In Whose Hands: Legislators' Targeting Portfolio and the Price of Delegation in Brazil

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Abstract

Legislators who target localities rarely do so through a single instrument, yet most research has studied these tools in isolation. Placing a legislator's broader portfolio on a single map, I ask what organizes it. The proposed answer rests on one dimension: how much of each resource, its execution, and credit for what it delivers the legislator relinquishes, and to whom. Using a deputy-by-municipality panel of Brazilian federal deputies covering campaign spending, office allowances, and earmarks disaggregated by executor, I find that resources spent directly by legislators are concentrated on their bases, whereas earmarks are more widely dispersed. Furthermore, within earmarks, those that preserve credit tilt towards their bases. A regression discontinuity analysis of close mayoral races shows that the presence of an allied local executive increases earmarks targeted through municipal governments while leaving unilaterally deployed instruments largely unchanged. Targeting involves the allocation of control as much as of goods.

Keywords: distributive politics, credit claiming, personal vote, earmarks, Brazil.

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1 Introduction

A central insight of the distributive politics literature is that electorally motivated politicians geographically target voters (Golden and Min, 2013). However, most of what we know comes from studying one targeting tool at a time. Kramon and Posner (2013) show how consequential this is: across studies, the answer to "who benefits?" depends systematically on which outcome is analyzed. While their diagnosis is methodological, it leaves a theoretical question open. Legislators rarely command a single instrument. Instead, they manage a portfolio, composed of instruments such as campaign expenditures, personal office resources and earmarks.[1] What determines which instrument goes where? The answer I propose in this paper rests on one dimension: how much of a resource, the control over its execution, and its credit the legislator relinquishes, and to whom.

On one hand, political competitors can rarely claim credit for or block the resources legislators control directly, such as campaign funds and personal office allowances, though the reach of these resources is limited to the legislator's own organization. On the other hand, delegated instruments move resources at a scale beyond their own organizations, but at two prices. The first concerns execution: a delegated resource must find an executor, so its map is tied to the map of executors. The second attaches to credit. Voters attribute credit for delivered goods weakly and contestably, and the executor who builds and inaugurates a project is far better placed to claim it than the distant legislator who financed it (Mayhew, 1974; Samuels, 2002; Cruz and Schneider, 2017; Bueno, 2018). Credit follows hands, so the choice of executor is a choice about credit. Routing resources through local governments places them with a claimant, while routing around the local government, through nonstate executors, delegates execution while retaining credit (Bueno, 2018).

The instruments in a legislator's portfolio can therefore be ordered along a single dimension — from fully retained, through credit-preserving delegated, to fully relinquished.

[1] Of course, not all of these are distributive goods in the received sense: campaign spending is the candidate's own, and the office allowance reimburses parliamentary activity rather than delivering a project. They belong in a single portfolio because they are alternative ways to target voters in the same localities.

And the relative prices of these positions vary predictably: an allied local executive lowers the cost of ceding credit, whereas a legislator's own rootedness increases the value of retained credit and helps them contest a claimant's narrative locally. This theoretical logic applies to any setting where candidate-centered competition, decentralized implementation, and local fiscal dependence coincide, and yields direct empirical leverage wherever the routing of delegated instruments is observable.

The framework yields four empirically testable predictions. First, retained instruments should be concentrated on the legislator's base and tend to co-locate, whereas delegated instruments are expected to be more widely distributed within the district (P1). Second, delegated instruments that preserve legislator credit should be more base-oriented than those that do not, though not as much as fully retained tools, reflecting the constraints imposed by delegation (P2). Third, the election of an allied local executive should increase the use of the claimant channel, leave the allocation of retained instruments largely unchanged, and prompt a reallocation across the credit regimes of delegated instruments (P3). Fourth, legislators with stronger local roots should favor retained instruments and credit-preserving routes, whereas those with weaker rootedness are more likely to use the claimant channel to expand their electoral reach (P4).

Brazilian federal deputies satisfy the framework's scope conditions. Deputies are elected under open-list PR in statewide districts, so co-partisans compete against one another, and each must cultivate a personal following, usually with a municipal geography (Ames, 1995b; Silva and Silotto, 2018; Carey and Shugart, 1995). Municipalities deliver services but depend on transfers from above, so a deputy-directed resource is large relative to the local budget and ordinarily runs through the municipal administration. And the delegated instrument, the individual budget amendment (*emenda individual*), leaves a record of its execution modality: for amendments to the National Health Fund (FNS), the deputy names both a beneficiary municipality and the executing entity, so the claimant and non-claimant routes are separately observed. The paper assembles a deputy × municipality × cohort panel for the 2010–2018 cohorts that places amendments alongside the retained instruments on a common municipal map. Locating campaign and

allowance spending, whose records name a supplier rather than a beneficiary locality, is itself a measurement contribution.

The empirical evidence supports the framework's predictions: within the same deputy, state, and term, retained tools are concentrated on the legislator's base and share a common geographic pattern, whereas amendments are more widely dispersed and exhibit a much weaker association with the base. Decomposing the amendment by the credit regime of its executor sorts value along the same dimension: the credit-preserving route is markedly more base-directed than the credit-ceding route and sits between the claimant channel and the retained tools. Then, using close mayoral races, I show that the election of an allied mayor sharply raises amendment value routed through the municipal government, and leaves the retained tools essentially unmoved. Within amendment, alignment shifts routing away from the channel that bypasses local governments. Finally, across legislators, rootedness tilts portfolios toward the retained tools, as the endowment logic expects, though the design is unable to determine whether it also shapes the choice of executor.

Three strands of literature frame the contribution. The first is the multi-good critique itself. Kramon and Posner (2013) establish that inferences about favoritism depend on the good under study; the portfolio view supplies a reason for the dependence. Divergent geographies across instruments are not sectoral noise but the equilibrium arrangement of legislators optimizing over positions that differ in what they give up. This is also where the framework departs from classical targeting models, which treat the good as homogeneous and predict one geography per strategy (Cox and McCubbins, 1986; Lindbeck and Weibull, 1987; Dixit and Londregan, 1996): they cannot generate two geographies for the same legislator over the same map, nor a routing mix that responds to the local executive's identity.[2]

The second strand concerns credit claiming and bypassing. The closest account is

[2]The term "portfolio" has been used for adjacent objects: party-level bundles of spending programs (Levitt and Snyder, 1995), combinations of clientelistic and programmatic linkage strategies (Calvo and Murillo, 2019), or reallocations between digital and physical outreach (Bessone et al., 2022). The object here is an individual legislator's allocation across formal state resources and personal political capital, ordered by delegation and credit.

Bueno (2018)'s theory of executive bypassing, and this framework builds on it: their two channels are recast as positions along a single dimension, with the claimant channel rewarding an allied executor and the non-claimant channel prioritizing credit retention. The portfolio perspective broadens the analytical scope. Whereas Bueno focuses on a single principal's routing choice, this approach considers a legislature in which many principals simultaneously allocate full portfolios across the same map, allowing for the observation of routing as one strategic margin among several and enabling analysis of substitution within the same actor. It also further clarifies the role of alignment: while upper-tier governments tend to favor aligned local incumbents (Arulampalam et al., 2009; Veiga and Veiga, 2013; Brollo and Nannicini, 2012), and local partners can be valuable yet unreliable brokers (Stokes et al., 2013; Novaes, 2018; Ventura, 2021), empirical evidence here indicates that alignment specifically affects the broker-mediated position, rather than uniformly enhancing all forms of targeting.

The third is the debate over how a Brazilian budgetary amendments operate. Samuels (2002) argues that amendments cultivate financiers and brokers rather than voters. The reasons are those from which this framework builds: deputies do not implement, executors and rivals claim credit, and the cue reaching voters is weak. What the framework adds is that this cost is not a fixed price inherent to the instrument. The deputy chooses how much of it to pay and through whose hands the project passes.[3] A related account holds that targeting tracks administrative capacity (Montini and Post, 2025), which is a relevant constraint considered in the proposed framework, but that cannot, by itself, the executor choice once a municipality is reached, nor the between legislators targeting variation within the same administration.

The paper proceeds by developing the framework and its predictions, establishing the Brazilian case and stating the predictions in its terms, describing the panel and the measurement of the personal base, and then presenting the empirical strategy, results, and extensions.

[3] A second reading treats the amendment as a token in executive–legislative exchange (Limongi and Figueiredo, 2005). That describes the instrument's upstream price when its value passed through the deputy's standing with the government.

2 The Portfolio Problem

Legislators who can target localities through several instruments must decide not only where each one goes, but how much of each resource they keep in their own hands. I argue the relinquishment of control and credit organizes the portfolio choice.

2.1 The Legislator's Problem

The decision-maker throughout is a legislator elected under candidate-centered rules, such as open-list proportional representation, where co-partisans compete against one another and survival requires a *personal* vote with a geography: a base of localities, built from biography and prior career, where their reputation and networks are dense (Carey and Shugart, 1995; Cain et al., 1987; Ames, 1995b; Johnston, 2005). Their electoral production has two main inputs: direct cultivation (that is, presence, contact, and mobilization) produced with their own organizations and cheapest where they exist, the base; and the support of other politicians, whose machines deliver endorsements and votes in the many localities their own organizations may not reach (Stokes et al., 2013; Gingerich, 2014; Larreguy et al., 2016). Their horizon, finally, need not be reelection alone: where ambition runs toward local and state executive office, a district-wide network of allied officeholders is a career asset in its own right (Samuels, 2003). The question is how legislators so situated allocate a portfolio of targeting instruments.

2.2 The Portfolio Choice as Relinquishment of Control and Credit

Targeting instruments differ in many institutional details. For the legislator's allocation problem, one dimension organizes the choice: how much of the resource (i.e., its disposition, its execution, and the credit for what it delivers) they relinquish, and to whom. At one end sit the instruments kept entirely in their hands. Campaign expenditures and office resources, for instance, are contracted and spent by legislators themselves: other political actors can rarely block or claim them. However, full control and full credit come at a price: these instruments are limited by what the legislators' own organizations can do, and where they exist. At the other end sits the executed public projects. It is the

largest-value item in the portfolio precisely because it is not theirs to execute: by routing money through the national budget to a third-party executor, the legislator moves resources at a scale their own organizations could never handle.

But delegation raises the question of what, exactly, legislators give up — and I argue it involves two distinct prices. The first is attached to execution itself, and whoever ends up claiming the result: a delegated resource must find an executor able and willing to carry it, so its geography is tied to the geography of executors (that is, to where capable local governments, eligible organizations, and receiving programs exist) in a way the instruments they spends themselves are not. The second price concerns the credit. Voters attribute credit for targeted goods weakly and contestably: the executor who builds and inaugurates a project is well placed to claim it; the distant legislator is not (Samuels, 2002; Cruz and Schneider, 2017; Bueno, 2018). Credit follows hands: whoever touches the good last is best positioned to claim it. Delegating execution therefore risks delegating credit, and this second price, unlike the first, is not fixed by the instrument: it is set by a further choice, the execution modality.

The execution modality. Conditional on delegating execution, the legislator chooses whose hands the resource passes through; and hands differ in whether they *compete for the credit*. The default modality in decentralized systems is through local government, and its head is no mere administrator. Local executives who propose, contract, execute, and inaugurate a project are positioned to claim it. They are also electoral brokers; visible local principals whose endorsement and machine spill over onto national candidates (Ames, 1994; Avelino et al., 2012; Novaes, 2018; Ventura, 2021). And because local governments are fiscally dependent, a legislator-directed project is large relative to his budget, so they actively bid for it. Ceding credit to such claimants is therefore a *payment* when they are partners — the resource becomes the currency of an exchange returning endorsement, machine support, and reverse coattails — and a *gift to the enemy* when they are rivals.

The alternative is to target around the local government, through nonstate organizations: executors with neither the incentive nor the standing to claim electoral credit

(Bueno, 2018). There, execution is delegated but the credit is retained. And retained credit, like the fully kept instruments themselves, is worth most where the legislator's own vote is cultivated. Yet, importantly, the local executive's credit-claiming advantage is a ceiling rather than an inevitability. Their structural position defines the credit legislators stand to lose, not necessarily the credit they actually lose. Contesting their narrative and reclaiming authorship takes the very same local presence and active networks that make retained credit valuable in the first place. Consequently, delegating to a local claimant should be less electorally costly to legislators at home, where their local roots allow them to dispute another's claim, than in peripheral localities where the claimant monopoly over the narrative could go entirely unanswered.

2.3 Predictions

P1 (Geography follows delegation). Instruments legislators keep in hand are bounded by their own organization: they should concentrate on their base and co-locate with one another. The delegated instruments should disperse across the district, as their geography is also a function of where executors are. This prediction is supported if, within the same legislator over the same map, concentration and base-attachment separate the fully retained tools from the delegated instrument.

P2 (Geography follows the execution modality). Within the delegated instrument, resources routed through non-claiming executors retain legislators' credit and should tilt toward their bases — though not to the retained tools' level, since the execution cost binds on any delegated position. This prediction is supported if, among the same legislator's delegated resources, the non-claimant route is more base-directed than the claimant route and sits between the claimant channel and the retained tools.

P3 (Alignment prices the claimant channel). The election of an allied local executive raises the value of ceding credit to him (i.e., cooperation becomes reliable and the ceded credit returns as machine support) so it should raise targeting through the claimant

channel while leaving the retained instruments unmoved to first order[4]. Further, the delegate instruments, in the same locality, should respond to the executor's alignment when routed through the claimant and not when routed around him. And because a single legislator makes the routing choice, alignment should reallocate rather than merely add — conditional on targeting, the non-claimant share should fall. This prediction is supported if, with the election of an allied executive, the the level of claimant channeled resources rises, the claimant-minus-non-claimant difference is positive, and the non-claimant share of delegated resources falls conditional on targeting.

P4 (Endowments shape the mix). The prices in the preceding predictions vary across municipalities. But they should also vary across legislators. The organization that makes direct cultivation productive is what makes retained credit valuable, and what makes ceded credit cheap to concede at home. Legislators without it can neither convert kept credit into votes nor contest a claimant's narrative, so ceding credit costs them little relative to the credit-preserving alternatives. The same dimension that orders positions within a portfolio should therefore sort portfolios across legislators: those with strong personal bases should tilt toward the retained tools and the non-claimant route, while those without them should rely more heavily on the claimant channel to buy reach. It is supported if portfolio composition varies with rootedness in this direction.

2.4 Alternative Accounts and Scope

Relation to Bueno (2018). The closest account is Bueno's theory of executive bypassing: upper-tier executives reward aligned local incumbents with transfers and, where the local incumbent is an opponent, route resources through nonstate organizations, delivering to voters without handing an enemy the credit he would otherwise claim. This framework builds on hers. Their two central moves reappear here as positions on a single dimension: rewarding an allied executor is the claimant channel, and their *credit-protection* logic is the non-claimant channel. What the portfolio view adds is scope.

[4]Second-order machine complementarity remains, but the sign is theoretically ambiguous: an allied machine may amplify the legislator's own mobilization or substitute for it

Bueno isolates one principal's routing choice, identified across localities; a legislature places hundreds of principals side by side, each allocating not one transfer but a full portfolio over the same map, which lets the routing choice be seen as one margin among several and lets substitution be observed *within* the allocating actor rather than inferred across actors.

Other accounts. A pure core/swing targeting logic (e.g., Cox and McCubbins, 1986; Lindbeck and Weibull, 1987; Dixit and Londregan, 1996) treats the good as homogeneous and predicts one geography per targeting strategy; it cannot generate two geographies for the same legislator, or a routing mix that responds to the local executive's identity. A capacity account, in which resources flow where administrations can execute, is not so much a rival as a constraint the framework already prices: the execution cost of delegation is precisely that a resource must find an executor capable of carrying it, and capacity should therefore shape where the delegated instrument can go at all (Montini and Post, 2025). What it cannot shape is which executor carries a project once a municipality is reached, since both routes are available in the same place and differ only in who claims the result, nor why targeting should rise for one legislator and not for others facing the same administration.

Beyond rival frameworks, each prediction has a mundane mechanical alternative. The base concentration of the retained tools ($P1$) could reflect supplier geography rather than targeting, since services are bought where vendors are and vendors cluster near the legislator's home. The base tilt of self-claimed targeting ($P2$) could reflect executor supply, since nonstate organizations cluster where organizational density is high. The alignment response of the claimant channel ($P3$) bundles the legislator's supply decision with the allied executive's demand: allies may simply solicit harder. And the endowment gradient ($P4$) admits reverse causality, since portfolios may build the bases they reflect as well as follow them. The first two are mechanical claims about where instruments can go, and the empirical design is built to difference them out; the third is not separable by any design available here, and the claim is stated at the level of the bundle; the fourth is why $P4$ is offered as descriptive covariation rather than a causal claim.

Scope. Three institutional scope conditions bound the framework: candidate-centered competition (where personal votes and geography drive strategy), decentralized implementation (where local executives serve as default executors), and local fiscal dependence (where elites bargain over national transfers). It is also most readily tested where delegated instruments are observable at the choice margin, leaving separate records for the executor and its credit regime.

3 The Brazilian Case

In this section, I argue that Brazilian elections for federal deputies provide a valid case for evaluating the theoretical framework.

3.1 Why Brazil Fits the Framework

Candidate-centered competition. Federal deputies are elected from statewide districts under open-list proportional representation, with district magnitudes among the largest in the world (a state returns between 8 and 70 deputies). Seats are assigned to parties by total votes, but which candidates fill them is set by individual vote totals, so co-partisans compete against one another and each must build a personal following (Ames, 1995a; Carey and Shugart, 1995). That following is usually geographic: deputies cultivate identifiable municipal bases, typically rooted in a home region or prior local career, from which their support radiates (Ames, 1995b; Silva and Silotto, 2018). The state is the electoral district, but the municipality is the unit through which the personal vote is cultivated and delivered.

Decentralized implementation and fiscal dependence. Brazilian municipalities carry front-line responsibility for health, education, and infrastructure, but depend heavily on transfers from above; own-source revenue is small, especially outside the large cities. A resource a deputy directs to a municipality is therefore large relative to the local budget, and converting it into a delivered good ordinarily runs through the municipal administration. The municipal executive (the mayor) is thus positioned both to execute

and to claim, and is a visible local broker whose machine and endorsement carry over to allied higher-office candidates (Ames, 1994; Avelino et al., 2012; Baião and Couto, 2017; Novaes, 2018).

3.2 The Targeting Instruments

Deputies target municipalities with three main instruments that differ in how much of the resource (i.e., its execution and the credit for it) deputies keep in their own hands.

Campaign expenditures. Reported to the electoral authority (TSE), campaign spending is contracted by the candidate directly from suppliers. The deputy spends and claims it themselves; no local officeholder executes or shares in it.

The parliamentary allowance (*cota parlamentar, CEAP*). A monthly reimbursement quota for the costs of parliamentary activity (e.g., maintenance, travel, fuel, publicity, services) disbursed against receipts from suppliers the deputy chooses. Again, fully the deputy's to spend and claim.

Individual budget amendments (*emendas individuais*). The largest-value instrument by far, and the delegated one. These are the Brazilian instance of legislator-directed earmarks. Within a ceiling, each deputy directs discretionary federal resources to programs and beneficiaries of their choosing, but a third party executes.[5] One decision within the amendment is the deputy's own and corresponds exactly to the theory's margin: the *execution modality*. The resource must be designated to an executing entity, and the deputy chooses which: the municipal government, or an executor around the municipal government, such as a nonstate organization. The municipal route places the project in the hands of a claimant; the routes around it place it with executors who neither claim electoral credit nor answer to the local incumbent.

[5]The amendment ceiling is a share of net current revenue, divided across a fixed set of programmatic categories.

3.3 The Instruments on the Relinquishment Dimension

Table 1 places the instruments on the framework's single dimension. Reading down the table is reading from resources deputies keep wholly in hand to resources whose execution and credit they cede to a local claimant.

Table 1: Brazilian targeting instruments as positions on the relinquishment dimension.

Instrument / Position	Executes	Credit	Framework Position
Campaign spending	Deputy	Deputy	**Fully retained**
Cota parlamentar (CEAP)	Deputy	Deputy	**Fully retained**
Amendment (non-gov)	NGO	Retained	Delegated, credit retained
Amendment (municipal)	Muni. Gov	Ceded	**Maximal relinquishment**

Notes. The deputy chooses the beneficiary municipality in every row. "Credit" characterizes who is positioned to claim the targeted resource electorally.

The table makes two key structural points explicit. First, amendments do not represent a single portfolio position, but a *pair* of them: choosing the executor shifts the same underlying instrument along the relinquishment dimension, making within-amendment variation central to the empirical strategy. Second, fully retained tools provide the empirical benchmark against which these delegated amendment positions are evaluated.

3.4 What the Framework Predicts Here

Stated for the Brazilian case, the four predictions become concrete expectations:

> **P1.** On one extreme, campaign and cota spending should concentrate on the deputy's base and co-locate with one another; on the other, amendments should disperse across the municipalities of their state, less attached to the base than campaign and cota spending.
>
> **P2.** Within amendments, resources executed around the municipal government retain the deputy's credit and should tilt toward their base, along with the retained tools.

P3. The election of an allied mayor should raise amendments executed through the municipal government while leaving campaign spending and the cota unmoved to first order. Also, because deputies make the routing choice themselves, alignment should affect the choice of amendments' modality: conditional on targeting, the share routed around the municipal government should fall when an ally takes office.

P4. Deputies with strong personal bases, such as those with a prior local career, should tilt their portfolios toward the retained tools and the around-government route. Deputies without them should rely more on amendments executed through the municipal government.

3.5 What the Instrument Is For

Two readings of the Brazilian amendment sit uneasily with a personal-electoral account of it. The first reads the individual amendment as a token in the executive–legislative exchange rather than a personal-electoral tool: the congressional budget phase is centralized in party leaderships, amendments must attach to programs the executive's bill establishes, and, in the period Limongi and Figueiredo (2005) analyze, execution was discretionary and tracked support for the government. That is a description of the instrument's upstream price when the amendment's value to the deputy passed through their standing with the government, but that leaves out the personal-electoral content downstream, in which executor carries the project and whose credit survives delivery.

The second reading questions the electoral premise directly: Samuels (2002) finds no relationship between amendment execution and deputies' subsequent electoral performance, and argues that deputies pursue amendments to cultivate campaign financiers rather than voters. The reasons he gives for the null are the ones this framework begins from — deputies do not implement, executors and rivals claim the credit, and bailiwicks are shared, so the cue reaching a voter is weak. What the framework adds is that this cost is not a constant: the deputy chooses how much of it to pay, through whose hands the project passes, and the predictions here concern that choice.

4 Data and Measurement

4.1 The Panel

A contribution of this paper is a deputy–municipality–cohort panel that places a legislator's broader targeting portfolio on a common municipal map. The unit is the federal deputy × municipality-in-her-state × electoral cohort[6] across cohorts 2010–2018, roughly 280,000 deputy–municipality pairs per cohort. Sources are administrative and near-universal:

- **Amendments** (*emendas individuais*) to the National Health Fund (FNS), from the Fund's register of deputies' *indicações*: for each amendment, the filing deputy, the beneficiary municipality, and the execution modality .
- **Campaign spending** from the electoral authority (TSE): itemized expenditures with supplier tax IDs.
- **Cota parlamentar** from the Chamber's open-data portal (CEAP): itemized by supplier and purpose.

4.2 Geolocating the Retained Instruments

Amendments name their targeted municipality; campaign spending and the cota do not — their records identify a *supplier*, not a targeted locality. Assigning each expenditure to a municipality is therefore a substantial construction task and a core measurement contribution. Supplier tax IDs (CNPJ) are matched to the federal business registry for firm location, and individual suppliers (CPF) without a registered firm are located by matching against a set of administrative records[7]. Coverage reaches more than 70% of individual suppliers. Full description and diagnostics of the matching procedures are reported in Appendix A.

One caveat shapes interpretation and is stated here: the retained instruments are located at the *supplier*. Some of their geographic concentration therefore could reflect

[6] A cohort being deputies elected in year Y, serving $Y+1$ to $Y+4$.

[7] Mainly, party-affiliation records, the COVID-19 emergency-aid registry (covering > 40% of the adult population), and the micro-entrepreneur (MEI) registry.

where suppliers cluster, not only where votes are courted. That is a point to keep in view when reading the base-directedness patterns below, which the personal-base measurement and the composition-adjusted estimates are built to address.

4.3 Locating the Personal Base

The framework's geography turns on the deputy's *personal base*, the microregion[8] where their own network is densest, so measuring it is central. As no administrative record captures rootedness directly, I consider three imperfect proxies with different weaknesses.

(i) Voter-enrollment microregion: the microregion where the deputy is registered to vote, from party-affiliation registries. This is the proxy nearest the construct, as it locates where the politician is enrolled and arguably embedded, and has the widest coverage. *(ii) Prior-career microregion*: the microregion of a prior elected local office, pre-determined but present only for the deputies with a local political career. *(iii) Birthplace microregion*: fully pre-determined, but the weakest link to adult political networks.

The enrollment measure, the proxy used in the main analysis, carries two limitations that define its sample. It comes from registry snapshots (2017 and 2024); because affiliation is flow data, some earlier-cohort deputies are not found, so coverage is a *temporal* as well as a completeness matter.[9] And I retain only deputies whose records resolve to a *single* microregion, dropping ambiguous cases. Enrollment location is a choice a politician could relocate, but re-registration is costly and, as prior work on this registry documents (Author, 2026), rare and slow, so the snapshots proxy enrollment throughout the period. The other two proxies, sharing no common failure mode (i.e., the career measure's selected subsample, the birthplace measure's weak network link), are considered in the robustness analysis.

[8]Microregions are statistical units defined by the Brazilian Institute of Geography and Statistics (IBGE), grouping contiguous municipalities within a state that share economic and social characteristics, and averaging roughly ten municipalities each. They are not administrative jurisdictions; they are used here as a unit large enough to capture the reach of a deputy's local networks, which rarely stop at a single municipal boundary, and small enough to sit well inside a state.

[9]For the 2010-2018 cohorts, 93% of the deputies were found.

4.4 The Amendment Record

The analysis considers only amendments directed to the National Health Fund (FNS), as the Fund publishes the designations — *indicações* — through which deputies name a beneficiary municipality and an execution modality. The modality draws the framework's distinction directly: a transfer to the municipal government places the targeted resource in the hands of the local executive, while a transfer to philanthropic hospitals or other nonstate entities does not.[10] The analysis is anchored on the designation rather than on execution, because an indication states what the deputy chose while the commitment that may follow states what survived the technical screening the receiving entity must pass.[11] Since recipient capacity is precisely the alternative account the design must hold apart from the credit regime, the designation is the appropriate record.[12]

The restriction to health is substantial but not selective: health is the largest single destination of individual amendments, and for most of the period analyzed half of each deputy's allocation must be directed to health-related programs.[13] Because indications are filed in the year the budget is executed, the register beginning with 2014 covers the 2010 cohort's final two years[14] and every year of the cohorts that follow, so the amendment is observed for the 2010–2018 cohorts.

Sample and conventions. The analysis sample considers all deputies (excluding those from the Federal District[15]) that submitted at least one amendment designation to the FNS from 2014 to 2023. That includes elected and substitute (*suplentes*) deputies. All values are IPCA-deflated (December 2025); and the campaign spending outcome is the term-end election.

[10] Execution may also be designated to state governments or to federal bodies. Neither is a local executor, so neither occupies a position on the credit-regime margin the framework draws. These designations are excluded from the analysis. They are fewer than five percent of indications, though about 18% of the total value, since projects executed at those levels are individually larger.

[11] Earlier stages do not serve either: at submission (*apresentação*) and in the approved bill (*autógrafo*), most amendments leave the execution modality to be defined later.

[12] As targeted municipalities and execution modality of all individual amendments can be tracked at the commitment stage from 2015 onward, Appendix C.2 reproduces the main results on that source.

[13] Constitutional Amendment 86/2015.

[14] A deputy elected in year Y files indications from $Y + 2$ to $Y + 5$.

[15] As it has only one municipality.

4.5 A First Look at the Portfolio

Before the main analysis, I discuss a set of descriptive patterns that previews some of the theoretical framework's implications.

The instruments are selective and skewed. Table 2 reports, per instrument, the share of deputy–municipality pairs with any activity and the distribution of amounts. Every instrument is dominated by zeros and amounts are right-skewed. Incidence differs by instrument: targeted amendments register in roughly 13% of pairs (of which 12.1 points run through the municipal government and 1.4 through NGOs), both campaign and cota spending in around 10%.

Outcome	Mean	SD	Obs.	% Non-Zero Obs.	Description
Amendment (FNS)	98847.56	601218.98	556621	12.97	Total value (in R$) of individual amendments directed to municipalities.
Amendment (FNS, claimant / local gov.)	87436.35	541312.19	556621	12.13	Total value (in R$) of individual amendments to be executed through local government (claimant route).
Amendment (FNS, non-claimant / NGO)	11411.21	198626.50	556621	1.40	Total value (in R$) of individual amendments to be executed through NGOs or direct application (non-claimant route)
Campaign Spending	4007.83	59613.00	556621	10.18	Total campaign expenditures (in R$) a deputy pays to suppliers.
Campaign Spending (Conditional)	4964.08	66308.85	449397	12.61	Same as Campaign Spending, but restricted to deputies who stood for re-election.
Cota Parlamentar	2304.87	36751.06	556621	10.30	Total Cota Parlamentar reimbursements (in R$) a deputy pays to suppliers.

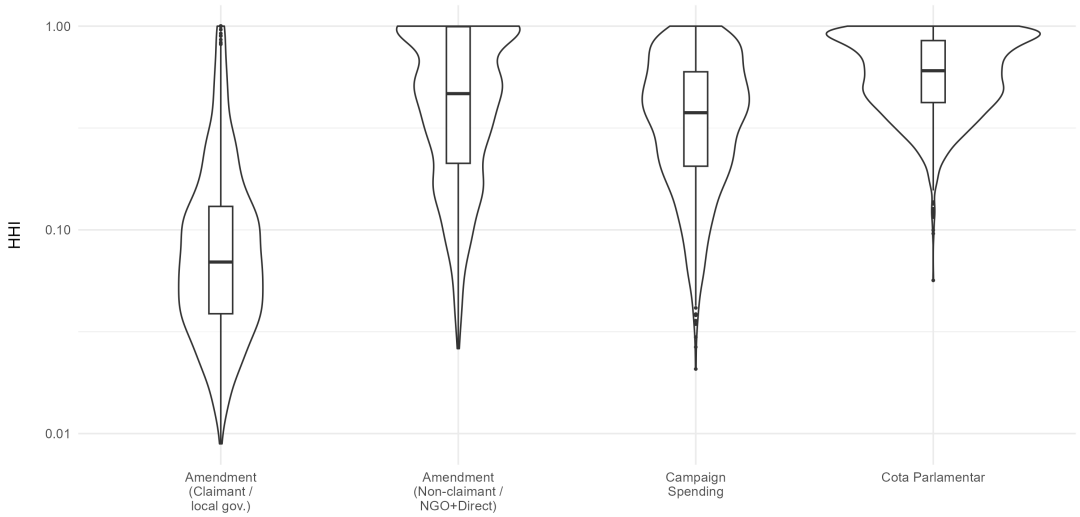
Table 2: Targeting Instruments - Summary Statistics

	2010	2014	2018
Amendment (Claimant / **local gov.**)	11.07%	22.19%	26.04%
Amendment (Non-claimant / **NGO**)	1.34%	1.71%	1.23%
Campaign Spending	10.56%	14.1%	16.66%
Cota Parlamentar	12.22%	13.3%	14.39%

Table 3: Average per Deputy-Cohort Municipality Coverage

Delegation shows in the geography. Table 3 shows that, in terms of the share of the state's municipalities touched at all, the targeted amendment is the widest instrument:

a deputy reaches roughly 24% of their state's municipalities[16] against roughly 13% for campaign and cota spending. In *value concentration* the ordering reverses. Figure 1 plots the within-deputy concentration (HHI) of each instrument across municipalities, and local government amendments are the most dispersed, with cota spending in the opposite extreme. As expected, the local-government amendment distribution is broad and flat, while the retained tools, and the amendment whose credit the deputy keeps, touch fewer places and pile value on very few.



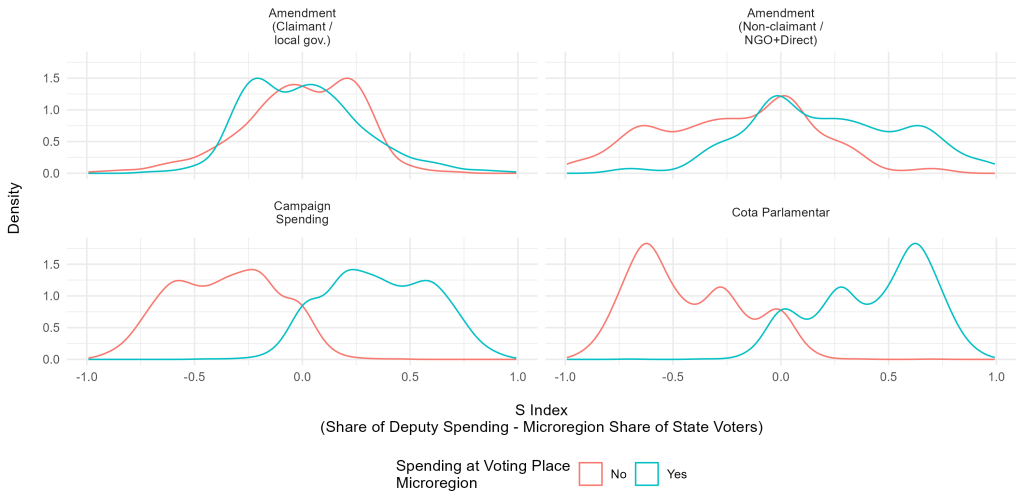
Notes. Distribution across deputy-cohorts of the Herfindahl index of an instrument's value across the municipalities of the deputy's state. Boxes mark the interquartile range and median inside the violins. The vertical axis is logarithmic, so the distance between the claimant route and the retained tools is larger than it appears. Deputy-cohorts not using an instrument are omitted from its panel.

Figure 1: Concentration by Instrument - Deputy×Cohort Distribution

Base directedness. Figure 2 shows, across deputies, each instrument's directedness toward the personal base, using the enrollment microregion. Plotted as an S-index[17] the separation is sharp. Campaign and cota spending strongly *over*-represent the base. The local-government amendment shows the opposite tilt, if anything directed *away* from the base relative to electoral weight. The non-government amendment sits with the retained tools, over-representing the base.

[16]For 2010 cohort, as only half of the term is covered in the FNS amendment data, coverage is lower.

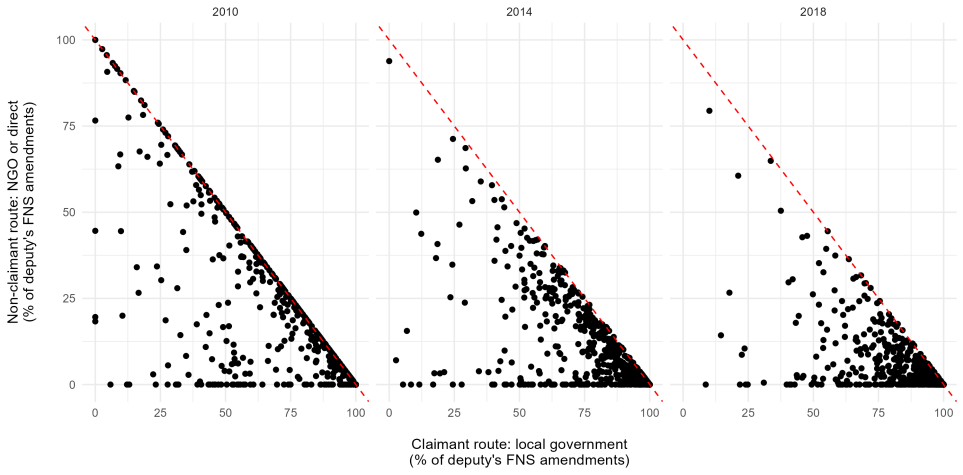
[17]That is, the instrument's base share minus the base's share of the state electorate, so zero is "proportional to electoral weight".



Notes. Distribution across deputy-cohorts of the S index — the share of an instrument's value going to a set of municipalities minus that set's share of the state electorate — computed separately for the deputy's own enrollment microregion and for the remainder of their state. Positive values indicate that a set receives more than its electoral weight. Two observations per deputy-cohort and instrument.

Figure 2: Base-directedness by Instrument - Deputy×Cohort Distribution

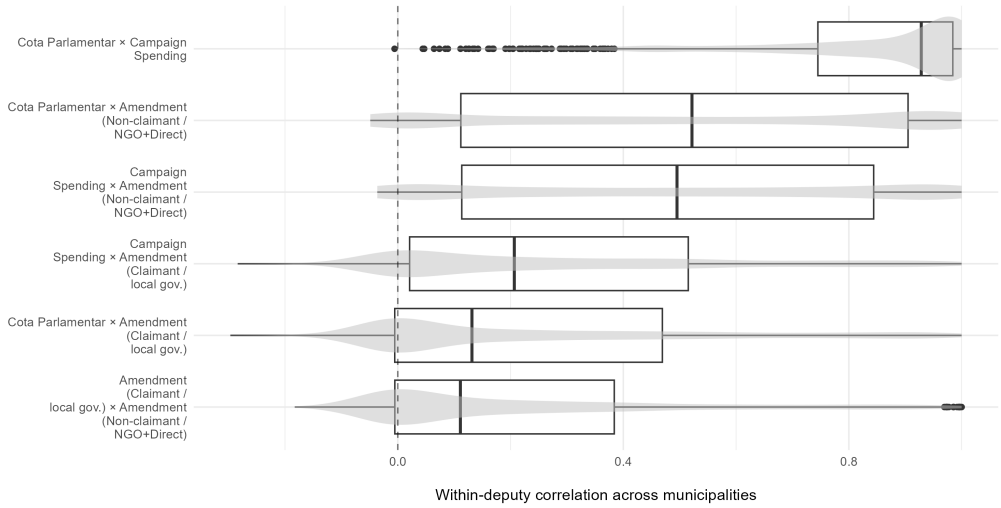
The credit-regime choice is real. Figure 3 decomposes amendments by the executing modality (i.e., local government vs. NGO vs. others) in shares of deputies' total. The local-government route carries the bulk of targeted value, but essentially all deputies also move money through non-government executors. The credit regime is thus a choice deputies actually exercise.



Notes. Each point is a deputy-cohort, positioned by the percentage of their FNS amendment value designated to the municipal goverment execution (horizontal) and to nonstate executors (vertical). The dashed line marks the frontier where the two routes exhaust the deputy's amendments; points below it use other modalities, such execution by the state or direct execution by a federal entity. Panels are electoral cohorts.

Figure 3: Deputies' amendment application modality by Cohort

The retained tools share one map. Figure 4 summarizes, for each pair of instruments, the within-deputy correlation of their allocation across municipalities (median and interquartile range, pooled over cohorts). For most deputies, campaign and cota spending are almost perfectly co-located, while both correlate far less with local government amendments. The ordering between these poles is itself informative and traces the credit dimension: the non-government (credit-retaining) amendment co-locates with the retained tools more than the local-government (credit-ceding) amendment does, echoing the base-directedness pattern above.



Notes. Distribution across deputy-cohorts of the within-deputy correlation between two instruments' values across the municipalities of their state, one observation per deputy-cohort and pair. Boxes mark the interquartile range and median; the dashed line marks zero. Pairs are ordered by median correlation.

Figure 4: Within-deputy instruments' pairwise correlation

Together these patterns preview the paper's geography: deputies run two programs — a concentrated, base-centered program of resources whose credit they keep (campaign spending, the cota, the amendment routed around the local government) and a broad, dispersed program of resources they cede to local partners.

5 Empirical Strategy

The four predictions call for different kinds of evidence, and no single design supplies all of them. $P1$ and $P2$ are claims about *allocation geography* — descriptive in form

but vulnerable to compositional confounding, since localities differ in many potentially confounding dimensions. $P3$ is a *causal* claim about the effect of an allied executor. $P4$ is cross-sectional covariation across legislators, offered as description. The section takes them in that order, matching each prediction to the design that identifies it under the weakest assumptions.

5.1 Geography Net of Composition (P1, P2)

$P1$ and $P2$ are claims about the *shape of a legislator's portfolio*: where each instrument's value goes, how tightly it clusters, and which instruments share a map. The descriptives in the previous section show the predicted shape in the raw data. Testing it raises two problems that the design must solve: the instruments differ in scale by orders of magnitude, and the deputy's base municipalities may differ from others (e.g., in size, administrative capacity, media-market, the density of eligible non-governmental executors).

Scale. Deputies' amendments, their cota and campaign outlays are not commensurable in reais. The design therefore considers a normalization. Every outcome is defined on the instrument's own allocation: for deputy d, cohort t, and instrument k, the share $s_{dmtk} := y_{dmtk} / \sum_{m'} y_{dm'tk}$ of the instrument's value that municipality m receives. Each instrument lives on its own simplex, so its geography is measured against itself, and instruments of any size are comparable by construction. The three quantities $P1$ names are functions of these shares: (i)*base-attachment*, $\phi_{dtk} := \sum_{m \in \text{base}} s_{dmtk}$, the fraction of the instrument's value landing in the deputy's enrollment microregion; (ii) *concentration*, the Herfindahl of the shares across municipalities; and (iii) *co-location*, the correlation of two instruments' share vectors across the municipalities the deputy touches. $P2$'s object is ϕ computed separately for the two routes of the amendments.

Composition. The second problem is that base-attachment could reflect what base municipalities *are* rather than what they are *to the legislator*. The estimator handles the two halves of this concern differently, because they enter differently. Attributes that pull resources symmetrically across instruments cancel in the design: every comparison is a

contrast *between instruments within the same deputy-cohort*, and the deputy's base is the same set of municipalities on both sides of the contrast, so anything that inflates all of their instruments there drops out. What survives is the *differential* version of the concern: place attributes that matter for one instrument and not another. For instance campaign services are bought where vendors are, and vendors may cluster where the deputy's career did, or non-governmental executors cluster where organizational density is high. These instrument-specific supply geographies are addressed by a separate, stricter specification described below.[18]

The estimator. The main specifications contrast instruments within the deputy. For $P1$, at the deputy × cohort × instrument level,

$$z_{dtk} = \sum_{k \neq \text{amd}} \beta_k \cdot \mathbf{1}\{k\} + \eta_{dt} + \varepsilon_{dtk}, \tag{1}$$

where z is ϕ or the HHI, η_{dt} are deputy × cohort fixed effects, amendment targeting is the reference category, and standard errors are clustered on deputy. Each β_k is the retained tool's base-attachment (or concentration) gap over the delegated amendment *within the same legislator*. The co-location clause is estimated on the within-deputy pairwise correlations, contrasting the retained pair against each retained-amendment pair with the same fixed effects; because the clause compares two contrasts that share no reference coefficient, it is reported as the linear combination with its delta-method standard error rather than read off a single estimate.

For $P2$ the same estimator runs decomposing amendments: the outcome is ϕ per route, and the coefficient of interest is the non-claimant−claimant gap with deputy × cohort fixed effects, on the deputy-cohorts that use *both* routes. I also consider a "common support" version of this analysis restricting the deputy × cohort × instrument aggregation to municipalities-cohorts where any deputy targets amendments via the non-claim

[18] One version of the supply concern deserves its own answer, because no fixed effect can absorb it: the cota reimburses the costs of office, and a deputy's local offices likely sit in their stronghold, so its base concentration might be read as operating geography rather than targeting. The framework does not distinguish the two. What would threaten the interpretation is spending that tracks supplier convenience with no organizational content, which is what the within-municipality specification is built to detect.

channel.[19] For the second part of $P2$, I also report the contrasts between the non-claimant amendments and retained tools.

Samples. Two samples are reported, because one of $P1$'s clauses forces a restriction the others do not need. The headline sample is every deputy-cohort with positive cota and amendment value, that is the widest set on which the base-attachment and concentration clauses are defined. Campaign spending exists only for deputies who seek reelection, so specifications involving it run on the reelection-seeking subsample. Reporting the cota-amendment contrasts in both samples works as a check that reelection selection is not producing the pattern.

The within-municipality bound. The differential supply geographies remain. To address them, a stricter specification returns to the municipality-level shares and interacts base status with the instrument,

$$s_{dmtk} = \gamma_0 \cdot \text{Base}_{dm} + \sum_{k \neq \text{amd}} \gamma_k \cdot (\text{Base}_{dm} \times \mathbf{1}\{k\}) + \mu_{mtk} + \eta_{dtk} + \varepsilon_{dmtk}, \tag{2}$$

with municipality × cohort × *instrument* and deputy × cohort × instrument fixed effects, two-way clustered on deputy and municipality. Because the municipality effects are instrument-specific, each place's attributes are absorbed separately per instrument and γ_k asks whether base status shifts the deputy's allocation toward the retained tool *inside the same place*. The two specifications answer different questions, and the paper keeps them apart deliberately. The within-deputy contrasts test $P1$ and $P2$ as written: they are claims about the shape of the portfolio. The within-municipality interaction bounds the *mechanism* behind that shape: if it holds, targeting operates even net of each instrument's supply geography; if it is null, the portfolio pattern is real but runs through *which places* the deputy's instruments reach rather than through differential routing within a place. The analogous bound is estimated for $P2$'s route contrast.

[19] This is a conservative feasibility constraint: it conditions on demonstrated rather than potential availability, and therefore over- rather than under-controls for the executor map.

5.2 The Alignment Design (P3): Close Local-Executive Races

To identify how a deputy adjusts their targeting when an allied mayor takes office (P3), I use a sharp regression discontinuity design centred on closely contested mayoral races, comparing municipalities where their ally barely won against those where the ally barely lost. The approach follows a long tradition of treating close elections as quasi-experiments (De La Cuesta and Imai, 2016). In particular, Brollo and Nannicini (2012) apply it to Brazilian mayoral races to study alignment and federal executive transfers.

Let M_{dm} be the vote margin of deputy d's allied[20] candidate in municipality m' and $A_{dm} = \mathbf{1}\{M_{dm} > 0\}$ an allied executive taking office. The estimand defined as:

$$\tau = \lim_{\mu \downarrow 0} \mathbb{E}[Y_{dm} \mid M_{dm} = \mu] - \lim_{\mu \uparrow 0} \mathbb{E}[Y_{dm} \mid M_{dm} = \mu]\,. \tag{3}$$

Because the running variable is deputy-specific, a single race enters the panel at $+\mu$ for the winner's allies and $-\mu$ for the runner-up's, so the comparison at the cutoff is between deputies whose ally prevailed and deputies whose ally did not. I estimate τ by local linear regression with a triangular kernel, MSE-optimal bandwidths, and robust bias-corrected inference, clustering at the municipal level, using *rdrobust* (Calonico et al., 2015, 2017).

Identification rests on continuity: absent an allied victory, potential outcomes would evolve smoothly through the threshold (Cattaneo et al., 2019). Here that requires deputy–municipality pairs whose ally barely won not to differ systematically from those whose ally barely lost in anything that independently affects targeting, so that a jump at the cutoff is attributable to the executive's alignment rather than to whatever selected the municipality into a close race. What τ recovers is the local effect of an allied executor taking office: a *bundle* of cooperation, brokerage, and partnership, which the design identifies without separating the deputy's supply decision from the ally's demand (Marshall, 2024). It is also local in the ordinary sense, applying to municipalities where the race was close.

[20] Alignment is defined by co-partisanship, considering the deputies' and mayors' parties at their elections.

Timing and outcomes. Municipal elections fall mid-term and outcomes are measured over the post-election half of the term, so no outcome predates its treatment. Each is estimated in reais and as an indicator for any positive value: the instruments differ in scale by orders of magnitude, so a dissociation visible only in levels could reflect their relative size, while the same is not true for the extensive margin.

Fixed-effects specification. Because many deputies contest each municipality, the discontinuity can also be estimated between deputies whose ally won a given race and deputies whose ally lost it. I re-estimate the design absorbing municipality × cohort fixed effects, as a weighted local linear regression inside the main specification's bandwidth,

$$Y_{dm} = \tau A_{dm} + \beta_1 M_{dm} + \beta_2 A_{dm} M_{dm} + \mu_{mt} + \varepsilon_{dm}, \qquad |M_{dm}| \leq h, \tag{4}$$

with triangular weights $1 - |M_{dm}|/h$ and standard errors clustered on deputy and municipality. The administration is then identical on both sides and only the deputy's relation to it differs, which separates the partnership from the executive's own competence. Identified only from municipality-cohorts containing deputies on both sides of the cutoff, the contrast need not equal the pooled effect where effects vary across places.

Reallocation. $P3$ predicts not only that the claimant channel rises but that value shifts into it. The corresponding outcome is the share routed around the executor, non-claimant/(claimant + non-claimant), which should fall at the cutoff. It is defined only where the deputy targets, and is reported as an auxiliary test.

Interpretation under capped instruments. Because each deputy's amendment and *cota* allocations are capped, value targeted where an ally narrowly wins is value not targeted elsewhere in their state. Their municipalities are not independent observations, and the comparison at the cutoff is between places where their portfolio concentrated and places where it did not, net of displacement spread across the rest. The estimand is therefore a within-portfolio reallocation effect. That is the quantity the framework is about, as predictions concern how a fixed portfolio is allocated.

5.3 Portfolio Composition and Endowments (P4)

$P4$ moves the analysis from within a portfolio to across them. The preceding predictions describe how a single legislator arranges their instruments; this one asks whether legislators with different endowments arrange them differently. The unit is therefore the deputy × cohort, and the outcome is portfolio composition on both margins the framework distinguishes: the retained-versus-delegated tilt, log(retained) − log(amendment), and, within the amendment, the non-claimant-versus-claimant tilt. The retained tools' own log intensity is reported alongside. Rootedness enters as two measures: whether the deputy previously held local executive office, and their vote-concentration quartile.[21] Cohort and state fixed effects absorb the electoral environment, and standard errors are clustered on deputy.

Two design choices follow from the measures themselves. Concentration enters as quartiles taken within cohort and state rather than as a level, since its scale is not comparable across states of different size and municipal count; the quartile is a rank within the environment the deputy actually faces. And because campaign spending exists only for deputies who contest the following election, the retained family is defined for the cota alone on the full sample, and the cota with campaign spending on the reelection-seeking subsample. Both are reported, and the pair is informative in itself: if rootedness tilts the portfolio, it should do so in the instrument available to every deputy and not only in the one that presupposes a campaign.

6 Results

The results show that within the same legislator, the retained tools and the delegated amendment describe two different geographies ($P1$). Decomposing the amendment by the credit regime of its executor sorts value along the same dimension: the route that preserves the deputy's credit is markedly more base-directed than the route that cedes it ($P2$). The alignment of the local executive moves the claimant channel, and moves it

[21] To measure the vote concentration of a deputy d in a municipality m in their state M, I use the S index: $\frac{V_{dm}}{\sum_{m \in M} V_{dm}} - \frac{V_m}{\sum_{m \in M} V_m}$, where V_m is the total number of votes in m.

by reallocating the deputy's amendments across modalities ($P3$). Portfolio composition covaries with rootedness on the retained-versus-delegated margin but not on the credit-regime margin ($P4$).

6.1 Two Geographies (P1)

Within the same legislator, the retained tools and the delegated amendment follow different maps. Table 4 reports the contrasts. The cota's base-attachment exceeds the amendment's by 0.4 and campaign spending's by 0.3. That is, a deputy directs about 28% of their amendment value to their base, against 68% of their cota and 60% of their campaign spending. Concentration separates the families the same way. The amendment's Herfindahl of 0.1 corresponds to spreading value across roughly eight effective municipalities; the cota's sits half a unit higher, on a scale bounded at one, which is fewer than two. Both clauses order the instruments as predicted. The cota–amendment estimated gaps are similar on the full sample of deputy-cohorts with positive cota and amendment value and on the reelection-seeking subsample.

Clause	Contrast	Estimate	Baseline (amendment)
Panel A: Full sample (cota users)			
Base-attachment (ϕ)	Cota - amendment	0.402*** (0.012)	0.281
Concentration (HHI)	Cota - amendment	0.505*** (0.008)	0.124
Panel B: Reelection subsample			
Base-attachment (ϕ)	Cota - amendment	0.405*** (0.014)	0.272
Base-attachment (ϕ)	Campaign spending - amendment	0.332*** (0.011)	0.272
Concentration (HHI)	Cota - amendment	0.511*** (0.009)	0.111
Concentration (HHI)	Campaign spending - amendment	0.313*** (0.009)	0.111
Co-location (ρ)	corr(cota,CS) - corr(cota,amd)	0.476*** (0.013)	0.356
Co-location (ρ)	corr(CS,cota) - corr(CS,amd)	0.444*** (0.013)	0.389

Notes. Within deputy-cohort contrasts against designated amendments, from regressions of each outcome on instrument indicators with deputy × cohort fixed effects. Base-attachment and concentration are estimated at the deputy × cohort × instrument level; co-location at the deputy × cohort × pair level, with the second row a linear combination. Standard errors clustered on deputy. The baseline column gives the raw mean of the amendment's own value on each outcome. Panel A covers all deputy-cohorts with positive cota spending and amendment designations ($N = 1{,}525$); Panel B those with all three instruments ($N = 1{,}184$), campaign spending being observed only for deputies who contest the following election. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 4: P1: Base-attachment, concentration, and co-location, within deputy-cohort

In terms of co-location, the correlation between cota and campaign spending's share vectors exceeds the correlation between cota spending's and amendment's by ~ 0.5, and

exceeds the correlation between campaign spending's and amendment's by ~ 0.4. The retained tools travel together across the deputy's municipalities in a way that neither does with the delegated instrument.

The mechanism bound. Within a place, base status pulls every instrument toward it. Comparing deputies for whom the same municipality is and is not base, base status raises the amendment's share by 0.017 against a mean amendment share of 0.023 in a base municipality. That is, base status pulls the delegated instrument toward the base as well, but half as hard as it pulls the retained tools. The separation between the families is therefore not an artifact of where each instrument happens to be spendable: it survives inside the municipality.

Contrast	Estimate	Total effect for the instrument
Sample: Full (cota users)		
Base (amendment, reference)	0.017*** (0.001)	0.017*** (0.001)
Base x cota	0.013*** (0.003)	0.030*** (0.003)
Sample: Reelection		
Base (amendment, reference)	0.016*** (0.001)	0.016*** (0.001)
Base x cota	0.014*** (0.003)	0.030*** (0.004)
Base x CS	0.013*** (0.002)	0.030*** (0.003)

Notes. Outcome: municipality's share of the deputy's own value for the instrument. Fixed effects: municipality × cohort × instrument and deputy × cohort × instrument, so each place's attributes are absorbed separately per instrument. Standard errors, two-way clustered on deputy and municipality, in parentheses. Amendment targeting is the reference category: the first row of each block is its own within-municipality base effect, and the interaction rows are the retained tools' effect on top of it; the total effect sums the two. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 5: P1: The within-municipality bound

6.2 The Credit Regime (P2)

Decomposing the targeted amendments by the credit regime of its executor divides it into two geographies. In Panel A1 of Table 6, the non-claimant route's base-attachment exceeds the claimant route's by 0.192 among the 1054 deputy-cohorts that used both. The gap is large: the route that preserves deputy's credit sends nineteen percentage points more of its value home, relative to the claimant route.[22] Restricting the aggregation to

[22]The tilt also indicates that the routing choice is the deputy's rather than their party's. It is defined against each deputy's own enrollment microregion, and co-partisans differ in where that base lies, so a

municipality-cohorts where some deputy targets value through the non-claimant channel (Panel A2), so that the two routes are compared only where both are demonstrably feasible, the difference falls to 0.095. The geography of eligible executors accounts for a large part of the raw gap, then, but not all of it: even where non-governmental executors demonstrably operate, the deputy sends more of their credit-preserving value home than of their partner-directed value.

Holds Fixed	Non-claimant - Claimant Base Tilt	Claimant Level
A1: Within deputy		
deputy x cohort	0.192*** (0.015)	0.236
A2: Within deputy, common support		
deputy x cohort + feasible set	0.095*** (0.013)	0.333
A3: Within municipality (mechanism bound)		
deputy x cohort + everything about the place	0.004** (0.002)	0.016*** (0.001)

Notes. Outcome: the share of amendment route's own targeted value landing in the deputy's enrollment microregion. Each row reports the non-claimant minus claimant gap, estimated at the deputy × cohort × route level with deputy × cohort fixed effects, on the $N = 1{,}054$ deputy-cohorts that use both routes; standard errors clustered on deputy in parentheses. The rungs differ in what they hold fixed. A1 holds the legislator fixed. A2 recomputes each route's share over municipality-cohorts in which some deputy targets through the non-claimant channel. A3 returns to municipality-level shares and adds municipality × cohort × route fixed effects, absorbing each place's attributes separately by route, with standard errors two-way clustered on deputy and municipality; the coefficient there is the interaction of base status with the non-claimant route. The claimant level column reports, for A1 and A2, the claimant route's own base share as a raw mean; for A3 it reports the claimant route's own within-municipality base effect, estimated in the same regression. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 6: P2: Base-attachment by route

Panel A3 reports the same mechanism bound estimated for $P1$. Absorbing every place's attribute separately by route, base status raises the claimant route's share by 0.016 and the non-claimant route's by a further 0.004, a quarter more. What the bound adds is that the tilt is not exhausted by executor supply: inside a fixed place, with each route's attributes absorbed separately, base status still pulls the credit-retaining route harder. The margin is small, and consistent with a decomposition of the Panel A1 gap: the routes separate mostly in which municipalities each reaches, and only secondarily in how much each carries.[23] That division is what the two prices imply: the credit price is

party rule about which executors to use is unlikely by itself to produce a pattern in which each deputy's non-claiming value points at their own base. Consistent with this, among deputies targeting the same municipality and year, co-partisans divide it between the two routes almost exactly as differently as randomly paired deputies do, while a deputy's own routing varies less across the municipalities of their state than their co-partisans' does within any one of them (Appendix Table B.1).

[23] Written in log odds of base to non-base value, the gap decomposes exactly into the two margins: the extensive margin accounts for over ninety percent of it, and the difference in value per base municipality reached is small and imprecisely estimated (Appendix Table B.2).

paid project by project, so the deputy pays it by choosing where each route's value lands rather than by splitting every municipality's allocation in the same proportion.

The non-claimant route against the retained tools. *P*2 also places the non-claimant route between the claimant channel and the retained family, and on the common sample of Table 7 that is where it falls. Taking the claimant channeled amendment as the origin, the non-claimant routed sits at 0.192, campaign spending at 0.348, and cota at 0.427. Cota targeting exceeds the non-claimant routed amendments by 0.235 and campaign spending exceeds it by 0.171, both precisely estimated. Expressed as a position on the interval between the claimant floor and the cota ceiling, the non-claimant routed amendment sits at 0.449, with a confidence interval of $[0.391, 0.508]$; that is, distinguishable from the claimant channel and from the retained tools alike, and statistically indistinguishable from the midpoint. Ceding execution while keeping credit moves the resource decisively toward the personal map without carrying it the whole way, which is what a dimension priced twice (i.e., once for execution, once for credit) implies.[24]

Contrast	Estimate
Sample: Core (claimant, non-claimant, cota)	
Non-claimant - claimant	0.192*** (0.015)
Cota - claimant	0.427*** (0.015)
Cota - non-claimant	0.235*** (0.015)
Sample: Reelection (+ CS)	
CS - claimant	0.348*** (0.013)
CS - non-claimant	0.171*** (0.016)
Non-claimant Benchmarking	
Non-claimant position on [claimant, cota] interval ($\beta_{nonclaim}/\beta_{cota}$)	0.449 CI:[0.391,0.508]

Notes. Outcome: the share of an instrument's own indicated value landing in the deputy's enrollment microregion. Contrasts are estimated at the deputy × cohort × instrument level from a regression of that share on instrument indicators with deputy × cohort fixed effects, the claimant route omitted; standard errors clustered on deputy in parentheses. Rows other than those against the claimant route are linear combinations of coefficients, with delta-method standard errors. The core sample comprises deputy-cohorts using both routes and the cota ($N = 1,054$); campaign spending is observed only for deputies who also contest the following election ($N = 824$). The final row expresses the non-claimant route's position on the interval between the claimant route and the cota as the ratio of their coefficients, with a delta-method confidence interval. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 7: P2: Non-claimant amendment relative position, within deputy-cohort.

[24]The contrasts are internally consistent with Table 4's. The targeted amendment contains both routes, and the non-claimant routed is the more base-directed of the two, so the amendment's base-attachment sits above the claimant channel's; accordingly the cota's gap over the amendment is smaller than its gap over the claimant channel alone .

6.3 Alignment Prices the Municipal Channel (P3)

The election of an allied local executive moves target amendments into the channel that runs through him and out of the channel that runs around him. Table 8's Panel A reports the effect of a narrowly elected ally on every outcome, in reais (R$). Only the effect on target amendments to be executed by the local government is statistically significant: it rises by $R\$101,227$, a substantial effect considering the estimated control mean $(57,592)$. The point estimate for the NGO-routed amendments is negative, as predicted, but not statistically distinguishable from zero.

	Amendment: Claimant (local gov.)	Amendment: Non-claimant (NGO)	Campaign spending	Campaign spending (reelection)	Cota
Panel A: Continuous Outcomes					
	101227.12***	-1170.64	9.74	20.00	62.36
	(8907.66)	(1936.75)	(579.77)	(815.94)	(167.94)
BW	8.82	12.86	10.27	10.07	7.83
Eff. Obs. (L)	19504	27286	22430	17306	17724
Eff. Obs. (R)	18970	25777	21649	16727	17247
BC Estimate (L)	57592.26	8406.57	2633.23	3367.74	219
Panel B: Binary Outcomes					
	0.120***	-0.003**	-0.002	-0.002	0.012***
	(0.004)	(0.001)	(0.003)	(0.004)	(0.004)
BW	12.6	17.98	19.63	19.42	11.59
Eff. Obs. (L)	26744	35078	37175	29031	24871
Eff. Obs. (R)	25310	32353	33952	26577	23814
BC Estimate (L)	0.08	0.02	0.12	0.15	0.08
Panel C: Continuous Outcomes + Municipality Fixed-Effects					
	113707.16***	-2651.70	301.32	389.29	-190.28
	(15838.44)	(3429.51)	(821.22)	(1113.04)	(233.05)
BW	8.82	12.86	10.27	10.07	7.83
Obs.	37724	52078	43235	33026	34284
Share ident. (mun.-cohort)	0.88	0.88	0.88	0.83	0.88

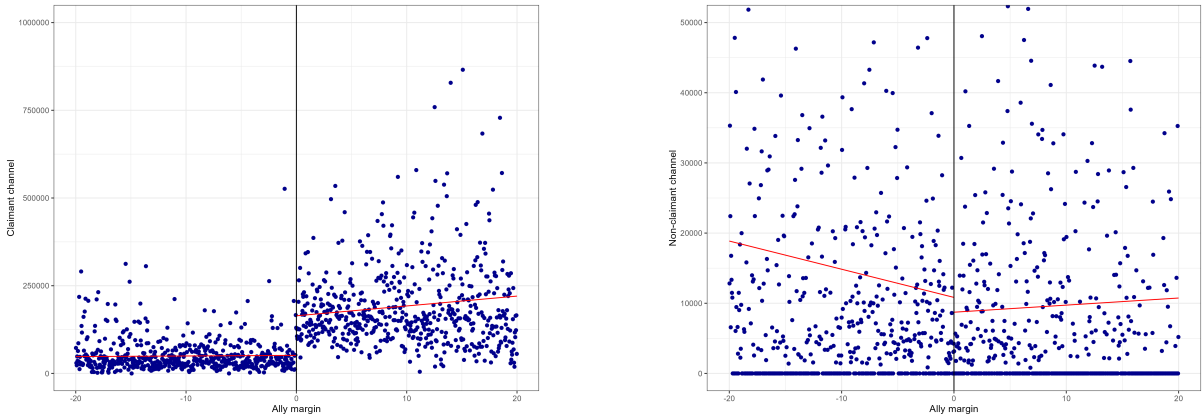
Notes. Close-race regression discontinuity estimates of the effect of an allied local executive taking office. Panels A estimates each outcome in reais (R$) and Panel B as an indicator for any positive value, both by local linear regression with a triangular kernel, MSE-optimal bandwidths, and robust bias-corrected inference, with standard errors clustered on municipality. Panel C absorbs municipality × cohort fixed effects, so that the comparison, in R$, runs between deputies whose ally won a given race and deputies whose ally lost it; it is estimated as a weighted local linear regression inside Panel A's bandwidth, with triangular weights and standard errors two-way clustered on deputy and municipality.Inference there is conventional rather than bias-corrected. *BC Estimate (L)* is the bias-corrected limit of the outcome on the control side of the cutoff. *Share ident.* is the share of observations falling in municipality-cohorts that contain deputies on both sides. Campaign spending is observed only for deputies who contest the following election; the reelection column restricts to them. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 8: P3: The effect of a narrowly elected allied local executive, by instrument

Turning to the extensive margin, Panel B shows a similar pattern. The effect on claimant channeled amendments is sizable and statistically significant, a 12 percentage points increase against an estimated control mean of 8.5. The shift on the NGO-routed

amendments is negative, −0.3 percentage points, and statistically significant, but small in magnitude. Campaign spending again does not move, but cota does, although as a small increase (a likely second-order machine complementarity). Figure 5 shows the two channels side by side at the cutoff: the claimant channel steps up as the ally's margin crosses zero, and the non-claimant channel does not.

As many deputies contest each municipality, the same discontinuity can be estimated within municipality × cohort, between deputies whose ally won the race and deputies whose ally lost it (that is, the same city hall, the same administration, the same year, differing only in whose partner runs it). The dissociation holds and widens: Panel C shows that amendments routed through the claimant channel rise by $R\$113,707$ while the non-claimant channel falls by $R\$2,651$ (although, again, the latter is not statistically significant). The retained tools remain unmoved. What moves the claimant channel is therefore not how the administration works, since that is held fixed, but whose partner runs it.



(a) Claimant (local gov.) **(b)** Non-claimant (NGO/direct)

Notes. Binned scatter plots of the deputy's amendment value in the municipality against the vote margin of their allied mayoral candidate, restricted to margins within twenty points of the cutoff. Dots are averages within evenly spaced bins of the running variable, the number selected to mimic the variance of the underlying data; solid lines are linear fits estimated separately on each side with a triangular kernel (Calonico et al., 2015). A positive margin denotes an allied executive taking office. The two panels differ in vertical scale by an order of magnitude.

Figure 5: P3: RD Plots - Amendment Targeting

Two additional exercises on the comparison within targeted amendment are reported in Table 9. First, estimated directly, as an RD on the within-cell difference between the two routes, the contrast is a $R\$103,332$ increase. Second, because deputies make the routing choice themselves, alignment should reallocate rather than merely add: condi-

tional on targeting in the municipality, the share routed around the executor should fall. It does: a sizable 11 percent points decrease in the share of the targeted amendments to be executed by NGOs. That estimate conditions on targeting, however, and targeting is itself a response to treatment. Because an ally more than doubles the probability that the deputy targets anything through him, municipalities that receive value only because he won enter the conditional sample on the treated side alone, and they enter through the claimant channel, which is what makes them targeting at all. The effective samples are correspondingly lopsided: $3,771$ observations to the left of the co-partisan cutoff against $7,307$ to the right. Thus, part of the share's decline is that composition rather than value moved between routes, and the conditional estimate cannot separate the two.

	Claimant - Non-claimant	Non-claimant share
	103332.39***	-0.11***
	(9155.37)	(0.01)
BW	8.83	19.2
Eff. Obs. (L)	19524	3771
Eff. Obs. (R)	19007	7307
BC Estimate (L)	48646.19	0.16

Notes. Close-race regression discontinuity estimates of the effect of an allied mayor taking office. The first column takes as outcome the difference between the two routes' value in the same deputy × municipality; the second takes the share of the deputy's amendment value in the municipality routed around the executor, defined only where they allocate value there. Both are estimated by local linear regression with a triangular kernel, MSE-optimal bandwidths, and robust bias-corrected inference, with standard errors clustered on municipality. *BC Estimate (L)* is the bias-corrected limit of the outcome on the control side of the cutoff. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 9: P3: Reallocation within amendment

Connecting spatial and alignment margins. Read alongside the geographic results, these findings demonstrate how local alignment (P3) unifies the portfolio allocation mechanisms in P1 and P2. Mechanically, spatial concentration and alignment sensitivity are distinct empirical parameters: an instrument could theoretically target a legislator's base while responding to local executive alignment, or disperse broadly while ignoring partisan ties. The observed empirical combinations, however, follow the relinquishment dimension. Retained tools remain heavily base-directed and invariant to mayoral alignment because no local executive intermediary stands between the deputy and the resource. Claimant amendments exhibit lower baseline base-attachment but expand significantly under mayoral alignment. Non-claimant amendments occupy an intermediate level of

base attachment and fall under alignment, serving as the primary substitution margin when credit-sharing becomes advantageous. An instrument's location on this single dimension thus governs both its spatial distribution across municipalities and its sensitivity to local executive alignment.

6.4 Portfolio Composition and Endowments (P4)

Rootedness covaries with the retained-versus-delegated mix in the predicted direction, though the two proxies do not carry it on the same sample. A deputy who previously held local executive office runs a more cota-intensive portfolio and tilts it away from the amendment (by 0.14 and 0.17 on the full sample, both precisely estimated) but neither effect survives on the reelection subsample, where campaign spending joins the retained family. Vote concentration works there instead: the retained-versus-amendment tilt rises by 0.13 and 0.11 across the second and third quartiles, and is flat at the fourth. On the full sample it is null throughout. The relation is offered as covariation: endowments are not assigned, and a portfolio tilted toward retained tools may build the rootedness it appears to reflect.

	Non-Claimant Tilt		Retained Intensity		Retained vs. Amendment	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Prior Local Career (Mayor/Councilor)	0.034	0.042	0.139***	0.050	0.166***	0.043
	(0.071)	(0.080)	(0.044)	(0.031)	(0.046)	(0.035)
Vote Concentration (Q2)	0.054	-0.054	0.036	0.078*	0.058	0.127***
	(0.088)	(0.101)	(0.048)	(0.042)	(0.051)	(0.045)
Vote Concentration (Q3)	-0.072	-0.129	-0.021	0.100**	-0.021	0.109**
	(0.097)	(0.107)	(0.057)	(0.042)	(0.058)	(0.048)
Vote Concentration (Q4)	0.114	0.018	-0.065	-0.024	-0.025	0.017
	(0.090)	(0.102)	(0.063)	(0.041)	(0.062)	(0.046)
Observations	1134	890	1627	1273	1627	1273
$\mathbf{R^2}$	0.365	0.380	0.061	0.108	0.218	0.333

Notes. Estimates at the deputy × cohort level. The outcomes are the non-claimant-versus-claimant tilt within the amendment (columns 1–2), the log intensity of the retained tools (3–4), and the retained-versus-amendment tilt (5–6). Odd-numbered columns are estimated on the full sample, where the retained family is the cota alone; even-numbered columns on the subsample of deputies who contest the following election, where it also includes campaign spending. Vote concentration enters as quartiles taken within cohort and state, the first omitted. All specifications include cohort and state fixed effects; standard errors, clustered on deputy, in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 10: P4: Portfolio composition and personal rootedness

$P4$'s second half, that strongly rooted deputies also tilt toward the non-claimant route

within the amendment, is not adjudicated here. No coefficient on that margin reaches significance in either sample, but the standard errors are roughly twice those on the retained margin, and the interval on prior local office extends to an effect of the same magnitude as the one it registers there. The design is likely not powered to detect it. What $P4$ establishes is the retained-versus-delegated tilt: rootedness shapes how much a legislator delegates. Whether it also shapes to whom is left open.

7 Extensions

7.1 Where Alignment Is Priced

The RD results establish that alignment prices the claimant channel. They do not say where the price is paid. The framework locates it: the value of ceding credit to an allied executor depends on what the targeted resource is worth to the deputy and on what the ceded credit costs her, and both vary across their own map. Splitting the discontinuity by the municipality's weight in their vote distribution[25] recovers that variation.

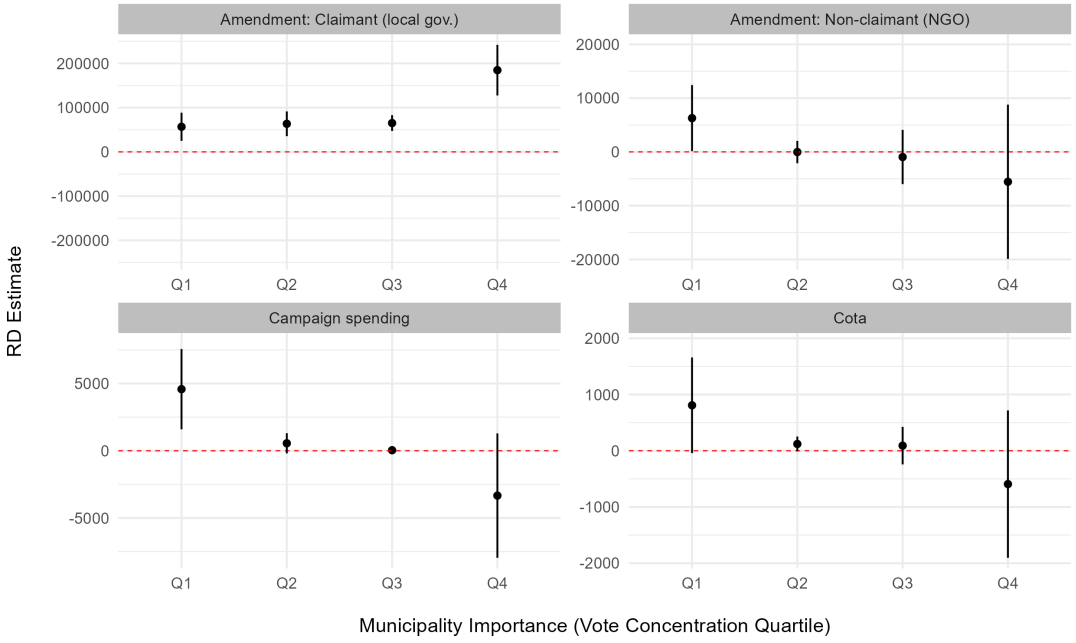
The claimant channel's response is concentrated in the municipalities that matter most to her. Figure 6 shows that across the lower three quartiles the effect is positive, precise, and essentially flat; in the top quartile it is roughly three times larger. A feature of the framework points this way. The credit a deputy concedes to a claimant is cheapest to concede there, since contesting his authorship draws on the presence and support that define the base in the first place. An allied executor in a stronghold is the configuration in which ceding credit costs less to a deputy, and that is where the alignment premium lands.

Every other instrument moves the opposite way: the estimates decline with the municipality's importance and are positive only in the lowest quartiles. The non-claimant route, campaign spending, and cota each rise where an ally takes office in the deputy's marginal municipalities and fall, or cease to respond, in the deputy's stronghold. The pattern resolves an ambiguity the framework left open. Machine complementarity was

[25]Measured by the S Index, which benchmarks concentration against municipality size. See footnote 21.

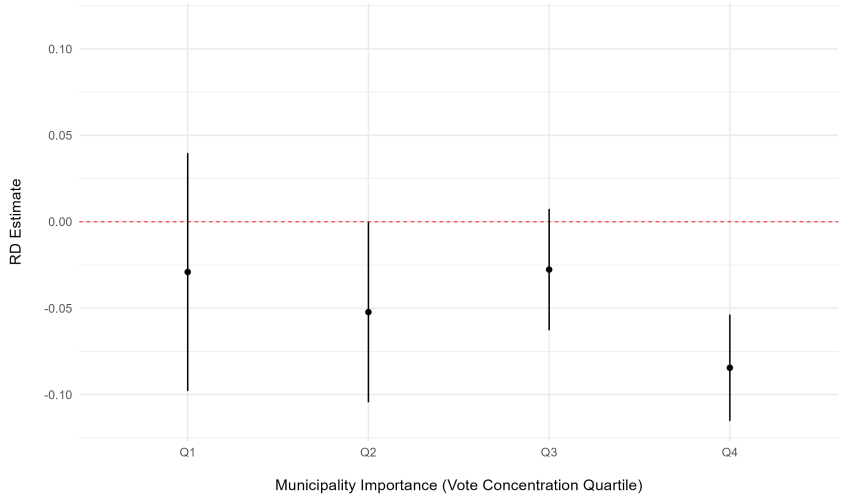
expected to be second-order and of indeterminate sign (i.e., an allied machine may amplify a legislator's own mobilization or stand in for it) and the estimates suggest it does both, in different places. Where deputies have a weaker electoral dominance, an ally is what makes activity there worthwhile, and they spend more of everything. Where dominance is stronger, an ally is less consequential (or substitute for additional targeting efforts). The estimates, however, remain an order of magnitude below the claimant response throughout.

The reallocation between amendment execution modalities follows a similar pattern. Figure 7 shows that, conditional on targeting, the share routed around the local executive falls in every quartile, but the decline deepens with importance and is sharpest and most precisely estimated at the top, which is where $P2$ says the non-claimant route's value is concentrated, and so where a shift in routing has money to move.



Notes. Close-race RD estimates of the effect of an allied mayor taking office, estimated separately within quartiles of the municipality's weight in the deputy's vote distribution, measured by the S index and taken within deputy and cohort; Q1 is the least important quartile and Q4 the most. Each cell is estimated by local linear regression with a triangular kernel, its own MSE-optimal bandwidth, and robust bias-corrected inference, with standard errors clustered on municipality. Bars are 95 percent confidence intervals. Vertical scales differ across panels; outcomes are in reais (R$).

Figure 6: The alignment effect by the municipality's weight in the deputy's vote distribution



Notes. Close-race regression discontinuity estimates of the effect of an allied mayor taking office on the share of the deputy's amendment value in the municipality routed around the executor, defined only where they allocate value there. Quartiles of the municipality's weight in the deputy's vote distribution, measured as in Figure 6. Estimated by local linear regression with a triangular kernel, its own MSE-optimal bandwidth, and robust bias-corrected inference, with standard errors clustered on municipality; bars are 95 percent confidence intervals.

Figure 7: Reallocation within amendment, by the municipality's weight in the deputy's vote distribution

7.2 Electoral Returns and Exchange Link

Whether the positions convert into votes is a question this design cannot answer causally: allocation is chosen, and deputies deploy instruments where they expect them to pay. That is why electoral returns are not among the framework's predictions, and why the exchange's evidence is external to this design, in the reverse-coattails literature the framework builds on (e.g., Ames, 1994; Novaes, 2018; Ventura, 2021). The positions do nonetheless imply a pattern in returns, and one discriminating prediction: if the claimant channel pays through the partner, its association with the deputy's subsequent vote should concentrate where the executor is allied, while the retained tools, which pass through no one, should not depend on who governs.

On the reelection-seeking sample, I regress deputies' log votes in the municipality at the term-end election on their four standardized targeting positions there, absorbing municipality × cohort and deputy × cohort fixed effects and controlling flexibly for their baseline votes (deciles by cohort) interacted with cohort. Alignment then enters interacted with each position. Table 11 reports the estimates.

	Reelection Votes (log)	
	(1)	(2)
Amendment: Claimant (local gov.)	0.208***	0.208***
	(0.015)	(0.015)
Amendment: Non-claimant (NGO)	0.042***	0.040***
	(0.009)	(0.009)
Campaign spending	0.016**	0.015**
	(0.006)	(0.006)
Cota	0.072***	0.083***
	(0.013)	(0.011)
Same-Party Mayor		0.226***
		(0.015)
Amendment: Claimant (local gov.) X Same-Party Mayor		-0.015
		(0.017)
Amendment: Non-claimant (NGO) X Same-Party Mayor		0.013
		(0.010)
Campaign spending X Same-Party Mayor		-0.008
		(0.016)
Cota X Same-Party Mayor		-0.046***
		(0.012)
Observations	445814	445814
R^2	0.722	0.723

Notes. Estimates at the deputy × municipality × cohort level on the sample of deputies who contest the following election. The outcome is the log of the deputy's vote in the municipality at the term-end election. Each position is the value they allocate there through that instrument, standardized within cohort, so coefficients are per standard deviation. Column 2 adds an indicator for an allied executive holding office in the municipality and its interaction with each position. All specifications absorb municipality × cohort, deputy × cohort, and baseline-vote-decile × cohort fixed effects; standard errors, two-way clustered on deputy and municipality, in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 11: Targeting positions and deputy's electoral returns.

All four positions are positively associated with the subsequent vote, and the claimant channel by far the most strongly: a standard deviation of amendment value routed through the local government is associated with roughly twenty percent more votes in the municipality, several times what cota, non-claimant routed amendment, or campaign spending register. The claimant channel's association, however, is the same under allied and unallied executives. Taken at face value, the targeted real is associated with votes whoever executes it.

The interaction is a null on an association that is not itself causally identified. Two readings of it are consistent with the main results, and the paper does not adjudicate between them. The first is selection: deputies route through unallied executors only where they expect it to pay regardless, which compresses any true differential in equilibrium. The second follows from the routing results themselves. $P3$ shows that alignment moves the deputy's routing. If that choice prices alignment correctly, then across the placements they actually make returns equalize at the margin, and the partner's value is expressed

in where the money goes rather than in what the chosen placements yield. Two further coefficients fit the same picture. An allied executive is associated with substantially more subsequent votes independently of every instrument in the specification: partnership's electoral value does not route through the budget, consistent with the alliance as a bundle of brokerage and coattails rather than a conduit for projects. Thus, what the exercise adds is bounded: the position through which deputies relinquish most is the one most strongly associated with their subsequent vote where they deploy it, while the partner's value shows in how they route rather than in these returns.

8 Robustness

Three families of robustness checks evaluate, respectively, the construction of the portfolio objects, the measurement of the base, and the validity of the discontinuity design. Full displays are in Appendix C.

The portfolio objects. The Herfindahl index falls mechanically as an instrument reaches more municipalities, so concentration is re-reported as the effective number of municipalities across which each instrument's value spreads; the families separate identically, with the sign reversed by construction (Table C.1). Co-location is re-estimated with rank correlations and on the union of each pair's support, since Pearson coefficients on zero-inflated vectors can turn on a few large cells. Shared zeros are not doing the work and the ordering across pairs never reverses; rank measures, which weight every municipality equally regardless of the value it carries, yield smaller gaps, and the campaign-spending contrast is null in one of them (Table C.2). Because the non-claimant route can rest on few grants, the $P2$ contrast is re-estimated weighting deputy-cohorts by targeted value and restricting to portfolios that use the route in several municipalities; the gap is broad-based rather than the product of thin portfolios (Table C.3, Figure C.1). Finally, amendment targeting is measured at the indication stage of the National Health Fund register. Commitment records, available from 2015, cover all individual amendments rather than health alone; re-estimating Tables 4 through 10 on that source returns the

same patterns (Tables C.4–C.10).

The base. The headline base proxy is the enrollment microregion. The prior-career and birthplace microregions — also pre-determined, but with different limitations — reproduce every contrast with the same sign and precision, attenuated in the order their distance from the construct would predict. The career measure returns roughly nine-tenths of each enrollment estimate and the birthplace measure roughly three-quarters, and in near-identical proportion across the three contrasts (Table C.11). Both alternative samples are also selected: the former contains only deputies with a prior local office, while the latter, only deputies born in the state they represent — so the estimates differ in composition as well as in measurement. The attenuation is therefore consistent with measurement, though composition cannot be ruled out.

RD design. The density of the running variable is continuous at the threshold (Figure C.2); estimates are stable to bandwidth choices (Figure C.3); and placebo cutoffs, reported only for the targeted claimant amendment since the exercise is uninformative where no discontinuity exists at the true threshold, recover no comparable jump anywhere else (Figure C.4). Pre-determined outcomes are balanced, with one exception (Table C.12). Deputies whose ally would narrowly win had allocated no differently before the local elections, and won no more or fewer votes in the municipality, than deputies whose ally would narrowly lose. What does differ is the alignment of the mayor already in office: it is three percentage points more likely to have been an ally, which is the persistence of local political control across municipal terms rather than anything about the deputy. Conditioning the main specification on these variables leaves the results unchanged: the claimant response is larger than in the unadjusted estimates, and no other tool moves (Table C.13).

9 Conclusion

A legislator who targets localities rarely does so through a single instrument, yet the literature has largely studied these instruments one at a time. This paper places a legislator's targeting portfolio on a single map and asks what organizes it. The answer I propose lies along a single main dimension: how much execution and credit the legislator relinquishes, and to whom.

The evidence mostly supports the proposed theoretical framework. Within the same deputy, the retained tools and the delegated amendment trace different geographies: campaign and cota spending concentrate on their bases and share one map, while targeted amendments, the Brazilian instance of legislator-directed earmarks, disperse across the deputy's state. Within amendments, observed here for their health-related programs (FNS), the executor's credit regime sorts value along the same axis, and base-attachment is monotone in how much credit the deputy retains. When an allied mayor is elected, amendments targeted through the municipal government rise, and the legislator reallocates value out of the route that runs around local government. And, across deputies, rootedness tilts portfolios toward the retained tools, as the endowment logic expects, though it does not visibly shape the choice of executor.

The portfolio view matters because conclusions about distributive politics depend on which good one measures (Kramon and Posner, 2013). That point is usually made across studies; here it appears within a single legislator. Read alone, amendments say legislators target partners and disperse, while campaign and office allowance spending say that they cultivate a base. On the relinquishment dimension, the apparent contradiction dissolves: the instruments answer differently because they occupy different positions. What looks like inconsistency across instruments is one choice, made at different prices.

Some important questions remain unresolved. First, the alignment effect is a bundle, and the design cannot separate it into the deputy's supply and the ally's demand. Second, the endowment gradient result is covariation, as portfolios may build the electoral strength they appear to reflect. Finally, the last link in the deputy-mayor exchange is unclear. If ceded credit returns as the ally's machine, the claimant channel should pay where the

executor is allied. However, the electoral returns extension indicated that its association with the deputy's subsequent vote is large and indistinguishable across allied and unallied executors. As both routing that already prices alignment and a selection story would produce this same result, we need more evidence from designs closer to the transactions.

Targeting is ordinarily understood as the allocation of goods. The results in this paper suggest it is also the allocation of control: who is allowed to touch a resource, and to claim it, is as much a choice as where it goes.

AI Declaration

The author made use of Claude to assist with the drafting of this article. Claude Opus 5 (Anthropic) was accessed from claude.ai and used without modification in 2026 for language editing, drafting table/figure notes, and generating initial drafts of select text passages from structured queries. The author thoroughly revised all content and takes full responsibility for the scientific content of the paper.

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Online Appendix to "In Whose Hands: Legislators' Targeting Portfolio and the Price of Delegation in Brazil"

November 20, 2026

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A Data

A.1 Municipality Matching Methodology

As described in Section 4, a central methodological contribution of this study is the development of a comprehensive procedure to link federal deputies' campaign spending and *Cota Parlamentar* expenditures to specific municipalities. Neither the campaign finance records from the Superior Electoral Court (TSE) nor the Cota Parlamentar reimbursement data from the Chamber of Deputies explicitly identify the municipality where expenditures occur. Instead, these datasets only provide supplier identification numbers (CPF for individuals or CNPJ for businesses) other transaction details, such as expenditure descriptions and categories. This appendix details my multi-source matching approach that successfully geocodes most of these expenditures to the municipal level, enabling the first systematic analysis of geographically-targeted spending patterns by Brazilian federal deputies.

A.1.A Matching Strategy

I implement distinct matching procedures for the two datasets based on their supplier composition:

1. **Business Suppliers (CNPJ) - Both Datasets**

   CNPJ (*Cadastro Nacional da Pessoa Jurídica*) is Brazil's national registry number for legal entities - essentially a 14-digit tax identification number that every company, organization, or business must have to operate legally in Brazil. For business expenditures (identified by CNPJ), present in both campaign spending and Cota Parlamentar data, I match against the Federal Revenue Service (*Receita Federal*) national business registry. This comprehensive dataset[1] contains:

   - Over 60 million active businesses across all sectors;
   - Complete registration information including municipality codes;
   - Both headquarters and branch office locations (which are identified by digits 9-12 of the CNPJ);
   - Business classification codes and registration status.

   The CNPJ matching is straightforward: I directly link the 14-digit CNPJ from expenditure records to the Federal Revenue registry to obtain the municipality code (following the IBGE municipal coding system) where the business is registered to

[1] December 2024 extraction.

operate. This approach works particularly well for Cota Parlamentar data, where the vast majority of suppliers (95%) are formally registered businesses (hotels, airlines, gas stations, office supply stores, property management firms, etc.).

2. **Individual Suppliers (CPF) - Campaign Spending Data**

   CPF (*Cadastro de Pessoas Físicas*) is Brazil's national tax identification number for individuals - an 11-digit unique identifier that every Brazilian citizen and resident must have for tax purposes, banking, employment, and most official transactions, functioning similarly to a Social Security Number in the United States. For individual suppliers (identified by CPF), which constitute a significant portion of campaign spending (more than 35% of the total value across 2002-2022 elections), I implement a comprehensive multi-database matching approach:

   Primary Matching Sources (Applied Simultaneously)

   I match CPFs against three administrative databases in parallel:

   1. **Party Affiliation Records (Filiados):** Party membership rolls that identify the municipality where over 16 million individuals maintain their political affiliation across all registered parties.[2]

   2. **Auxílio Emergencial Database:** COVID-19 emergency aid records covering approximately 70 million beneficiaries (more than 40% of Brazilian adult population)[3]. While the government releases only partially masked CPFs (6 visible digits) alongside full names and municipalities, I implement a fuzzy matching algorithm:

      – Names are standardized and I match on the combination of standardized name and partial CPF mask;

      – For ambiguous cases, I progressively simplify name matching (first name + first letter of surname) to resolve multiple potential matches.

   3. **Microempreendedor Individual (MEI) Registry**: Brazil's simplified tax regime for sole proprietors requires business names to include the owner's CPF. I extract these embedded CPFs from over 14 million MEI registrations to identify entrepreneur municipalities.[4]

   Fallback Source

   4. **Local Elections Campaign Spending**: For suppliers not found in the primary sources, I check TSE's municipality elections campaign spending records (2004-2024). When a supplier has been hired by a local candidate,

[2] July 2024 extraction. The data was scraped from the Sistema de Filiação Partidária.
[3] November 2020 extraction.
[4] December 2024 extraction.

we assign them to the municipality of the candidate (mayor or city council) who hired the service.

A.1.B Implementation Details (Data Processing Pipeline)

Each expenditure record enters the pipeline with a supplier tax ID (CPF or CNPJ) and exits with a municipality code. The process involves four stages:

1. **Validation and Standardization**:
   - Remove punctuation from all identifiers;
   - Pad CPFs to 11 digits and CNPJs to 14 digits with leading zeros;
   - Validate identifiers using official check digit algorithms;
   - Filter out invalid or uninformative IDs (e.g., all zeros, containing letters).
2. **CNPJ Matching Process (Both Datasets)**:
   - Direct match against Federal Revenue business registry;
   - Extract municipality code from registry records.
3. **CPF Matching Process (Campaign Spending)**:
   - Execute parallel matches across Filiados, Auxílio Emergencial, and MEI databases;
   - For unmatched CPFs, query the municipality elections candidate database as fallback;
   - For suppliers with multiple municipality associations ($\tilde{3}\%$ of the matches), consider all linked municipalities.
4. **Geographic Filtering**:
   - Apply state-level constraints based on deputy candidate's electoral district.

A.1.C Limitations and Scope

Several limitations merit acknowledgment:

1. **Supplier Registration vs. Service Delivery Location**: The matching method may capture where suppliers are registered, not where political resources actually reach voters. For example, when deputies purchase Facebook ads or hire printing companies in state capitals to produce materials for rural areas, we record the supplier's location (São Paulo for Facebook, the capital for the printer), not the targeted municipalities. This potential geographic concentration of formal service providers implies a likely underestimation of resource flows to smaller municipalities.

2. **Temporal Extrapolation**: I use 2020s administrative databases to match expenditures from the whole 2002-2022 period. This assumes geographic stability that may not hold - for example, a supplier in São Paulo in 2024 might have been in interior of the state in 2006.

Despite these limitations, my approach provides one of the first systematic methods to analyze the geographic distribution of federal deputies' campaign and office expenditures at the municipal level, enabling new insights into the spatial patterns of political resource allocation in Brazil.[5]

A.2 Municipality Matching Statistics (Campaign Spending)

A.2.A Overall Matching Rates

The municipality matching procedure achieves high coverage rates for the campaign spending data, successfully assigning geographic codes to approximately 85% of all campaign expenditure (in terms of total value). Figure A.1 shows the coverage for the full set of federal deputy candidates in the 2002-2022 elections ("All") and for the set of elected federal deputies, which are the ones considered in the paper's analysis ("Analysis").

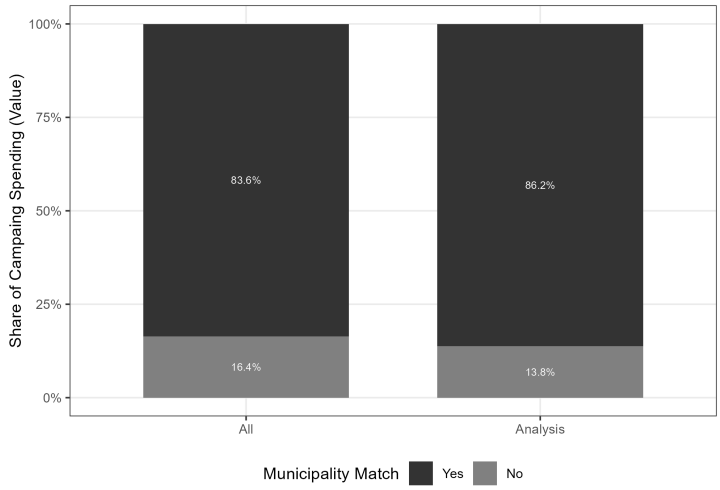


Figure A.1: Overall Municipality Match

[5]After developing the procedure and conducting all analyses present in this paper, I became aware of Guarnieri and Silva (2025), which proposes an alternative strategy to link campaign spending to municipalities. Their approach exploits information in campaign bank statements, which contain the identifier of the supplier's bank branch, and use this to assign expenditures to a municipality. As of publication, their application is limited to the 2018 election, since bank statement data are only available from 2014 onwards. This restriction prevents the use of their method for earlier elections (2002, 2006, and 2010), which are part of my analysis. Moreover, some limitations are shared with my approach, especially the potential mismatch between the supplier's banking location and the location where services are actually provided. On the other hand, their strategy avoids the temporal extrapolation problem that may arise in my procedure. Future work should compare the performance of both approaches when data availability permits.

Figure A.2 reports the yearly composition of federal deputy candidates' campaign spending, while Figure A.3 shows the yearly coverage rates of the matching procedure. Both composition and coverage rates remain stable across electoral cycles, especially after the 2006 election. Invalid supplier IDs (due to incorrectly typed numbers or missing records) are negligible after 2006.

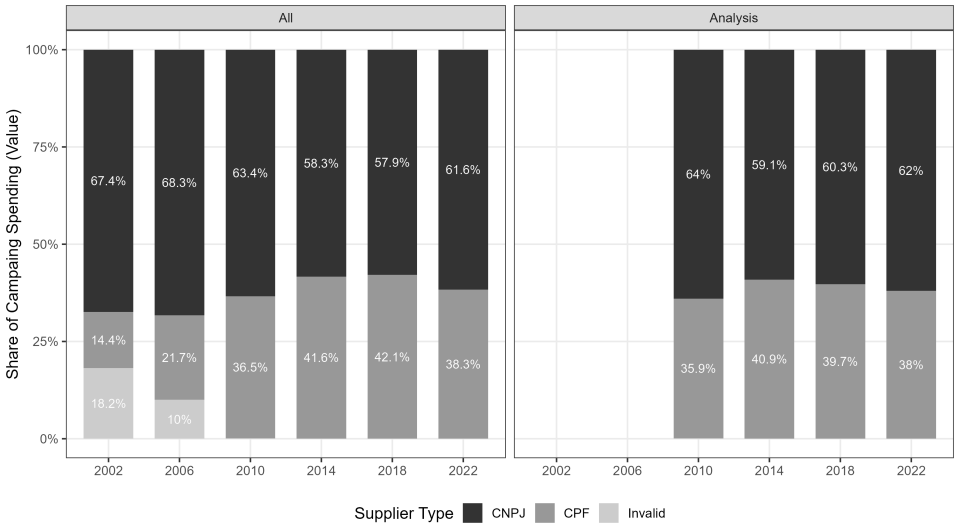


Figure A.2: Suppliers Composition by Year

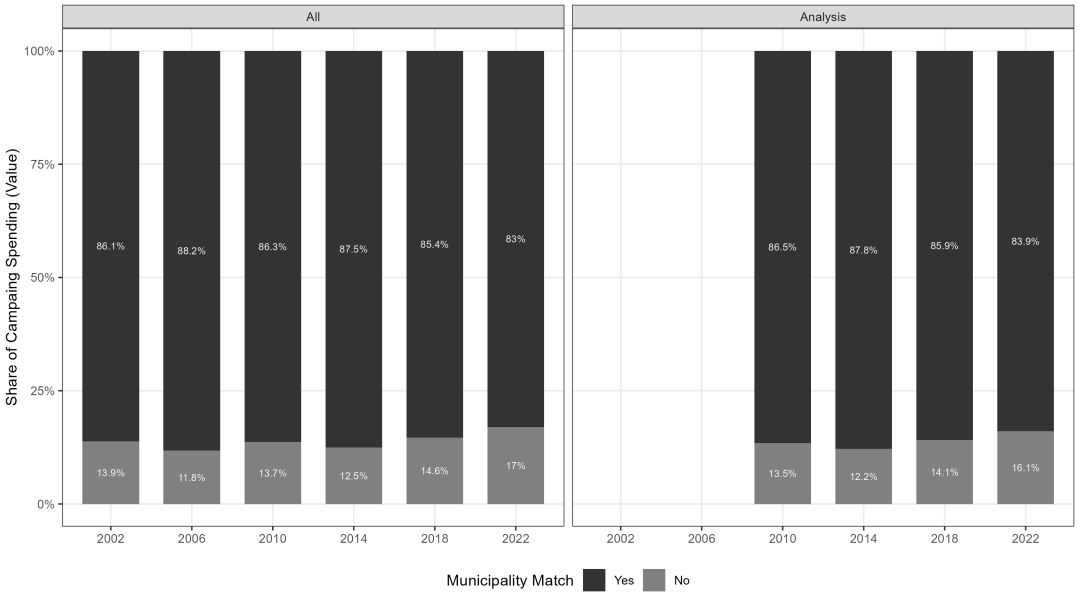


Figure A.3: Municipality Match by Year

Interestingly, coverage rates decrease in the most recent 2018 and 2022 elections. Figure A.4 suggests why: coverage rates among CNPJ suppliers are declining during the same period. Since all CNPJs can be matched to a municipality using the Federal

Revenue registry (which contains the universe of CNPJs), non-coverage indicates that the supplier's municipality is not within the candidate's constituency/state. As discussed above, a limitation of the matching method is that it may capture where suppliers are registered, not where political resources actually reach voters. In recent elections, there has been an increase in social media advertising, which is likely associated with CNPJs that may fall outside the candidate's state.

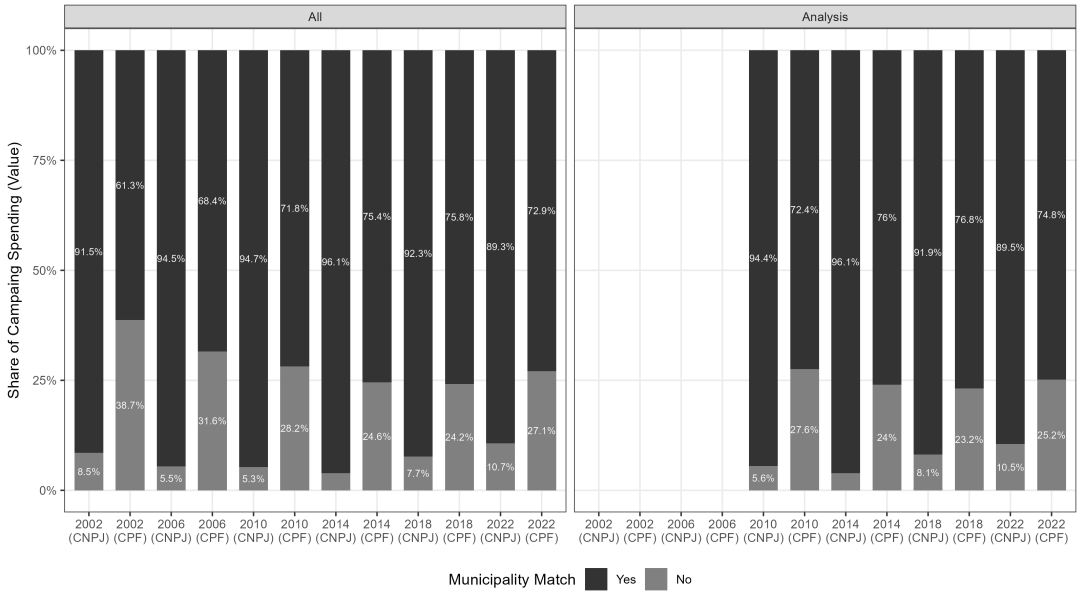


Figure A.4: Municipality Match by Year and Supplier Type

A.2.B CPF Matching

I next report descriptive statistics for the CPF matching procedure in the campaign spending data. Unless otherwise noted, all figures are based on the full universe of federal candidates in the 2002–2022 elections (the restricted analysis sample yields very similar patterns). This dataset contains 1,582,399 unique CPF–state suppliers.

Figure A.5 reports the coverage of the different sources. Overall, about 70% of individual suppliers are successfully matched to at least one municipality within the relevant state.[6] The single source with the highest coverage is the *Auxílio Emergencial* (Covid-19 relief aid) dataset, which alone accounts for matches to 35% of suppliers. Figure A.6 further decomposes this coverage into unique and overlapping matches across sources. Roughly 31% of suppliers are matched by more than one source, while 39% are matched by a single source. Among unique matches, the *Auxílio Emergencial* again dominates, representing 16% of all suppliers.

[6]On analysis sample, coverage reaches 72.8%.

The fact that 31% of suppliers are matched by multiple sources raises the question of how similar these matches are—whether they represent redundancy (the same municipality) or disagreement (different municipalities). Figure A.7a shows the share of suppliers jointly matched by each pair of sources. For example, 8% of suppliers are linked to municipalities by both the *Auxílio Emergencial* and Party Affiliates datasets. To assess the quality of this common coverage, I compute the mean Jaccard index across pairs. The Jaccard index measures the proportion of overlap between two sets relative to their union, taking the value 100% if two sources always assign the same municipality and 0 if they never do. Figure A.7b shows that, conditional on common coverage, sources generally assign the same municipalities, which provides reassurance about the reliability of the matching procedure.

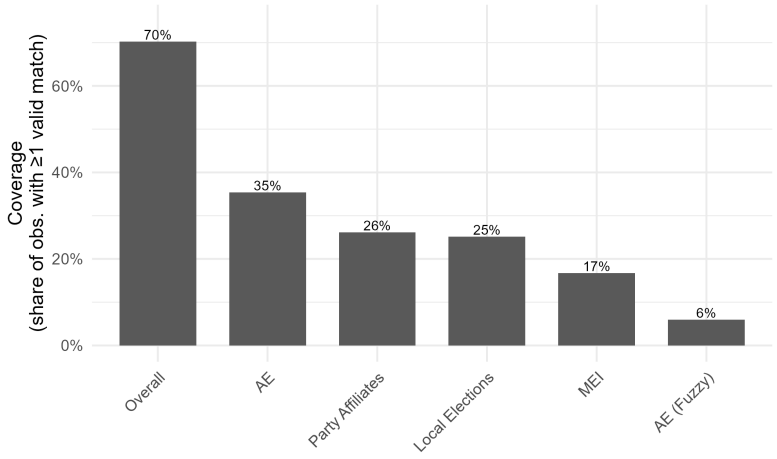


Figure A.5: Matching Coverage by Source

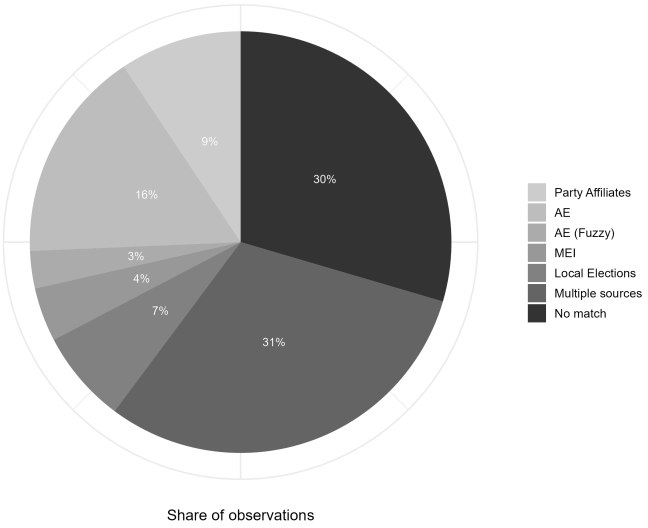
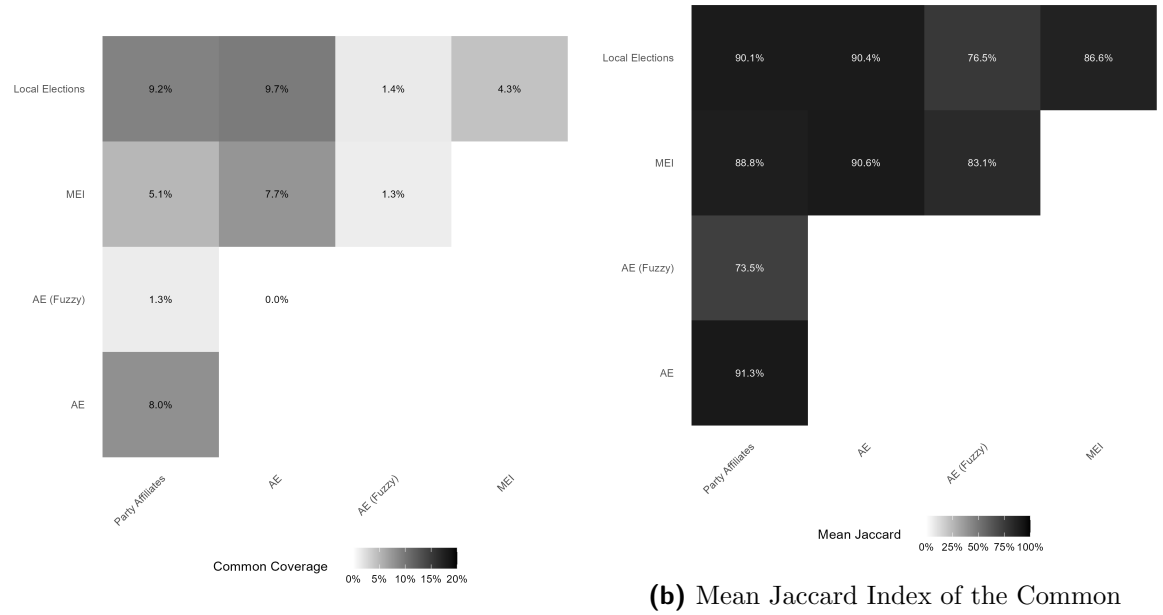


Figure A.6: Distribution of Matches Across Sources



(a) Common Coverage (Share of Observations)

(b) Mean Jaccard Index of the Common Coverage

Figure A.7: Pairwise Common Coverage

Finally, Figure A.8 displays the distribution of suppliers by the number of valid municipality matches. The large majority of suppliers are associated with a single municipality, yielding one-to-one matches. Only about 3% of suppliers are linked to more than one municipality within the candidate's state. In these relatively rare cases, I retain all municipalities and replicate the associated expense across them.

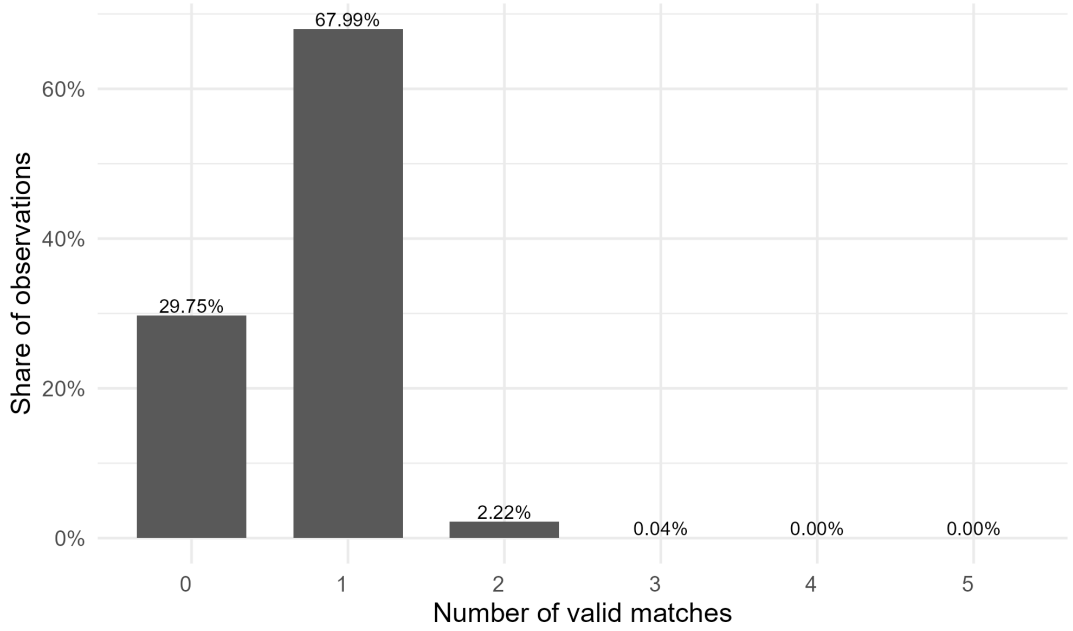


Figure A.8: Share of Suppliers by Number of Valid Matches

Taken together, these results indicate that the CPF matching procedure yields broad coverage across individual suppliers and generally consistent assignments across sources. While no single dataset dominates, the *Auxílio Emergencial* records contribute the largest share of both overall and unique matches, and the high levels of overlap and agreement across sources suggest that the procedure is reliable. Moreover, the fact that the overwhelming majority of suppliers are linked to a single municipality further increases confidence in the quality of the matches. Although some limitations remain - in particular, the temporal extrapolation and the possibility that a supplier's registered location does not perfectly correspond to the location of service provision - the procedure provides a systematic and replicable strategy for geolocating campaign expenditures at the municipal level.

B Supplementary Analyses

Whose Choice the Routing Is

If routing were set by party leaderships rather than by deputies, the personal-electoral reading of the credit-regime margin would not survive. The question is whether copartisans, facing the same municipality in the same year, route it alike relative to comparable deputies. The table below reports how dispersed the routing mix is within groupings of observations, nested from the municipality outward, against a benchmark that reassigns party labels at random within each municipality and cohort. Because that benchmark preserves the cell-size distribution exactly, it isolates what sharing a party contributes beyond being grouped at all.

Grouping	Pooled SD	Pooled SD (active)	Mean SD (active)	Inactive cells	Median cell	Cells
Unconditional	0.264	—	—	—	—	67,880
Same municipality-cohort	0.220	0.378	0.385	80%	4	12,946
and same party	0.235	0.447	0.402	77%	2	8,912
and same party (permuted)	—	0.463	[0.457, 0.468]	—	—	—
Same deputy-cohort	0.234	0.264	0.252	30%	35	1,522

Notes. The outcome is the share of the deputy's amendment value in the municipality routed around the municipal government, defined where they allocate anything there; observations are deputy × municipality × cohort. Pooled SD is the degrees-of-freedom-weighted within-cell standard deviation over cells containing more than one observation. 'Inactive' cells are those in which no observation uses the non-claimant route, where dispersion is zero by shared absence rather than shared strategy; the 'active' columns exclude them. The permuted row reassigns party labels at random within municipality and cohort, preserving the cell-size distribution, and is the benchmark against which the party row should be read; the bracketed interval is the 2.5th–97.5th percentile over 100 draws. The final row groups each deputy's own observations across the municipalities of their state.

Table B.1: P2: Dispersion of the routing mix, by grouping

Decomposing the Base Tilt (P2)

The base-share gap reported in Table 6 can be produced two ways: the non-claimant route may reach base municipalities more often than the claimant route does, or it may place more value in each base municipality it reaches. Written in log odds of base to non-base value, the two enter additively and sum to the total exactly. Let y_B and y_N be a route's value in base and non-base municipalities and n_B and n_N the number of each it reaches; then

$$\underbrace{\log \frac{y_B}{y_N}}_{\text{total}} = \underbrace{\log \frac{n_B}{n_N}}_{\text{extensive}} + \underbrace{\log \frac{y_B/n_B}{y_N/n_N}}_{\text{intensive}}.$$

Each component is regressed on a route indicator with deputy × cohort fixed effects, so the three coefficients decompose the within-deputy gap with no residual.

Component	Non-claimant − claimant	Share of total
Total: $\log(y_B/y_N)$	1.204*** (0.083)	100%
Extensive: $\log(n_B/n_N)$	1.113*** (0.060)	92%
Intensive: $\log[(y_B/n_B)/(y_N/n_N)]$	0.091 (0.058)	8%

Notes. Estimates at the deputy × cohort × route level, from regressions of each component on a non-claimant indicator with deputy × cohort fixed effects; standard errors clustered on deputy in parentheses. The components sum to the total by construction, and the share column reports each as a fraction of it. The sample is the 592 of 1,054 paired deputy-cohorts whose routes each reach at least one base and one non-base municipality, the logs being undefined otherwise. For reference, the mean share of reached municipalities lying in the base is 0.128 for the claimant route and 0.289 for the non-claimant; the mean ratio of value per base municipality to value per non-base municipality is 3.48 and 4.19 respectively. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table B.2: P2: Decomposing the Non-claimant Amendment's Base Tilt

C Robustness

C.1 The portfolio objects

Contrast	HHI	ENM	log ENM
Panel A: Full sample (cota users)			
Cota - amendment	0.505*** (0.008)	-16.590*** (0.521)	-1.997*** (0.029)
Panel B: Reelection subsample			
Cota - amendment	0.511*** (0.009)	-17.453*** (0.611)	-2.057*** (0.032)
Campaign spending - amendment	0.313*** (0.009)	-15.228*** (0.577)	-1.520*** (0.033)

Notes. Within deputy-cohort contrasts against the amendment, as in Table 4. ENM is the effective number of municipalities, 1/HHI, across which an instrument's value is spread; the sign reverses by construction, since instruments with higher concentration reach fewer places. Standard errors clustered on deputy in parentheses. Samples and specification as in the main table. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.1: Concentration and reach

Specification	corr(cota,CS) − corr(cota,amd)	corr(CS,cota) − corr(CS,amd)	Mean corr(cota,amd)
Pearson, all municipalities (baseline)	0.476*** (0.013)	0.444*** (0.013)	0.356
Spearman, all municipalities	0.119*** (0.005)	0.077*** (0.007)	0.228
Pearson, union of support	0.514*** (0.014)	0.497*** (0.014)	0.309
Spearman, union of support	0.261*** (0.010)	0.198*** (0.012)	-0.208

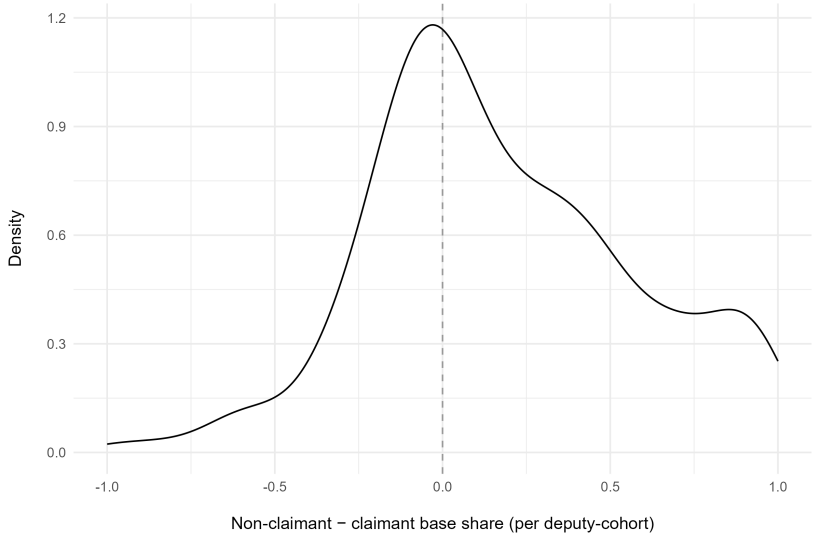
Notes. Each row re-estimates the two co-location contrasts of Table 4 under a different correlation measure and support definition. The union-of-support rows drop municipalities where neither instrument in the pair is present. Rank measures weight a municipality holding a trace of the deputy's value as heavily as one holding half of it. The final column reports the mean within-deputy cota–amendment correlation under each definition. Reelection subsample; standard errors clustered on deputy in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.2: Co-location under alternative correlation measures

Specification	Non-claimant - Claimant Base Tilt	N. Deputy-Cohorts
Unweighted (baseline)	0.192*** (0.015)	1054
Weighted by allocated value	0.185*** (0.015)	1054
Non-claimant route in ≥ 3 municipalities	0.142*** (0.014)	635

Notes. The baseline row reproduces Panel A1 of Table 6. Weights are the deputy-cohort's total amendment value, applied equally to both routes, so the within-deputy difference is unchanged and only the weight of each pair varies. The final row restricts to deputy-cohorts using the non-claimant route in at least three municipalities. Standard errors clustered on deputy in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.3: The P2 gap and portfolio thinness



Notes. Kernel density of the difference between the non-claimant and claimant routes' base shares, one observation per deputy-cohort, over the deputy-cohorts using both routes. The dashed line marks zero. The mass lies to the right of zero across the distribution rather than concentrating at its endpoints, so the gap in Table 6 is not the product of portfolios using one route in a single municipality.

Figure C.1: Distribution of the paired amendment's routes base-share difference

C.2 Committed Amendments

The main analysis measures amendments at the indication stage of the National Health Fund register, which observes health amendments alone. From 2015 the beneficiary municipality and execution modality of all individual amendments can be tracked at the commitment stage, across every programmatic destination, with amendments assigned to their budget year rather than to the date of commitment. Data come from *SIGA Brasil* portal, maintained by the Brazilian Federal Senate. Coverage of the 2010 cohort is thinner here than in the main analysis: the register's 2015 start leaves one of its four allocation years observed, against two under the FNS.

Tables C.4 through C.10 reproduce the main results on that source. The patterns are the ones reported in the main text: the retained tools separate from the delegated instrument on base-attachment, concentration, and co-location; the credit-preserving route is more base-directed than the credit-ceding route and sits between it and the retained tools; an allied local executive raises delivery through the claimant channel and shifts routing toward it while the retained instruments do not respond; and portfolio composition covaries with rootedness on the retained-versus-delegated margin. The health restriction is therefore not selecting the result: deputies route their amendments this way across programmatic destinations, not only in the fund whose register records the choice at the designation stage.

Two Geographies (P1)

Clause	Contrast	Estimate	Baseline (amendment)
Panel A: Full sample (cota users)			
Base-attachment (ϕ)	Cota - amendment	0.403*** (0.013)	0.279
Concentration (HHI)	Cota - amendment	0.475*** (0.009)	0.154
Panel B: Reelection subsample			
Base-attachment (ϕ)	Cota - amendment	0.407*** (0.014)	0.270
Base-attachment (ϕ)	Campaign spending - amendment	0.330*** (0.012)	0.270
Concentration (HHI)	Cota - amendment	0.483*** (0.010)	0.139
Concentration (HHI)	Campaign spending - amendment	0.283*** (0.010)	0.139
Co-location (ρ)	corr(cota,CS) - corr(cota,amd)	0.503*** (0.013)	0.328
Co-location (ρ)	corr(CS,cota) - corr(CS,amd)	0.466*** (0.013)	0.367

Notes. Within deputy-cohort contrasts against designated amendments, from regressions of each outcome on instrument indicators with deputy × cohort fixed effects. Base-attachment and concentration are estimated at the deputy × cohort × instrument level; co-location at the deputy × cohort × pair level, with the second row a linear combination. Standard errors clustered on deputy. The baseline column gives the raw mean of the amendment's own value on each outcome. Panel A covers all deputy-cohorts with positive cota spending and amendment commitments ($N = 1,467$); Panel B those with all three instruments ($N = 1,155$), campaign spending being observed only for deputies who contest the following election. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.4: P1: Base-attachment, concentration, and co-location, within deputy-cohort

Contrast	Estimate	Total effect for the instrument
Sample: Full (cota users)		
Base (amendment, reference)	0.017*** (0.001)	0.017*** (0.001)
Base x cota	0.012*** (0.003)	0.030*** (0.003)
Sample: Reelection		
Base (amendment, reference)	0.017*** (0.001)	0.017*** (0.001)
Base x cota	0.013*** (0.003)	0.030*** (0.004)
Base x CS	0.012*** (0.002)	0.029*** (0.003)

Notes. Outcome: municipality's share of the deputy's own value for the instrument. Fixed effects: municipality × cohort × instrument and deputy × cohort × instrument, so each place's attributes are absorbed separately per instrument. Standard errors, two-way clustered on deputy and municipality, in parentheses. Amendment commitments is the reference category: the first row of each block is its own within-municipality base effect, and the interaction rows are the retained tools' effect on top of it; the total effect sums the two. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.5: P1: The within-municipality bound

The Credit Regime (P2)

Holds Fixed	Non-claimant - Claimant Base Tilt	Claimant Level
A1: Within deputy		
deputy x cohort	0.229*** (0.014)	0.253
A2: Within deputy, common support		
deputy x cohort + feasible set	0.123*** (0.013)	0.356
A3: Within municipality (mechanism bound)		
deputy x cohort + everything about the place	0.006*** (0.002)	0.016*** (0.001)

Notes. Outcome: the share of amendment route's own commited value landing in the deputy's enrollment microregion. Each row reports the non-claimant minus claimant gap, estimated at the deputy × cohort × route level with deputy × cohort fixed effects, on the N = 1,003 deputy-cohorts that use both routes; standard errors clustered on deputy in parentheses. The rungs differ in what they hold fixed. A1 holds the legislator fixed. A2 recomputes each route's share over municipality-cohorts in which some deputy targets through the non-claimant channel. A3 returns to municipality-level shares and adds municipality × cohort × route fixed effects, absorbing each place's attributes separately by route, with standard errors two-way clustered on deputy and municipality; the coefficient there is the interaction of base status with the non-claimant route. The claimant level column reports, for A1 and A2, the claimant route's own base share as a raw mean; for A3 it reports the claimant route's own within-municipality base effect, estimated in the same regression. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.6: P2: Base-attachment by route

Contrast	Estimate
Sample: Core (claimant, non-claimant, cota)	
Non-claimant - claimant	0.229*** (0.014)
Cota - claimant	0.420*** (0.015)
Cota - non-claimant	0.191*** (0.014)
Sample: Reelection (+ CS)	
CS - claimant	0.339*** (0.013)
CS - non-claimant	0.116*** (0.015)
Non-claimant Benchmarking	
Non-claimant position on [claimant, cota] interval ($\beta_{nonclaim}/\beta_{cota}$)	0.545 CI:[0.489,0.602]

Notes. Outcome: the share of an instrument's own indicated value landing in the deputy's enrollment microregion. Contrasts are estimated at the deputy × cohort × instrument level from a regression of that share on instrument indicators with deputy × cohort fixed effects, the claimant route omitted; standard errors clustered on deputy in parentheses. Rows other than those against the claimant route are linear combinations of coefficients, with delta-method standard errors. The core sample comprises deputy-cohorts using both routes and the cota ($N = 1,003$); campaign spending is observed only for deputies who also contest the following election ($N = 807$). The final row expresses the non-claimant route's position on the interval between the claimant route and the cota as the ratio of their coefficients, with a delta-method confidence interval. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.7: P2: Non-claimant amendment relative position, within deputy-cohort.

Alignment Prices the Municipal Channel (P3)

	Amendment: Claimant (local gov.)	Amendment: Non-claimant (NGO)	Campaign spending	Campaign spending (reelection)	Cota
Panel A: Continuous Outcomes					
	170100.82***	-3332.41**	26.07	6.98	80.34
	(12932.63)	(1641.54)	(613.90)	(848.51)	(179.93)
BW	9.35	11.83	10.22	10.05	7.99
Eff. Obs. (L)	19696	24008	21286	16811	17154
Eff. Obs. (R)	19129	23053	20647	16314	16727
BC Estimate (L)	77795.54	7414.12	2715.13	3426.26	202.94
Panel B: Binary Outcomes					
	0.121***	-0.003**	-0.001	-0.001	0.013***
	(0.005)	(0.001)	(0.003)	(0.005)	(0.004)
BW	12.31	13.35	19.95	19.35	11.46
Eff. Obs. (L)	24954	26679	35711	28196	23388
Eff. Obs. (R)	23804	25204	32691	25900	22562
BC Estimate (L)	0.1	0.01	0.12	0.15	0.08
Panel C: Continuous Outcomes + Municipality Fixed-Effects					
	197236.09***	-3708.83	273.27	383.60	-180.72
	(21787.62)	(2872.57)	(852.59)	(1144.15)	(233.43)
BW	9.35	11.83	10.22	10.05	7.99
Obs.	38031	46115	41083	32118	33175
Share ident. (mun.-cohort)	0.88	0.88	0.88	0.83	0.88

Notes. Close-race regression discontinuity estimates of the effect of an allied local executive taking office. Panels A estimates each outcome in reais (R$) and Panel B as an indicator for any positive value, both by local linear regression with a triangular kernel, MSE-optimal bandwidths, and robust bias-corrected inference, with standard errors clustered on municipality. Panel C absorbs municipality × cohort fixed effects, so that the comparison, in R$, runs between deputies whose ally won a given race and deputies whose ally lost it; it is estimated as a weighted local linear regression inside Panel A's bandwidth, with triangular weights and standard errors two-way clustered on deputy and municipality.Inference there is conventional rather than bias-corrected. *BC Estimate (L)* is the bias-corrected limit of the outcome on the control side of the cutoff. *Share ident.* is the share of observations falling in municipality-cohorts that contain deputies on both sides. Campaign spending is observed only for deputies who contest the following election; the reelection column restricts to them. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.8: P3: The effect of a narrowly elected allied local executive, by instrument

	Claimant - Non-claimant	Non-claimant share
	172772.07***	-0.06***
	(12648.62)	(0.01)
BW	9.35	14.42
Eff. Obs. (L)	19690	3205
Eff. Obs. (R)	19123	6186
BC Estimate (L)	71082.59	0.08

Notes. Close-race regression discontinuity estimates of the effect of an allied *prefeito* taking office. The first column takes as outcome the difference between the two routes' value in the same deputy × municipality; the second takes the share of the deputy's committed amendment value in the municipality routed around the executor, defined only where they allocate value there. Both are estimated by local linear regression with a triangular kernel, MSE-optimal bandwidths, and robust bias-corrected inference, with standard errors clustered on municipality. *BC Estimate (L)* is the bias-corrected limit of the outcome on the control side of the cutoff. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.9: P3: Reallocation within amendment

Portfolio Composition and Endowments (P4)

	Non-Claimant Tilt		Retained Intensity		Retained vs. Amendment	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Prior Local Career (Mayor/Councilor)	0.113	0.143*	0.132***	0.051	0.135***	0.023
	(0.077)	(0.083)	(0.045)	(0.031)	(0.047)	(0.037)
Vote Concentration (Q2)	-0.138	-0.269**	0.003	0.075*	0.012	0.091**
	(0.093)	(0.105)	(0.050)	(0.042)	(0.053)	(0.046)
Vote Concentration (Q3)	-0.183*	-0.222**	-0.020	0.107***	-0.008	0.113**
	(0.098)	(0.108)	(0.058)	(0.041)	(0.059)	(0.047)
Vote Concentration (Q4)	-0.098	-0.163	-0.060	-0.020	0.058	0.054
	(0.100)	(0.110)	(0.063)	(0.040)	(0.066)	(0.048)
Observations	1074	870	1564	1241	1564	1241
$\mathbf{R^2}$	0.343	0.361	0.058	0.103	0.608	0.751

Notes. Estimates at the deputy × cohort level. The outcomes are the non-claimant-versus-claimant tilt within the committed amendment (columns 1–2), the log intensity of the retained tools (3–4), and the retained-versus-amendment tilt (5–6). Odd-numbered columns are estimated on the full sample, where the retained family is the cota alone; even-numbered columns on the subsample of deputies who contest the following election, where it also includes campaign spending. Vote concentration enters as quartiles taken within cohort and state, the first omitted. All specifications include cohort and state fixed effects; standard errors, clustered on deputy, in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.10: P4: Portfolio composition and personal rootedness

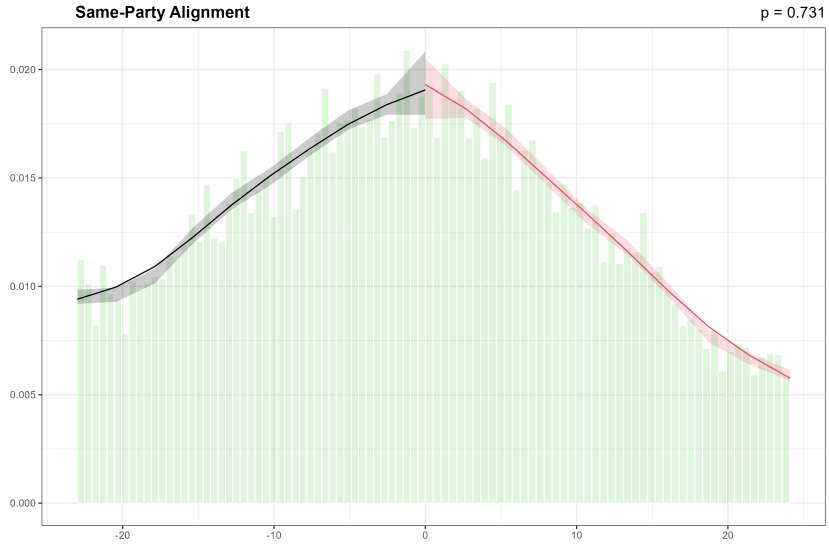
Contrast	Estimate	N. Deputy-Cohorts	N. Deputies
Enrollment microregion (headline)			
$P1$: Cota − amendment	0.402*** (0.012)	1525	1001
$P1$: Campaign spending − amendment	0.332*** (0.011)	1184	795
$P2$: Non-claimant − claimant	0.192*** (0.015)	1054	723
Prior-career microregion			
$P1$: Cota − amendment	0.344*** (0.019)	670	447
$P1$: Campaign spending − amendment	0.305*** (0.018)	504	341
$P2$: Non-claimant − claimant	0.170*** (0.020)	482	333
Birthplace microregion			
$P1$: Cota − amendment	0.297*** (0.015)	1238	799
$P1$: Campaign spending − amendment	0.247*** (0.013)	989	651
$P2$: Non-claimant − claimant	0.134*** (0.015)	874	589

Notes. Each panel re-estimates the headline contrasts under a different proxy for the deputy's base, on the sample of deputies that proxy places. The prior-career microregion is defined for deputies with a previous local office, the birthplace microregion for those born in the state they represent, so the samples differ in composition as well as in measurement. Estimator, fixed effects and clustering as in Tables 4 and 6; standard errors clustered on deputy in parentheses. Concentration and co-location are computed from allocation shares alone and do not depend on the base definition. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.11: Alternative base definitions

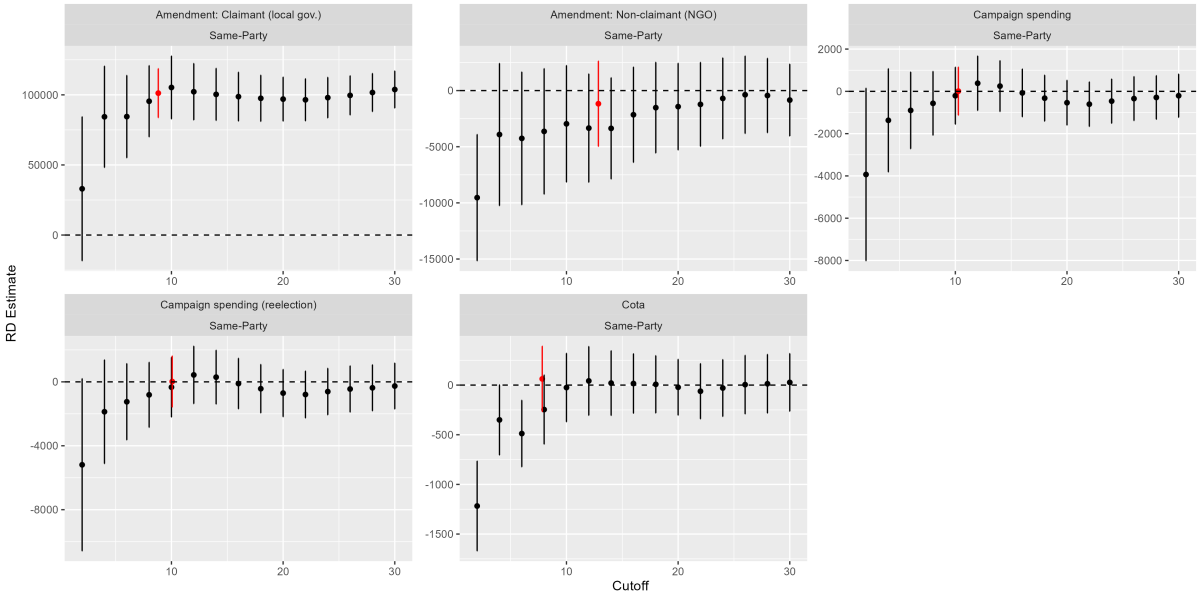
C.3 The base

C.4 RD Design



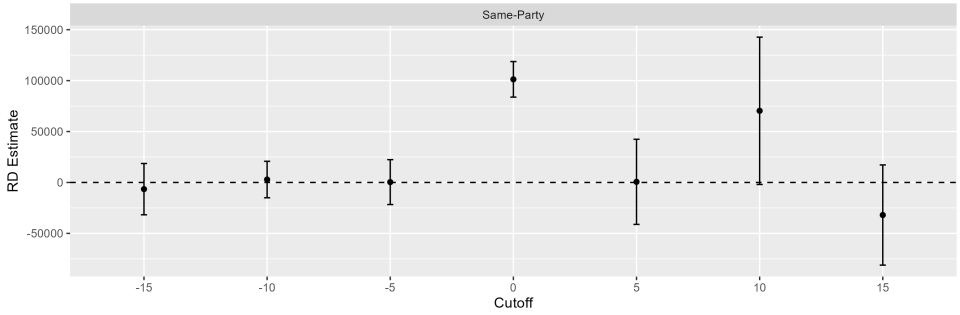
Notes. Estimated density of the ally's vote margin either side of the cutoff, with 95 percent confidence bands, following Cattaneo et al. (2018); the histogram shows the raw distribution. The reported p-value is from the manipulation test of continuity in the density at the threshold, with jackknife standard errors. It provides no evidence of sorting.

Figure C.2: Continuity of the running variable



Notes. Each point re-estimates the discontinuity at a fixed bandwidth, with 95 percent confidence intervals; the MSE-optimal bandwidth used in the main specification is marked in red. Local linear regression with a triangular kernel and robust bias-corrected inference, standard errors clustered on municipality. Vertical scales differ across panels.

Figure C.3: Estimates across bandwidths



Notes. The discontinuity in the claimant channel estimated at artificial thresholds either side of the true cutoff, using only observations on the relevant side of it, with 95 percent confidence intervals. Estimation as in the main specification. Placebo cutoffs are reported for the claimant channel alone, since the exercise is uninformative for outcomes that exhibit no discontinuity at the true threshold.

Figure C.4: Placebo cutoffs, amendments' claimant channel

	Amendment: Claimant (local gov.) [T2]	Amendment: Non-claimant (NGO) [T2]	Campaign spending [T0]	Cota [T1]	Deputy's Votes [T0]	Allied Mayor [Previous local election]
	-6535.89	-356.45	-320.29	48.58	-33.82	0.03***
	(4014.16)	(790.42)	(553.62)	(169.66)	(25.89)	(0.01)
BW	9.95	10.69	7.21	8.93	10.01	6.23
Eff. Obs. (L)	12678	13480	16493	18446	21963	14212
Eff. Obs. (R)	12452	13279	16058	17946	21152	14068
BC Estimate (L)	35074.35	2880.82	2857.67	187.38	359.23	0.31

Notes. The design applied to quantities determined before the municipal election: each instrument's value in the term's first year (in the case of amendments, the second year, only available for 2014-2018 cohorts), the deputy's campaign spending and vote in the municipality at the election that elected them, and whether the *prefeito* then in office was an ally, elected in the previous municipal cycle. Estimation as in Table 8's Panel A. *BC Estimate (L)* is the bias-corrected limit on the control side of the cutoff. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.12: Balance in pre-determined outcomes

	Amendment: Claimant (local gov.)	Amendment: Non-claimant (NGO)	Campaign spending	Campaign spending (reelection)	Cota
	165774.01***	-2542.53	402.91	719.20	44.87
	(9327.51)	(1713.35)	(412.02)	(537.09)	(87.96)
BW	21.91	11.88	11.54	13.29	10.13
Eff. Obs. (L)	23711	14749	24821	21954	20713
Eff. Obs. (R)	21576	14403	23775	20663	19945

Notes. The main specification conditioned on each outcome's own pre-term value, the deputy's baseline vote in the municipality as within-cohort deciles, and the alignment of the *prefeito* in office during the term's first year. Because pre-treatment amendment allocations are not available for the 2010 cohort, the first two columns consider only 2014-2018 cohorts. Estimation otherwise as in Table 8's Panel A. Because the covariates enter uncentred, the control-side limit is not comparable to the unadjusted one and is omitted. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table C.13: Covariate-adjusted estimates