)

Margin municipal election (%)	0.0036 (0.01)	-0.0003 (0.01)	-0.0008 (0.01)	0.0006 (0.01)
Margin presidential election (%)	0.0110 (0.01)	0.0193 (0.01)	0.0001 (0.00)	-0.0014 (0.00)
Intendente x Period		0.3201* (0.15)		-0.1269 (0.09)
Intendete x Margin_municipal		-0.0029 (0.02)		-0.0075 (0.01)
Intendente x Margin_presidential		-0.0319* (0.01)		0.0078 (0.01)
Crime rate (per 100,000 inhabitants)	-0.0001 (0.00)	-0.0001 (0.00)	0.0003 (0.00)	0.0003 (0.00)
Homicide rate (per 100,000 inhabitants)	0.0282 (0.03)	0.0218 (0.03)	-0.0046 (0.03)	0.0007 (0.03)
Associations (Dummy P60)	-0.0160 (0.15)	-0.0169 (0.16)	-0.1307 (0.19)	-0.1344 (0.19)
Neighbourhood associations (Dummy P60)	0.1496 (0.36)	0.0908 (0.36)	0.0537 (0.11)	0.0447 (0.12)
New Housing Space	0.0145 (0.07)	-0.0195 (0.06)	0.0027 (0.05)	0.0111 (0.05)
Municipal revenues per capita (ln)	-0.1129 (0.43)	-0.1333 (0.42)	0.2726 (0.29)	0.2041 (0.27)
Professionals per capita (ln)	-0.0409 (0.08)	-0.0076 (0.08)	-0.0743* (0.03)	-0.1028* (0.04)
Poverty (ln)	0.5759* (0.25)	0.5856* (0.25)	0.3695 (0.19)	0.3494 (0.18)
_cons	-0.8058 (2.63)	-0.2677 (2.61)	0.8052 (2.35)	0.0494 (2.28)
N	466	466	280	280
R-Squared	0.2233	0.2516	0.2949	0.3080
Number of id	52	52	43	43
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES

Annex 5. FE estimations for associational density equal or below 80%

	UIP per capita (ln)		PP per capita (ln)	
	Model 1	Model 2	Model 3	Model 4
Intendente (Dummy)	0.6629**	0.4283	0.0083	0.3407
	(0.23)	(0.55)	(0.14)	(0.24)
Period	-0.2687**	-0.3548**	-0.0353	0.0041
	(0.09)	(0.11)	(0.07)	(0.08)
Margin municipal election (%)	0.0038	-0.0002	-0.0008	0.0007
	(0.01)	(0.01)	(0.01)	(0.01)
Margin presidential election (%)	0.0111	0.0195	0.0004	-0.0012
	(0.01)	(0.01)	(0.00)	(0.00)
Intendente x Period		0.3085*		-0.1198
		(0.15)		(0.09)
Intendete x Margin_municipal		-0.0024		-0.0077
		(0.02)		(0.01)
Intendente x Margin_presidential		-0.0321*		0.0080
		(0.01)		(0.01)
Crime rate (per 100,000 inhabitants)	-0.0001	-0.0001	0.0003	0.0003
	(0.00)	(0.00)	(0.00)	(0.00)
Homicide rate (per 100,000 inhabitants)	0.0287	0.0221	-0.0051	-0.0001
	(0.03)	(0.03)	(0.03)	(0.03)
Associations (Dummy P80)	0.2749	0.2574	-0.1690	-0.1751
	(0.19)	(0.19)	(0.26)	(0.26)
Neighbourhood associations (Dummy P80)	-0.5198*	-0.4453	0.3641	0.3422
	(0.21)	(0.24)	(0.25)	(0.24)
New Housing Space	-0.1175	-0.1293	0.2763	0.2102
	(0.41)	(0.40)	(0.28)	(0.27)
Municipal revenues per capita (ln)	0.0214	-0.0139	0.0002	0.0085
	(0.06)	(0.06)	(0.05)	(0.05)
Professionals per capita (ln)	-0.0605	-0.0265	-0.0685	-0.0967*
	(0.08)	(0.09)	(0.03)	(0.04)
Poverty (ln)	0.5759*	0.5880*	0.3713	0.3501
	(0.25)	(0.25)	(0.18)	(0.18)
_cons	-0.6289	-0.1311	0.6704	-0.0461
	(2.58)	(2.59)	(2.27)	(2.21)

N	466	466	280	280
R-Squared	0.2261	0.2539	0.2991	0.3117
Number of id	52	52	43	43
FE Municipalities	YES	YES	YES	YES
FE Year	YES	YES	YES	YES