This article studies the main factors that affect the allocation of non-earmarked federal funds to subnational units in Argentina between 1999 and 2009. The main contribution is that it brings presidential popularity together with presidential structural and partisan preferences for distribution into the analysis. It argues that electorally strong and popular presidents tend to increase transfers to developing districts and reduce allocations to richer districts. Investing in developing provinces is more efficient, and governors from these districts tend to support redistributive presidents and be weaker political challengers than governors from richer units. In contrast, weaker presidents are less capable of resisting pressures from governors from larger and richer districts. There is also more distribution to developing regions when presidents have a larger share of partisan allies there and fewer in richer states. The article discusses these results, compares them with competitive claims, and explores implications for the comparative debate.

Distributive politics depends on powerful actors. However, there is still much discussion about who these relevant actors are and particularly how they influence distribution. Empirical studies on the topic fail to show conclusive evidence in this regard.

Existing scholarship, particularly in the United States, has long studied the federal resource allocation across regions by focusing fundamentally on the role of Congress and its internal operations, such as committee composition, partisan configuration, or the role of majority party leaders (Atlas et al. 1995; Balla et al. 2002; Grossman 1994, 299; Holcombe and Zardkoohi 1981, 397; Lauderdale 2008; Lee 2000; Lee 2003). Although most researchers recognize a crucial role of members of Congress, we have only mixed empirical evidence on how they shape distribution (Berry et al. 2010, 784; Kriner and Reeves 2012, 349).

Some recent studies have explored the influence presidents have over the allocation of federal outlays (Berry et al. 2010; Kriner and Reeves 2015; Larcinese
et al. 2006, 2013). Scholars present several theoretical reasons why presidents target funds to their reelection constituency. It may be to enhance cooperation between the president and members of Congress (Cox and McCubbins 1986), to further the president’s legislative agenda by directing spending to specific legislators (McCarty 2000), or to support district leaders with the same policy preferences (Larcinese et al. 2006, 448).

This work provides new evidence on how presidents shape distributive politics in developing federal democracies by bringing presidential popularity together with presidential structural and partisan preferences for distribution into the analysis. The main argument is that politically powerful and popular presidents tend to distribute more funds to poorer districts and fewer to richer ones. More specifically, it claims that electorally strong and highly popular presidents, that is, presidents who have some leverage in the distribution of infrastructure funds, increase transfers to less developed districts and reduce allocations to richer districts. This is because governors from less developed districts prefer and need redistribution (that is, they need a central government taking resources from richer districts and transferring them to poorer states), investing in them is more efficient (in terms of the political return for each invested dollar), and they tend to be weaker political challengers to the president than governors from more developed districts (who usually control more votes and resources). Electorally weak and less popular presidents, on the contrary, have less leverage in the distribution of infrastructure funds and are less capable of resisting pressures from more developed districts. Strong governors from these districts struggle against presidents and governors from poorer districts to increase transfers to their provinces.

These factors are particularly relevant in developing countries, where inequality among regions is sharper and, hence, cleavages among provinces are sometimes fierce and most of the time enduring. Moreover, in some of these countries most rules that regulate the distribution of federal funds tend to be more flexible (and changing), partisan structures and ties are weaker and territorialized (or weakening, such as in Argentina), and clashes among contending national and regional elites tend to be more direct or personalistic than in consolidated democracies.

I study the politics of the allocation of highly redistributive and non-earmarked discretionary federal grants. Discretionary funds are those that are not allocated following particular legal frameworks. Hence, I exclude from the analysis legally mandated and earmarked funds. Redistributive grants are those that can generate potentially large economic and social externalities in the localities or regions in which they are invested. Based on this decision, I concentrate the analysis on public infrastructure, a policy tool in hands of governments that most scholars in the literature consider crucial to stimulate growth and promote territorial redistribution (it is labor intensive and tends to generate large positive economic externalities where allocated). The regional distribution of infrastructure funds is a mechanism
through which to redistribute money from the regions that pay taxes that finance these funds to others in which the investment is actually made (Solé Ollé 2010).

I analyze distributive politics in Argentina, an unequal Latin American case in a region that is, in fact, the most unequal region in the world. I calculated the average income of each province and estimated the interregional Gini index to measure income inequality across provinces in five of the largest Latin American countries: Argentina stands out as the most unequal country, with a Gini of 33, closely followed by Brazil with 30 and Colombia with 28. Mexico and Chile are less unequal, with about 24 each. The average income per capita in rich districts in Argentina is up to six times higher than that of poorer ones. Even more starkly, Santiago del Estero, one of the poorest Northern Argentine provinces, has a Gross Geographic Product (GGP) per capita 17 times lower than Santa Cruz’s, one the richest oil-producing Patagonian districts.

The relevance of studying the allocation of infrastructure funds in this case is threefold. First, these are crucial funds central governments have to correct territorial inequality.¹ Second, these territorially redistributive funds have increased 429 percent in real terms (after controlling for inflation) during the last decade in Argentina, becoming one of the most important redistributive tools in the hands of the central government.²

Third, the president in Argentina has enormous discretionary power over its allocation. To begin with, the president has large ex-ante institutional powers to decide the allocation of infrastructure grants through the budget bill. The federal executive is in charge of drafting this bill. The territorial distribution of most infrastructure grants is outlined in this moment.³ On top of that, presidents Néstor Kirchner (2003–2007) and Cristina Fernández (2007–2015) counted on large parliamentary majorities (and large partisan discipline) in both chambers for most of the time during their presidential mandates, granting them large partisan powers to influence the decision making process. Finally, the federal executive in Argentina has enormous ex-post institutional powers to reassign budget allocations already approved by Congress making use of so-called “super-powers.”⁴

Due to this discretion, loyal districts are advantaged in the distribution of federal outlays. Several newspaper articles repeatedly reported how presidents used these ex-ante and ex-post institutional as well as partisan powers to discretionarily allocate infrastructure funds in the provinces, particularly in allied ones (see, for instance, La Nación, 2007–2014; and Clarín 2014). In Argentina, districts loyal to the president receive on average almost 60 percent more infrastructure funds than the opposition. Interestingly, these figures are much larger than the share of equivalent grants in Brazil (20.4 percent), Colombia (17 percent) (González and Mamone 2015), Portugal (19 percent; Migueis 2013), India (16 percent; Arulampalam et al. 2009), and the United States (about 4–5 percent; Berry et al. 2010, 783). Larcinese et al. claim that while this gap between loyal and opposition
districts can be entirely due to the needs and characteristics of the states’ respective populations, “it is legitimate to ask how much of this difference can be due to purely political factors” (2006, 450).

I organize the article as follows. First, I discuss the literature on the topic and, based on it, present the main theoretical claim. Second, I operationalize the variables and provide the data sources for the main and competing hypotheses. Third, I introduce the methodological approach selected to analyze the data. In the fourth and fifth sections, I put forth the empirical findings and discuss them.

State of Research

A large part of the literature analyzes whether programmatic factors influence the distribution of federal funds. A central government distributes funds programatically when it follows certain ideas of equality and efficiency. Programmatic policies distribute public resources to all members of a socioeconomic group, such as the elderly, the sick, and the unemployed (Persson and Tabellini 2000, 115). Some authors have grouped the programmatic criteria into efficiency and equity categories. According to the first, the favored regions should be those in which infrastructure projects have a greater economic impact, such as areas with the largest number of users or those with higher development levels. Under equity criteria, a government committed to maximizing a nationwide social welfare function allocates grants among states to compensate the effects that an uneven distribution of wealth across a territory of a given country or to provide for those that are especially in need. Hence, investments should target districts with low levels of development to offset the effects of an uneven geographical distribution of public services (Grossman 1994, 295; Solé Ollé 2010, 297). I explore whether political factors influence the distribution of federal grants, controlling for the role programmatic factors may play.

Early studies on the topic have also claimed that the distribution of federal grants depends on relatively time-invariant institutional rules. Among those rules, overrepresentation is believed to affect the amount of federal grants states receive. Bennett and Mayberry (1979) and Holcombe and Zardkoohi (1981) developed early studies claiming that overrepresented states tend to receive more federal grants per capita. The claim, supported by several other works (see Atlas et al. 1995; Hoover and Pecorino 2005; Lee 1998), is that the political benefits from a marginal dollar of increased grants to a small and overrepresented state are greater than a marginal dollar of increased grants to a large state in which the per capita impact is smaller. Although part of the comparative literature on the topic reached similar conclusions (see Gibson et al. 2004; Gibson and Calvo 2000; Gordin 2006; Rodden 2010; Samuels and Snyder 2001), other studies did not find overrepresentation to be a relevant factor in explaining changes in the allocation
of federal funds (González and Mamone 2012; Lodola 2005). I analyze the role of overrepresentation and especially explore its interactions with the provinces’ structural characteristics, and other dynamic variables, such as partisan links between presidents and governors.

Specialists on the US Congress have long debated whether legislative delegations, the composition of committees, or individual deputies and senators as well as majority leaders have a significant effect over the distribution of federal grants. In an early work, Ferejohn (1974) demonstrated that members of the Appropriation and Public Works committees allocated more funds to their districts. But since then, scholars found mixed empirical evidence on the relevance of committees (Berry et al. 2010, 784; Kriner and Reeves 2012, 349). Some studies found that larger delegations and committee membership affect federal distribution (Grossman 1994, 299; Holcombe and Zardkoohi 1981, 397), but several other works found mixed results for this claim (Alvarex and Saving 1997; Anzia and Berry 2011; Atlas et al. 1995; Balla et al. 2002; Bickers and Stein 2000; Knight 2005; Lee 2000; Lee 2003; Levitt and Poterba 1999; Stein and Bickers 1994). In this article, I study whether the distribution of electoral and partisan power in Congress has an influence over the allocation of funds and if so, whether national and state executives have more sway over the final outcome.

Recent studies show that presidents influence the geographic distribution of non-earmarked funds (Berry et al. 2010; Dynes and Huber 2015; Kriner and Reeves 2015; Larcinese et al. 2006). However, there is still discussion on how and why presidents affect the allocation of federal outlays. Some argue presidents influence the budgetary process following electoral expectations: they allocate more funds in districts where they expect larger electoral benefits and returns. Those districts that are not expected to generate electoral or political returns will be excluded from federal non-earmarked investment. Lindbeck and Weibull (1987, 289) argue that presidents spend funds in swing districts (those with a high proportion of relatively unattached voters or in which the incumbent won or lost by a narrow margin) because these regions have larger electoral power than secure ones.5 For Cox and McCubbins (1986, 379), in contrast, the optimal strategy for risk-averse candidates is to distribute to their reelection constituency and over-invest in their closest supporters to maintain existing political coalitions.6

There are several theoretical reasons why presidents may target funds to their reelection constituency. For Cox and McCubbins, cooperation between the president and members of Congress is enhanced when one is the party leader and the others are her copartisan. But for other scholars, the president could also target core supporters to prioritize the needs of politically important constituents (Kriner and Reeves 2015) or to further her legislative agenda by directing spending to specific legislators (McCarty 2000). It may also be that the federal administration prefers to allocate funds to governors with the same policy preferences (Larcinese
et al. 2006, 448; 2013) or to districts in which interest groups are powerful (Larcinese et al. 2013, 874).

I put forward an argument to explain why and how presidents influence the distribution of federal grants by including presidential popularity together with presidential structural and partisan preferences for distribution into the analysis. Structural cleavages and partisan alliances influence presidential preferences for distribution. Popularity affects the leverage presidents have to materialize their preferences.

Presidential Popularity and the Distribution of Federal Funds

Presidents distribute revenue to secure regional votes, build up congressional majorities, and form territorial governing coalitions. To do that, they allocate federal funds across the territory. To influence the territorial allocation of infrastructure funds, presidents need institutional powers. The institutional powers of presidents are established by the constitution, which determines whether they have authority to introduce legislation (and exclusive authority to introduce certain types of legislative proposals, such as in budgetary matters), decree power (either to legislate in some policy areas, where the decree is law unless it is overturned by Congress; or to legislate by delegation of Congress), veto power (partial or pocket veto), and emergency powers (Shugart and Carey 1992, 134–43).

According to Mainwaring and Shugart (1997, 49), presidents in Argentina are “potentially dominant,” as they have strong veto powers, decree authority, and exclusive introduction. As Mustapic (2000, 573) claims, the fact that these authors use this expression (“potentially”) to classify the dominant executive reveals that institutional resources are not decisive by themselves but rather that they interact with several other contextual factors that are critical to determine the executive capacity to influence Congress and affect policies. In a similar vein, Calvo (2007, 263) argues that there is little comparative research integrating different institutional and contextual factors to explain the sources of presidential strength or weakness. Based on this discussion, I claim that we need to combine relatively stable institutional variables together with more dynamic, contextual factors. Among contextual factors, I argue that presidential popularity (or presidential support in public opinion) influences the capacity of the president to decide the allocation of infrastructure funds. As Neustadt (1989, 4, 11) claims, presidential popularity or public support is “the power to persuade” and is also related to the president’s “capacity to influence the conduct of men who make up government.” By that he is mainly referring to members of the executive cabinet, bureaucrats, and, to some extent, federal legislators, whose support is crucial to make decisions. For Calvo (2007, 266–268), public opinion is relevant because legislators might fear the electoral consequences of supporting executive initiatives opposed by the
A president having strong institutional powers but weak public support is less powerful to influence the territorial allocation of infrastructure grants than one having strong support in terms of both institutional power and public opinion.

When presidents allocate federal funds across the territory, they do not distribute federal funds to all districts uniformly: they take into account structural and partisan differences among districts. To begin with, in structural terms, they prefer to distribute to less developed districts. There are three main reasons for them to do this. First, governors from poorer districts prefer a strong central government capable of extracting funds from richer districts and distributing these funds to them. Unlike their counterparts from richer districts, they support a redistributive president. Through the distribution of infrastructure funds, the central government redistributes money from the regions that pay taxes to finance them (and usually richer regions pay proportionately more taxes than poorer regions) to others in which the investment is actually made (Solé Ollé 2010).

Second, political leaders from less developed districts tend to be weaker political challengers to the president than those from more developed and populated districts (who tend to control more money and votes).

And third, the political return for each invested dollar is larger in these units than in more developed ones. A peso spent in Formosa (one of the poorest and sparsely populated provinces in Argentina) has a much larger socioeconomic (and possibly electoral) impact than in Buenos Aires province (the most populated province in the country). This is Gibson’s (1997) and Gibson and Calvo’s (2000) claim. But in their argument, provincial authorities from poorer districts (called “peripheral”) appear to be passive and federal authorities prefer them because they are politically “cheap” to buy. In this article, the claim is somewhat different. Provincial authorities from poorer provinces support a politically strong central government because this is what they prefer: they need a strong federal government capable of redistributing transfers to them and limiting the power of richer districts.

Ceteris paribus then, I expect that strong presidents, that is, presidents who have some leverage in the distribution of infrastructure grants, will distribute more funds to poorer districts and fewer to richer ones. Weaker presidents, on the contrary, would be less capable of resisting distributive pressures from richer districts (Model 1).

Data and Method

I test the main and competitive hypotheses using original data on federal government infrastructure spending in Argentina between 1999 and 2009 collected from the National Budget Office. Total infrastructure funds include transfers from the central government to the provinces from eighteen budget programs of
the Ministry of Federal Planning, Public Works, and Services. All values are reported in thousand Argentine pesos (ARS), per capita, in constant values. The main independent variable is presidential electoral support. This variable seeks to capture whether presidents are electorally powerful, have support in Congress, are popular in public opinion, and, as a consequence, have some leverage over the distribution of infrastructure funds. To operationalize this variable, I use a proxy that measures the support presidents get in public opinion polls. This proxy allows me to have more variation over time than their share of votes and seats in Congress. The share of votes that the presidents’ party and electoral coalition got in national elections is a relative time invariant variable in the time series I have: there were only four presidential elections between 1999 and 2011 (1999, 2003, 2007, and 2011). Something similar can be said about the share of seats the president got in Congress, as there were seven legislative elections during this period (1999, 2001, 2003, 2005, 2007, 2009, and 2011).

In structural terms, we can classify districts according to their demography, development level, and factor endowments. Here, I use a series of control variables for each subnational unit: population (as Larcinese et al. 2013 advise), per capita income (Gross Geographic Product, GGP, per capita), regional poverty (number of people or families below poverty line or with unsatisfied basic needs), and industrialization (state industrial gross domestic product). Table 1 provides descriptive statistics for the dependent and the main independent variables.

I also construct a simplified classification of provinces according to their structural characteristics. I divide the federation into two main regions, as Gibson (1997) and Gibson and Calvo (2000) do. I labeled them developed and

Table 1 Descriptive statistics for the main variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of observation</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure grants (in thousand constant ARS per capita)</td>
<td>241</td>
<td>0.1094</td>
<td>0.1773</td>
<td>0.0014</td>
<td>1.5930</td>
</tr>
<tr>
<td>Presidential positive image (percentage of the population)</td>
<td>648</td>
<td>38.7404</td>
<td>17.7931</td>
<td>6.43</td>
<td>72</td>
</tr>
<tr>
<td>Share of allied governors</td>
<td>624</td>
<td>0.5307</td>
<td>0.1850</td>
<td>0.1364</td>
<td>0.8333</td>
</tr>
<tr>
<td>Index of overrepresentation</td>
<td>590</td>
<td>1.9695</td>
<td>2.1984</td>
<td>0.6442</td>
<td>19.1255</td>
</tr>
<tr>
<td>Poverty (share of the total population)</td>
<td>593</td>
<td>26.9191</td>
<td>11.4646</td>
<td>7.8</td>
<td>54.4</td>
</tr>
<tr>
<td>Per capita Gross Geographic Product</td>
<td>409</td>
<td>11855.78</td>
<td>10781.32</td>
<td>2140.08</td>
<td>82384.09</td>
</tr>
</tbody>
</table>
less developed interior provinces. I include dummy variables for each of these two categories.

I test the effects of the different models using an OLS regression with panel corrected standard errors (PCSE; Beck and Katz 1995), which computes the variance-covariance estimates and the standard errors assuming that the disturbances are heteroskedastic and correlated across panels.

In a recent study, Clark and Linzer (2015) recommend random effects models for panels with features like the one I use in this study, that is, when the largest variation is observed mainly among units, when there are relatively few observations per unit (in some models the minimum is 4 observations), and if the correlation between some independent variables and the dummies is high: provincial dummies strongly correlate with other dummies for the structural characteristics of the districts (more developed and less developed districts as well as other variables that change little over time, such as population and GGP per capita). Under these conditions, the authors recommend using the random effects estimator because its results are better than those using fixed effects. Similarly, Plumper et al. (2005, 330–34) and Huber et al. (2008, 429) recommend avoiding dummy variables for each unit in the models as their inclusion eliminates cross sectional variance (Huber and Stephens 2001), makes it impossible to estimate the effect of exogenous time-invariant variables (Wooldridge 2002), and severely skews the estimated effects of partially invariant variables over time (Beck 2001). Despite this discussion, I run a Hausman test of random versus fixed effects to decide which of the two models is the most appropriate.

I control for temporal autocorrelation using two strategies. First, I use models that correct for temporal and spatial autocorrelation and include variables that capture some of the main differences among provinces, relevant to account for changes in the dependent variable. Including a lagged dependent variable may generate autocorrelation, distort the results, inflate the explanatory power of the lagged variable and improperly underestimate the explanatory power of other independent variables or even reverse the signs of the coefficients, such as Achen (2000) has shown. In spite of this, and second, I run the main models again with a lagged dependent variable (available in the Online Appendix) to control for temporal autocorrelation and compare the results.

**Alternative Hypotheses**

I am primarily interested in testing the role of presidents, governors, and regional cleavages in influencing distributive politics. However, and following the discussion in the literature, I also examine the relevance of partisan, legislative, electoral, and programmatic arguments.
Partisan Determinants

So far, I have discussed whether presidents prefer to distribute to governors from poorer or richer districts. The coalitions presidents build with governors have not only a structural but also a partisan component. As an important part of the literature claims (e.g., Cox and McCubbins 1986; Kriner and Reeves 2015; Larcinese et al. 2006; McCarty 2000), we could expect president to distribute more funds to politically allied districts (Model 2). Governors from allied provinces can offer presidents political support, both in terms of votes and seats, to govern.

To test this partisan model, I include a dummy variable to determine how politically linked governors are to the president. This variable, labeled core ally, is coded as 1 if presidents and governors are in the same governing coalition in a given year; 0 otherwise. I coded them during fieldwork, based on official electoral data, information from newspapers, and interviews with provincial experts. I classified districts into those belonging to the opposition (which are expected to receive few funds, if any), swing districts (which are expected to receive somewhat more money), and support districts (core ally), or those aligned in partisan terms (which are expected to receive the largest share of funds).

Furthermore, I also expect that the geographical allocation of federal grants will depend on how partisan coalitions between presidents and governors are territorially distributed: the developing regions of the country will receive more grants when presidents have a larger number (or share) of their partisan allies there and fewer in richer states. On the contrary, I anticipate less distribution to poorer provinces when presidents have a smaller number of their partisan allies in these districts or more allies in developed states (Model 3). The number of allied governors of the president is the number of allies in both developed and developing states. The share of allies is the number of allied governors in each region, divided by the total number of governorships in the region.

Legislative and Electoral Determinants

I also test whether provinces with more representatives in core committees (committee) and with larger delegations from the president’s party (delegation) in Congress are more likely to receive more funds (Model 4). The variable “committee” reports the number of deputies a given province has in the Budget and Appropriations (Presupuesto y Hacienda) and in the Public Works (Obras Públicas) Committees in the Argentine Chamber of Deputies. The variable “delegation” is the percentage of congressmen in the Chamber of Deputies who are members of the majority party.

Several scholars expect overrepresentation to influence the distribution of federal grants (Atlas et al. 1995; Gibson and Calvo 2000; Gibson et al. 2004; Holcombe and
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<th>Model 1a</th>
<th>Model 1b</th>
<th>Model 2</th>
<th>Model 3a</th>
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<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
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<tbody>
<tr>
<td>Presidential popularity</td>
<td>0.002**</td>
<td>0.000</td>
<td>0.002***</td>
<td>0.000</td>
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<td>(0.001)</td>
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<td>Presidential popularity*</td>
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<td>-0.002***</td>
<td></td>
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<tr>
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<td>poor province</td>
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<td>(0.001)</td>
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<tr>
<td>Core</td>
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<td>-0.244***</td>
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<td>rich province</td>
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<td>(0.075)</td>
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<tr>
<td>Share of allied governors*</td>
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<td></td>
<td></td>
<td>0.207***</td>
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<td></td>
<td>(0.076)</td>
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<td>Presidential election year</td>
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<td>Committee</td>
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<td></td>
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<td>(0.018)</td>
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<td>(0.006)</td>
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<td>Delegation</td>
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(continued)
### Table 2 Continued

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<th>Model 3a</th>
<th>Model 3b</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
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<td>Industrial G. product (log)</td>
<td>0.000</td>
<td>–0.035*</td>
<td>0.000</td>
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<td>(0.021)</td>
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</tr>
<tr>
<td>Cars</td>
<td>–0.000**</td>
<td>0.000*</td>
<td>–0.000**</td>
<td>0.000</td>
<td>(0.000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population density</td>
<td>–0.000***</td>
<td>–0.000*</td>
<td>–0.000**</td>
<td>–0.000*</td>
<td>0.000</td>
<td>(0.000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urbanization rate</td>
<td>0.269**</td>
<td>0.212</td>
<td>0.269</td>
<td>0.212</td>
<td>(0.118)</td>
<td>(0.183)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over-representation</td>
<td>0.028***</td>
<td>0.026***</td>
<td>0.030***</td>
<td>0.032***</td>
<td>0.030***</td>
<td>0.042</td>
<td>0.015***</td>
<td>0.017**</td>
</tr>
<tr>
<td></td>
<td>(0.008)</td>
<td>(0.008)</td>
<td>(0.009)</td>
<td>(0.009)</td>
<td>(0.009)</td>
<td>(0.009)</td>
<td>(0.006)</td>
<td>(0.007)</td>
</tr>
<tr>
<td>Poverty</td>
<td>–0.001</td>
<td>–0.002</td>
<td>0.001</td>
<td>–0.002</td>
<td>–0.002</td>
<td>0.003</td>
<td>0.001</td>
<td>–0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.003)</td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>GGP per capita (nat log)</td>
<td>0.034</td>
<td>0.037</td>
<td>0.061***</td>
<td>0.016</td>
<td>0.023</td>
<td>0.141**</td>
<td>0.036*</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td>(0.028)</td>
<td>(0.027)</td>
<td>(0.022)</td>
<td>(0.029)</td>
<td>(0.029)</td>
<td>(0.058)</td>
<td>(0.020)</td>
<td>(0.018)</td>
</tr>
<tr>
<td>Richer provinces</td>
<td>0.001</td>
<td></td>
<td>0.069</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.032)</td>
<td></td>
<td>(0.046)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poorer provinces</td>
<td></td>
<td>0.032</td>
<td>–0.031</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.030)</td>
<td>(0.047)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>–0.300</td>
<td>–0.340</td>
<td>–0.597***</td>
<td>–0.228</td>
<td>–0.225</td>
<td>–1.236**</td>
<td>–0.508**</td>
<td>–0.153</td>
</tr>
<tr>
<td></td>
<td>(0.272)</td>
<td>(0.260)</td>
<td>(0.222)</td>
<td>(0.273)</td>
<td>(0.258)</td>
<td>(0.570)</td>
<td>(0.217)</td>
<td>(0.156)</td>
</tr>
<tr>
<td>Observations</td>
<td>168</td>
<td>168</td>
<td>165</td>
<td>168</td>
<td>168</td>
<td>75</td>
<td>149</td>
<td>130</td>
</tr>
<tr>
<td>R2</td>
<td>0.24</td>
<td>0.24</td>
<td>0.31</td>
<td>0.24</td>
<td>0.25</td>
<td>0.29</td>
<td>0.22</td>
<td>0.45</td>
</tr>
<tr>
<td>Cross-sectional units</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>22</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>

**Note:** Dependent variable: Federal Government Investment in Public Works per capita, in thousand Argentine pesos, deflated using INDEC’s construction index prices. Unstandardized regression coefficients. Standard Errors reported in parenthesis.

*p < 0.100; **p < 0.050; ***p < 0.010.
This article furnishes further evidence to the discussion including this variable as a control in the different models.

In addition, and following electoral considerations, I analyze whether provinces will be more likely to receive more investment during election times, both legislative, and executive—presidential and gubernatorial—elections (Model 4).

Programmatic Determinants

I control for programmatic variables. According to equity-oriented arguments, relatively deprived districts, those with lower GGP per capita and higher poverty rates, will be more likely to receive more federal grants. For efficiency-oriented claims, provinces with higher urbanization rate, population density, larger number of cars, and GGP, should be more likely to receive more funds. In the same way, I expect more infrastructure investment in areas in which industrial production is larger, as this activity requires it for its expansion (Model 5). Finally, I include the main variables in a single, full-specified model (Model 6).

Empirical Analysis

Results from the main PCSE regression models displayed in table 2 suggest that, controlling for third variables, powerful presidents distribute more funds to poorer districts and fewer to richer ones (Models 1a and 1b). The interaction terms between presidential popularity and type of district move in the theoretically expected direction and are relatively robust as well as statistically significant. It is negative for developed districts and positive for less developed, indicating that popular presidents tend to distribute fewer funds to developed units and more to developing provinces. More specifically, and maintaining third variables constant, a 1 percent increase in presidential popularity augments federal infrastructure grants to poorer districts in about 2$ per capita and to richer provinces in 0.2$. Or, put in another way, a 10 percent rise in presidential approval rates represents an increase in about 20$ per capita to poorer districts (or about 16 percent of the mean value of 126$) and only 2$ for richer provinces (8 percent of their mean, of 25$). Although powerful presidents do not appear to reduce grants to richer districts, results clearly show that they tend to transfer ten times more funds per capita to poorer ones.

I run these two and the other main models again with a lagged dependent variable (available in the Online Appendix) to control for temporal autocorrelation. Substantive results remain identical. I also run a Hausman test of random versus fixed effects. The p-value for Model 1a using random and fixed effects is 0.54 and 0.45 for Model 1b (much larger than 0.05). Therefore, it is safe to use random effects models.
Figures 1 and 2 are the interaction plots and report the predicted average marginal effect (with confidence intervals) of the previously fit models (1a and 1b). Controlling for third variables, we can see a positive marginal effect of presidential approval on the dependent variable in developing districts (i.e., when the dummy variable for developing districts is 1) (figure 1) and a negative marginal effect of the same independent variable (and controls) on the dependent in more developed districts (figure 2).

Figures 3 and 4 contribute to support the previous findings. They show the trends of both presidential approval and transfers per capita in poor provinces over
time. Figure 3 displays the trends of both variables in their original metrics. Figure 4 exhibits the same trends expressed in natural logarithms, so that the two scales can be more easily compared. Both figures reveal the positive relationship between the two variables.

Qualitative evidence also supports the claim that presidents altered the allocation of funds while their support in public opinion changed over time. De La Rúa (1999–2001) was a relatively popular president during the beginning of his term in office, but his popularity plummeted (from a positive image of 61 percent in March 2000, to 8 percent in November 2001; Data from Nueva Mayoría), as the economy dramatically worsened and political as well as social tensions mounted. In line with our theoretical expectations, he suffered strong pressures from the largest districts when he began to lose political support and popularity. The president created an ambitious Federal Infrastructure Plan (of about 2 billion US$) during 2001, through which he dramatically favored the largest districts: he allocated 41.9 percent of the total infrastructure plan in the three largest provinces (Santa Fe, Córdoba, and Buenos Aires) (Plan Federal de Infraestructura, 2001). Smaller and less developed provinces demanded to be treated by the president on equal footing (Clarín 2000: La Nación 2000a and 2000b).

De la Rúa resigned in December 2001 and four presidents followed him in ten days. President Néstor Kirchner took office in 2003 with 22 percent of the votes. As we could expect, he distributed infrastructure grants to the three largest districts at the beginning of his term in office (La Nación 2005). These districts increased their share of total infrastructure grants from 17 percent in 2002 to 35 percent in 2005. Kirchner’s popularity increased markedly as the economy improved and political as well as social stability returned to the country. Having access to funds from a sharp increase in revenues from exports (due to rising commodities’ prices) and using the enormous leverage and discretion he was able to amass, the president allocated infrastructure grants mainly to allied, less developed provinces after 2005. Cristina Fernández, his wife, followed a similar strategy when she took office (2007–2015). During this period, the most favored districts were the Kirchners’ home province, Santa Cruz, and other less developed and politically allied provinces (La Rioja, La Pampa, Tierra del Fuego, Catamarca, and Formosa) (La Nación 2010a and 2010b, 2013, 2015). The least favored districts were the largest, especially the province of Buenos Aires (La Nación 2013).

The empirical results also allow us to discuss the relevance of alternative claims discussed in the literature. In the next models (2-3), I incorporate partisan alignments between presidents and governors. All else being equal, results indicate that districts ruled by allied governors receive substantially more funds than those in hands of the opposition: an average of 183$ per capita (Model 2).

Provinces are also more likely to get more funds if they are electorally secure and not swing districts, when controlling for third variables. Subnational units get
Figure 3  Presidential approval rates and infrastructure grants per capita in poor provinces.

Figure 4  Presidential approval rates and infrastructure grants per capita in poor provinces (natural logarithms).
more funds when the difference between the share of votes of the governor and the main party in the opposition is larger (that is, when the value of the variable swing increases). The mean value of the variable swing is .16 (it ranges from 0 to 1). Hence, a one percent increase in the difference between the governor share of votes and the main opposition party produces an increase in 2.6$ per capita (Model 2). All coefficients are robust, positive, and statistically significant. These findings are similar to what Larcinese et al. (2006, 452) and Berry et al. (2010, 791) found in the United States, Díaz Cayeros (2006, 139) found in Mexico, and Arulamparam et al. (2009) found in India.21

I also explored whether the geographical allocation of federal grants depend on how coalitions between presidents and governors are territorially distributed. Ceteris paribus, presidents distribute fewer funds to richer states when they have a larger share of their partisan allies in these districts (Model 3a) and more funds to the developing provinces of the country when they have a larger share of their partisan allies there (Model 3b) (the average share of allies in a given year is 0.53, or 53 percent). A one percent increase in the share of allies in poorer provinces increases grants in about 268$ per capita, but only in 50$ per capita in the allies are in richer districts.

Results also indicate that infrastructure distribution in Argentina is mainly decided by the national and provincial executives and not the federal legislative: neither congressional committees nor congressional delegations seem to affect the outcome as theoretically expected. Both coefficients are negative, and the one for congressional committees is within the limit of statistical significance (Model 4). These findings are consistent with those of Berry et al. (2010, 795) for the United States.

Presidential election years do not seem to contribute to explaining the allocation of infrastructure investment either. More funds are not transferred to governors during (federal or state) election times (Model 4). I also lagged presidential election one year and results remain the same. These results are intuitive, since most infrastructure projects need a more or less large period of time to be finished (sometimes even more than four years, which is the period between presidential elections in Argentina).22

The coefficient for overrepresentation is statistically significant in most models. These findings are consistent to what several authors reported in their studies on the United States and the European Union (see Atlas et al. 1995; Hoover and Pecorino 2005; Lee 2000; Rodden 2002). Despite being statistically significant, the coefficient is always smaller than the ones for the variables in the main models presented in this article.23

The main controls to test programmatic arguments get mixed empirical support. The efficiency criteria are feeble to explain the allocation of infrastructure funds. More industrialized provinces do not receive more federal infrastructure funds and
districts more densely populated and with more cars receive fewer funds. Only urbanization rate moves as expected (Model 5). There is also weak empirical support for equity criteria: poverty is not statistically significant and moves in the opposite direction than theoretically expected in many models. Richer districts seem to receive more funds, although the coefficient for GGP per capita is not statistically significant in five out of eight models (Models 1-6).

Including the main variables in a single, full-specified model\textsuperscript{24} does not change substantive results, as most of the key variables remain unchanged (Model 6). The R-Squares oscillate between 22 and 45 percent. Although differences across models are not large, the main model has more robust and statistically significant coefficients that move in the expected direction, something which is not always the case in most competing models. These R-Squares also indicate that between three-quarters and half of the variation in the dependent variable is left unexplained and that we need better theories, data, and models to account for the factors that affect the allocation of federal grants beyond the ones included in this study. Case studies may contribute to a better understanding of idiosyncratic factors involved in the distribution.

**Final Comments**

This article makes two important contributions. First, it provides further evidence on the key role presidents play in distributive politics in developing federal democracies, as a part of the literature in the United States and elsewhere has stressed. Instead of focusing solely on presidential preferences or partisan coalitions, this work shows that presidential popularity is relevant to explain the allocation of discretionary federal grants.

Second, it provides a theoretical argument and supports it with empirical evidence to account for why and how presidents influence the distribution of grants. It shows that popular presidents tend to increase transfers to developing provinces and reduce allocations to richer districts. Investing in poorer provinces is more efficient, and governors from these districts tend to support redistributive presidents and be weaker political challengers. Weaker presidents, on the contrary, are less capable of resisting pressures from governors from larger and richer districts.

All in all, the article stresses the relevance of regional cleavages, partisan alliances, and the role of presidential popularity on the allocation of discretionary federal funds. Regional cleavages and political alliances between presidents and governors from more or less developed regions of the country may be important not only in developing federal democracies such as Argentina, where inequality and cleavages among regions are sharp and enduring, partisan structures and partisan ties are weak and territorialized, and clashes among contending national and
regional elites tend to be more personalistic than in consolidated democracies. The influence of these factors on distributive politics should also be further explored in other nations, developing or developed, in which regional cleavages are essential to understanding federal politics.

Supplementary Data

Supplementary data can be found at www.publius.oxfordjournals.org.

Notes

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1 Central governments have other redistributive tools to correct functional inequality, ranging from subsidies, credits, or tariffs to redistributive social programs, such as conditional income transfers. I concentrate on a policy tool crucial to correct territorial inequality.

2 These funds represented almost 8 percent of the total budget in Argentina in 2006.

3 The bill is then submitted to Congress and discussed in both chambers. Once the bill is approved in Congress, the president has ten working days to sign or veto the law. This guarantees the president large institutional powers to propose the bill and reject the legislation she opposes (and the changes Congress made to the bill that the president does not want to approve).

4 These powers were initially created as an extraordinary measure during the economic crisis of 2001. But president Kirchner got Congress sanctioned the reform of article 37 of the Financial Administration Law (24,156) in August 2006, giving stability to the contested decision.

5 Some authors (see Wallis 1987; Wright 1974) found empirical evidence in the United States and some comparative analyses support this claim (see Magaloni et al. 2007, 202; Brollo and Nannicini 2012, 742; Dahlberg and Johansson 2002).

6 Several authors supported this claim with empirical evidence from the United States (see Carsey and Rundquist 1999; Levitt and Snyder 1995; Anderson and Tollison 1991; Couch and Shugart 1998, contrary to the findings of Wallis 1989, and Wright 1974) and the comparative experience (see Arulampalam et al. 2009).
Some of these funds are legally mandated and earmarked, so presidents cannot influence their allocation. I exclude them from the analysis and concentrate on discretionary grants, which are those that are not allocated following particular legal frameworks. See footnote 3 for the Argentine case.

Out of four categories: potentially dominant, proactive, reactive, and potentially marginal executives.

In interviews, provincial authorities from Catamarca (a relatively poor district in the Northwest) defended a strong central government to deliver public services in the provinces, such as health and education. With a strong central government, these officials argued, they could get teachers trained according to national standards, and get more competitive salaries. The Catamarcan provincial government could not guarantee either of these two things after the decentralization of primary health and education in 1992.

Both provinces have three senators. Buenos Aires has seventy deputies and Formosa five. But Buenos Aires has almost 14 million inhabitants, while Formosa has less than 500,000. Every deputy in Buenos Aires represents about 200,000 inhabitants; in Formosa this rate is half: less than 100,000.

Oficina Nacional de Presupuesto (ONP). It is the first time that data on the territorial distribution of public infrastructure is systematically gathered for Argentina. With the help of research assistants, I collected these data by reviewing ONP’s official documents, for eighteen budget programs, for each of the provinces in each year of the series for which we have available data. I received important help of several research assistants (including a geographer who helped us geo-referencing each of the budget items).

The original data in current pesos were deflated using the index of construction costs (ICC) reported by INDEC (base year is 1993 = 100). The models were also calculated using the dependent variable in U.S. dollars and substantive results remain very similar to those reported.

The data on presidential popularity is from the Centro de Estudios Nueva Mayoría, for the years 1984–2001. Poliarquía Consultores and Universidad Torcuato Di Tella provided the data on presidential popularity between the years 2002–2010 (data from the index of government confidence, or ICG). The observations are monthly measured, so the data have been averaged yearly.

Larcinese et al. (2013) show that properly controlling for population dynamics provides more reasonable estimates of small-state advantage in their empirical research on the geographic distribution of U.S. federal spending.

In Argentina, this region includes the provinces of Buenos Aires, Córdoba, Santa Fe, and the Federal Capital.

This region includes all the other provinces.

The variable swing measures the difference between the incumbent’s share of votes and the share of votes of the main opposition party.

Samuels and Snyder (2001) calculate legislative overrepresentation using the Loosemore–Hanby index of electoral disproportionality: Overrepresentation = (1/2) Σ |si–vi|, where si is the percentage of all seats allocated to district i, and vi is the percentage of the overall population residing in district I.
19 These are the results of the summing up the coefficients for presidential popularity and the interaction term between this variable and the dummies for developed and less developed districts. The results in the table are rounded up to three digits. The coefficient for presidential popularity is 0.00207 and the interaction term between this variable and the dummies for developed districts is – 0.00186.

20 The other models also get very high p-values (e.g., 0.58 and 0.54 for Models 2a and 2b), so random effects are also advised.

21 And in line with those of a large part of the literature on distributive politics (Cox and McCubbins 1986; Anderson and Tollison 1991; Levitt and Snyder 1995; Couch and Shugart 1998; Carsey and Rundquist 1999; McCarty 2000, among others).

22 Maybe public works are finished before elections, but I do not have data to test this claim.

23 We have also to bear in mind that the average overrepresentation index for Argentina is 1.9 and that the standard deviation is around 2; consequently, a one-point increase in the index is a major change that does not seem to produce substantial changes in the dependent variable (16$ in the full model and about 30$ in most of the others), especially when compared to the main variables in our model.

24 I do not include all the institutional variables in the full model due to the high collinearity among some of the variables.

References


Clarin, El Gobierno volvió a hacer una millonaria modificación del Presupuesto, August 1, 2014.

Clark, Tom S., and Drew A. Linzer. 2015. Should i use fixed or random effects? *Political Science Research and Methods* 3 (2): 399–408.


*La Nación*, El plan de infraestructura, al Congreso, August 5, 2000a.

———, Cómo será el Plan de Infraestructura, December 30, 2000b.


———, Santa Cruz, otra vez beneficiada con fondos discrecionales, September 27, 2010a.

———, Favorece a Santa Cruz el presupuesto, October 28, 2010b.

———, Advierten fuertes inequidades en el reparto de fondos para obras, April 29, 2013.


———, Santa Cruz, la más beneficiada de la década con fondos para rutas y obras, April 25, 2015.


