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DOCUMENTO DE TRABAJO N° 403

Agosto de 2026

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Citar como:

Meloni, Osvaldo (2026). Voting for No One. Subnational Politics and Invalid Votes in Argentine Presidential Elections. Documento de trabajo RedNIE N°403.

Voting for no one

Subnational politics and invalid votes in Argentine presidential elections*

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Abstract

Does the fiscal architecture of subnational government shape how citizens vote in national elections? This paper argues that fiscal correspondence is a systematic determinant of deliberate invalid voting in Argentine presidential elections through an attribution channel. In provinces where public spending is financed predominantly by automatic transfers determined by law, voters cannot connect fiscal outcomes to electoral choices, the transmission chain from presidential ballot to observable fiscal outcome becomes too opaque for rational voters to decode. Rather than casting a deliberate valid ballot, voters take the low-cost exit of depositing an invalid one. Using a balanced panel of 23 Argentine provinces across nine presidential elections from 1989 to 2023, I find that higher fiscal correspondence is associated with significantly fewer blank and invalid ballots. The effect is concentrated on blank ballots — deliberate protest votes — rather than null ballots, consistent with the theoretical prediction that the mechanism operates on the deliberate disengagement margin. Results are robust to instrumental variable estimation, exclusion of oil-producing provinces, and structural break tests around the 2001 crisis.

Key words: fiscal federalism, presidential elections, fiscal correspondence, Argentina

JEL: D72; P16

* I thank Pablo Sanguinetti and participants of *XXVIII Seminario de Federalismo Fiscal* for comments to an earlier version of this paper and to José Agustín Correa and Iván Gambarte for research assistance. All remaining errors are mine. I gratefully acknowledge the support of Consejo de Investigaciones de la Universidad Nacional de Tucumán, Grant F715, and Facultad de Ciencias Económicas (UNT), PICE grant. The usual disclaimer applies.

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1. Motivation

Social scientists have long been committed to elucidating the perplexing behavior of citizens who incur the expense of attending a polling place on election day to cast a ballot for "no one", thereby submitting a null or blank vote. The literature on invalid voting has made substantial progress in identifying the conditions under which this breakdown occurs. Three broad families of explanation have emerged. The first emphasizes socioeconomic factors: low levels of education, income, and urbanization all affect the likelihood that voters lack the informational resources to cast a valid ballot (Stiefbold 1965; McAllister & Makkai 1993; Power & Garand 2007). The second family centers on institutional design: compulsory voting, electoral disproportionality, ballot complexity, and high district magnitude all shape the rate at which ballots are spoiled (Power & Roberts 1995; Reynolds & Steenbergen, 2006; Singh, 2019). The third family interprets invalid ballots as protest: a deliberate signal of dissatisfaction with candidates, parties, or the political system (Uggla, 2008; Driscoll & Nelson, 2014; Cohen, 2018).

Taken together, these three frameworks have produced a reasonably comprehensive picture of who casts invalid ballots and under what formal rules. Yet, all three frameworks possess a common limitation: they consider the voter's relationship to the state as being defined only at the national level. None of them examines the fiscal relationship between citizens and the subnational governments through which most citizens actually experience public authority.

This omission, that is the point of departure of this paper, is critical because in federal systems, the experience of government is primarily at the subnational level. Citizens interact with the state through schools, hospitals, roads, and social services that are managed by provincial and local authorities. It is at this level that the fiscal relationship between citizens and state is most directly experienced, or most conspicuously lacking. When subnational governments finance their expenditures predominantly from central transfers rather than own-source taxation, that fiscal contract is weakened, generating a specific form of political disengagement in which the transmission chain from presidential ballot to observable fiscal consequence becomes too long and opaque for rational voters to decode. Both own provincial revenues and transfers respond to the national economic cycle molded by the economic policy of the president. But own revenues generate a short, directly observable link because the voter pays provincial taxes and observes the local service, while automatic transfers involve a long chain of intermediary steps, including the generation of the national tax pool, the federal transfers distributive formula, and the governor's budget allocation, whose

complexity rational voters do not invest in understanding given the near-zero private benefit of a single ballot. This rational ignorance severs the perceived connection between electoral participation and fiscal consequences. Under compulsory voting, it cannot express itself as abstention. Instead, it manifests on the intensive margin: voters who find the presidential-fiscal transmission chain too opaque to decode rationally opt for a blank ballot over the deliberation required to cast a valid one.

This paper formalizes this argument in a model in which fiscal correspondence defined as own-revenue share of provincial revenues, shapes the partisan differential voters attach to the presidential election, and that differential in turn determines the share of voters who, under compulsory voting, cast invalid ballots rather than valid ones. The model generates a clear testable prediction: higher fiscal correspondence is associated with fewer invalid and blank ballots, with the effect operating primarily through blank ballots — the deliberate disengagement margin — rather than null ballots, which reflect targeted protest or accidental spoiling by a different type of voter. This prediction is tested using a district-level panel of Argentine presidential elections covering 1989–2023, exploiting variation in provincial fiscal structure across twenty-three districts and nine electoral cycles.

My findings contribute to three distinct bodies of literature. In the field of invalid voting, I introduce a fiscal federalism mechanism that reveals a previously overlooked dimension of invalid voting determinants: the structural fiscal relationship between citizens and subnational governments shapes deliberate ballot behavior independently of individual socioeconomic characteristics, institutional rules, and national political conditions. In the literature on fiscal federalism and accountability, I present evidence that the political effects of weak fiscal correspondence go beyond incumbency advantage and public spending distortions, extending to the expressive quality of citizen participation in national elections. Lastly, in the field of Argentine political economy, I present a provincial-level analysis of electoral disengagement that connects the country's fiscal architecture — one of the most transfer-dependent federal systems in Latin America — to the quality of democratic participation across its provinces and electoral cycles.

This paper is organized as follows. Section 2 reviews the existing literature. Section 3 presents the formal model. Section 4 describes the Argentine electoral context. Section 5 describes the data and empirical strategy. Section 6 presents the results. Section 7 concludes.

2. Related Literature

The study of invalid voting can be traced back to Stiefbold (1965) who first distinguished between informational and expressive motivations for casting void ballots in West German elections. That early distinction anticipated the three broad theoretical traditions that have since organized the literature: socioeconomic, institutional, and protest. While these traditions have developed largely in parallel, recent work has begun to integrate them, and the emerging consensus is that invalid voting is a multi-causal phenomenon whose determinants vary systematically across electoral contexts.

The socioeconomic tradition treats invalid ballots primarily as a consequence of political exclusion. Citizens with low levels of education, income, and access to political information lack the cognitive and material resources needed to navigate the electoral process successfully. They are more likely to make unintentional errors when marking a ballot, less likely to understand the rules governing ballot validity, and less likely to have formed the partisan attachments that make a valid vote feel meaningful. The empirical evidence of this mechanism indicates a negative correlation between socioeconomic development and invalid vote rates, a pattern documented across Western Europe (Zulfikarpasic, 2001), Australia (McAllister & Makkai, 1993), and Latin America (Power & Garand, 2007). More recent work has refined this account by distinguishing between education as a cognitive resource, which implies a reduction in unintentional errors, and education as a political resource, which entails increasing probabilities of intentional protest (Driscoll & Nelson, 2014; Superti, 2014), suggesting that the socioeconomic mechanism operates differently depending on whether invalid votes are errors or deliberate acts.

The institutional tradition focuses on how the formal rules of electoral competition shape the costs and benefits of different voting responses. Three institutional factors have received the most attention. First, compulsory voting is consistently identified as the most powerful institutional predictor of invalid ballot rates. If abstention carries a legal or social penalty, citizens who would otherwise exit the electoral process are forced to appear at the polls, and the invalid ballot becomes a substitute for abstention. This mechanism was first formalized by Power & Roberts (1995) and subsequently confirmed across multiple countries (Power & Garand, 2007; Singh, 2019; Kouba & Lysek, 2016). Second, electoral system complexity raises invalid voting rates by multiplying the cognitive demands placed on voters: high district magnitude, personalized voting systems, concurrent elections, and complex ballot designs all increase the probability of error and the attractiveness of invalid balloting as a

low-effort response (Reynolds & Steenbergen 2006; Lysek et al., 2020). Third, electoral disproportionality has been linked to invalid voting as a form of systemic dissent: voters who perceive the system as unrepresentative withdraw their endorsement through the ballot (Power & Garand, 2007; Cohen, 2018).

The protest tradition offers the most explicit political interpretation. In this account, blank and spoiled ballots are deliberate expressive acts, signaling dissatisfaction with the available candidates, the governing parties, or the political system as a whole. Drawing on Hirschman's (1970) exit-voice-loyalty framework, invalid balloting under compulsory voting becomes a form of voice: a costly signal of rejection available to voters who cannot exit and find no available option worthy of support. Individual-level survey data shows that citizens casting invalid ballots are not uniformly disengaged but rather alienated: they follow politics and hold views but reject all available options (Driscoll & Nelson 2014). Aggregate evidence links invalid vote rates to economic crises, corruption scandals, and periods of democratic erosion (Power & Garand 2007; Cohen 2018; Liroy 2024).

Nevertheless, none of these traditions examines the fiscal architecture of subnational government as an independent determinant of invalid voting. The closest intellectual antecedent is the fiscal accountability literature in comparative political economy. Besley & Persson (2009) argue that fiscal capacity is intrinsically linked to political accountability: governments that tax their citizens are more susceptible to electoral discipline because citizens who pay taxes demand accountability for how those taxes are spent. This argument is broadly consistent with the attribution channel developed in this paper, though the mechanisms differ. Besley & Persson emphasize the supply-side institutional consequence of own-source taxation for state building and this paper emphasizes the demand-side informational consequence for voter behavior: citizens who pay own-source taxes experience a shorter and more observable fiscal transmission chain and therefore have stronger incentives to engage deliberately with the presidential ballot. The two mechanisms are complementary, and the present paper acknowledges that its FC measure captures both fiscal transparency and fiscal capacity simultaneously. What this paper adds to the accountability tradition is an application to the intensive margin of electoral participation under compulsory voting, in a setting where the attendance margin is closed and the behavioral response to fiscal disengagement manifests in ballot content rather than abstention.

2.1 Empirical Evidence

The empirical literature on invalid voting has grown substantially over the past three decades, encompassing single-country case studies as well as large-scale comparative analyses spanning multiple continents. While the regional focus has shifted over time, several robust empirical regularities have emerged that cut across institutional and cultural contexts.

The earliest systematic comparative evidence, including the works of McAllister & Makkai (1993) on Australia and Zulfikarpasic (2001) on France, shares a notable limitation: their examination of countries with voluntary voting hinders their ability to accurately identify the protest substitution mechanism that is essential in compulsory voting environments.

The cross-national comparative study of Martinez i Coma & Werner (2019), who analyze 417 parliamentary elections in 73 countries between 1970 and 2011, finds that enforced compulsory voting and ethnic fragmentation are the two strongest predictors of invalid voting, while corruption loses statistical significance once democracy and protest participation are controlled for. The compulsory voting result is particularly robust: across all model specifications and regional subsamples, countries with enforced mandatory voting consistently exhibit higher invalid vote rates, confirming that the substitution of invalid ballots for abstention is a general phenomenon rather than a regional peculiarity. Singh (2019), using cross-national survey data, identifies the specific voter profile driving the compulsory voting effect: politically unengaged, distrusting, and disaffected individuals are disproportionately responsible for the higher invalid vote rates observed under mandatory voting. This finding confirms that the compulsory voting mechanism impacts voters whose disengagement would otherwise have taken the form of abstention and implies that the invalid ballot rate under compulsory voting is a meaningful signal about the distribution of disengagement in the electorate rather than simply a product of legal coercion.

Evidence from post-communist Europe provides a complementary perspective. Kouba & Lysek (2016) analyze institutional determinants of invalid voting across post-communist Europe and Latin America, finding that runoff systems, compulsory voting, and low electoral competitiveness all raise invalid vote rates, but that the effects are conditioned by broader political context. Their disenchantment model, which views invalid votes as a response to poor institutional performance and weak political competition, is conceptually close to the protest tradition but emphasizes structural political conditions rather than specific electoral grievances.

2.2 Invalid Voting in Latin America and Argentina

Latin America occupies a particularly prominent place in this literature because the combination of compulsory voting, high socioeconomic inequality, and volatile party systems makes it a demanding test for competing theoretical explanations. The key reference is Power & Garand (2007) whose cross-sectional time-series design covers eighty legislative elections in eighteen democracies between 1980 and 2000. They find that enforced compulsory voting, electoral disproportionality, and the combination of high district magnitude with personalized voting significantly increase invalid vote rates, while urbanization reduces them. Castro et al. (2025) analyze invalid voting in Brazilian municipal elections, finding that blank and null votes respond to systematically different determinants, reinforcing the theoretical importance of disaggregating the two types of invalid ballot. The closest methodological precedent for the present paper is Carrión-Yaguana & Carroll (2024), who exploit municipal-level variation in Ecuador and show that invalid ballots respond to local political conditions rather than national ones alone, and that spoiled ballots serve as a protest instrument in contexts where competition is suppressed and electoral alternatives are absent.

A notable empirical regularity stands out as directly relevant: invalid voting is systematically more prevalent in contexts where the link between voters and government is weaker, regardless of whether this fragility arises from low educational attainment, ethnic diversity, institutional complexity, political disconnection, limited competition, or economic discontent. The existing literature has not investigated whether the fiscal design of subnational governments is an independent and additional contributor to that disconnection. This paper addresses that gap.

Despite Argentina's long electoral history under compulsory voting and the striking cross-provincial variation in blank and null ballot rates, the literature on Argentine invalid voting is scarce. Marto & Nallar (2018) provide the most direct empirical treatment of provincial variation, finding that blank and null votes in gubernatorial elections respond to different determinants, with blank ballots more closely associated with disengagement and null ballots with targeted protest. Nevertheless, these authors do not incorporate fiscal structure as a determinant of invalid voting. The provincial variation in blank and null ballot rates that Marto & Nallar document remains largely unexplained by the standard socioeconomic and institutional variables.

2.3 Subnational politics in Argentina

To understand why fiscal structure belongs in this picture, it is necessary to situate Argentine invalid voting within the broader literature on the political economy of Argentine federalism. As Saiegh & Tommasi (1999) and Tommasi et al. (2001) document, Argentina's intergovernmental fiscal system concentrates revenue-raising authority at the national level while allocating expenditure responsibilities to the provinces, generating low fiscal correspondence and making most provinces heavily dependent on central transfers for the financing of basic public services. This system creates perverse incentives at every level: provinces spend without taxing, and the tax-expenditure link that underpins democratic accountability is systematically weakened. Jones et al. (2000) extend this analysis to show that political institutions interact with fiscal arrangements to produce loose fiscal behavior at the provincial level, with electoral incentives consistently favoring spending over revenue effort.

The specific mechanism through which transfers flow to provinces is itself politically determined in ways that reinforce low fiscal correspondence. Porto & Sanguinetti (2001) show that the allocation of intergovernmental automatic transfers across Argentine provinces cannot be explained on purely normative grounds: political and electoral factors, including legislative representation and alignment with the national executive, significantly shape the per capita transfers received by each province. Their finding is foundational for our argument: fiscal dependency is not merely an economic condition but a political equilibrium. Jones et al. (2002) elaborate the legislative mechanism that influence automatic as well as discretionary transfers: Argentine legislators function as political brokers rather than policy specialists because reelection decisions rest not in the hands of voters but in those of provincial governors and party bosses. The Congress is reduced to a transactional arena in which provincial party bosses deliver legislative support to the national executive in exchange for fiscal transfers to their provinces, effectively bypassing the citizen-representative relationship that is supposed to connect electoral choices to fiscal outcomes. Jones et al. (2012) complete this picture by showing that voters in transfer-dependent provinces behave as fiscal liberals, supporting high spending while remaining inattentive to its fiscal costs, a pattern consistent with the attribution confusion mechanism at the foundation of our theoretical model.

The structural consequences of this dynamic for subnational democratic quality are documented by Gervasoni (2010), who demonstrates that provinces receiving disproportionately large transfers tend to have significantly lower levels of democratic

competition and accountability. Diaz-Rioseco & Alberti (2024) further show that the influence of fiscal rents on incumbency advantage is contingent upon provincial fiscal rules: when these institutions centralize rents at the provincial level, incumbency advantage is maximized and electoral contestation minimized.

Crucially for this paper, Meloni (2026) shows that fiscal correspondence significantly affects electoral participation in Argentine presidential elections, with more transfer-dependent provinces exhibiting systematically lower turnout. This result is the closest empirical precedent to the argument of the present paper: it establishes that the fiscal structure of Argentine federalism shapes not only who wins elections but whether citizens engage with the electoral process at all. This paper takes Meloni (2026) as its departure point and extends it to the intensive margin: given that the citizen is already at the polls under compulsory voting, does fiscal non-correspondence convert would-be valid voters into blank balloters?

It is important to distinguish the mechanism proposed here from the Downsian turnout mechanism in Meloni (2026). In that paper, automatic federal transfers reduce citizens' incentives to attend the polls because provincial resources are guaranteed regardless of electoral outcomes, lowering the expected benefit of participation in a standard cost-benefit framework — an extensive margin mechanism. The mechanism proposed here operates on a different and logically subsequent margin: given that the citizen is already at the polls, what determines whether she casts a valid vote or a blank one? Both own revenues and automatic transfers respond to national economic conditions, but the transmission chain from presidential policy to provincial fiscal outcome runs through far more intermediary steps when transfers dominate the budget. The two mechanisms are complementary, but they operate through different channels and produce empirically distinguishable predictions: lower turnout for the Downsian mechanism, fewer blank ballots for the rational ignorance mechanism.

3. A Model of Fiscal Correspondence and Invalid Voting

Consider a federation of districts $i = 1, \dots, N$ observed over elections t . In each district voting is mandatory. Citizens have three options: cast a valid vote, cast an invalid ballot (blank or null), or abstain and pay a fine. The extensive margin: attend versus abstain is effectively closed by compulsion for most citizens. The operative margin is therefore the intensive one: given attendance, citizens must decide whether to cast a valid ballot or an invalid one.

3.1 Fiscal Correspondence, transparency and the attribution channel

The central theoretical claim of this paper is that fiscal correspondence shapes the partisan differential voters attach to the presidential election through an attribution channel, not through a standard Downsian cost-benefit channel operating on the attendance margin.

Define fiscal correspondence (FC_{it}) in district i at time t as the share of own revenues, comprising own tax revenues and non-tax revenues, relative to non-discretionary district revenues.

Define $\varphi_{it} \in [0,1]$ as the fiscal transparency of province i at time t , measuring the degree to which the presidential-fiscal transmission chain is short enough and observable enough for rational voters to decode at a cost worth bearing

The attribution channel rests on the degree of fiscal transparency which in turn depends on the length and observability of the fiscal transmission chain that starts in the national Executive economic policy and ends in the provision of local goods and services. Rational voters evaluate if this chain is short enough and directly observable enough to understand at a cost worth bearing.

In high-FC provinces, own revenues generate a short chain: presidential macroeconomic policy $\rightarrow$ provincial economic activity $\rightarrow$ turnover tax collections $\rightarrow$ local public services. The voter experiences the first and last steps directly and the intermediary steps are few and observable.

In low-FC provinces, automatic transfers generate a long chain: presidential macroeconomic policy $\rightarrow$ national tax collections $\rightarrow$ national tax redistributive formula $\rightarrow$ national-to-provincial transfer $\rightarrow$ governor's budget allocation $\rightarrow$ local services.

The voter observes general economic conditions and local services, but the intermediary steps are administratively complex and not directly observable. Understanding the link between a presidential ballot and provincial fiscal outcomes requires knowledge of how the pool of federal resources are formed, what is the transfers redistributive formula and how is the provincial budget process. Rational voters do not invest in acquiring this knowledge given the near-zero private benefit of a single ballot, not because the link does not exist, but because the transmission chain is too long and opaque to decode at individually rational cost.

3.2 Belief formation.

Voter j uses the observed fiscal structure of her province to form a belief about φ_{it} . Under the assumption that fiscal correspondence is observable from the accumulated experience of local taxation over the electoral cycle, she correctly infers $\hat{\varphi}_{it} = FC_{it}$. This reframing aligns with Jones et al. (2012), who document that voters in transfer-dependent provinces behave as fiscal liberals precisely due to rational ignorance about the long automatic transfer chain.

In low- FC provinces, this belief correctly reflects that the presidential-fiscal transmission chain is too opaque to decode at rational cost: $\hat{\varphi}_{it} \approx 0$.

In high- FC provinces, it correctly reflects that the chain is short and directly observable: $\hat{\varphi}_{it} \approx 1$.

Notice that this attribution confusion is different from fiscal illusion in the classic Oates (1979) sense. Fiscal illusion refers to voters underestimating the cost of public spending financed by transfers. Conversely, attribution confusion means that voters correctly perceive that public spending is occurring but find the transmission chain between the presidential ballot and the provincial fiscal bundle too long and opaque to decode at individually rational cost. Understanding that link requires information investment that is individually not profitable to gather given the near-zero probability of being the pivotal voter.

3.3 Voter's Decision Problem

Let $\alpha_j > 0$ denote voter j 's underlying preference intensity, that is, her valuation of a unit improvement in the fiscal policy bundle delivered by her preferred presidential candidate relative to the alternative.

Let B_j represent the partisan differential defined as the expected utility gain from casting a valid ballot for the preferred candidate rather than submitting an invalid ballot.

B_j depends not only on α_j but also on voter j 's assessment of how much the presidential election outcome actually changes the provincial fiscal environment she experiences. The expected fiscal gain from electing the preferred candidate over the alternative is the product of the voter's preference intensity α_j and the fiscal responsiveness of her province to the election $\hat{\varphi}_{it}$:

$$B_j = \alpha_j \cdot \hat{\varphi}_{it} = \alpha_j \cdot FC_{it}$$

This multiplicative specification follows directly from expected utility maximization: B_j is the product of the voter's valuation of a unit improvement in fiscal policy (α_j) and her

expectation of how clearly the fiscal consequences of the election can be attributed to her ballot choice (FC_{it}) The multiplicative form captures the joint necessity of preference intensity and fiscal stakes for deliberate electoral engagement.

A voter who cares intensely about fiscal policy (high α_j) but lives in a province where the presidential-fiscal transmission chain is too opaque to decode ($FC_{it} \approx 0$) has a near-zero partisan differential, not because she does not care, but because there is nothing fiscal to care about in this election.

Conversely, a voter who lives in a fiscally autonomous province (FC_{it} high) but is indifferent between candidates ($\alpha_j \approx 0$) similarly has a low partisan differential. Rational ignorance in low-FC provinces operates precisely by driving $\hat{\phi}_{it}$ toward zero, compressing B_j regardless of the voter's underlying preference intensity α_j .

Utility structure. Citizen j faces three options with associated utilities:

- Cast a Valid ballot: $U_j^V = B_j - c^V = \alpha_j \cdot FC_{it} - c^V$
- Cast an Invalid ballot: $U_j^I = -c^I$
- Abstain: $U_j^A = -\pi$

where $c^V > 0$ is the cost of becoming sufficiently informed to cast a valid vote, $c^I > 0$ is the small cost of showing up without deliberating and $\pi > 0$ is the legal penalty for abstention.

The key assumptions are:

- $c^V > c^I$: casting a valid vote requires information acquisition and deliberation beyond the physical act of attending, so valid voting is always more costly than invalid voting conditional on showing up.
- $\pi > c^I$: the penalty for abstention exceeds the cost of showing up and submitting an invalid ballot, so compliance with the compulsory voting mandate is individually rational for virtually all citizens.

3.4 Decision Rules

There are two stages of decision for the citizen. In Stage 1 the decision is to attend or abstain. In Stage 2 the decision is to cast a valid or invalid ballot.

Stage 1: Attend or abstain?

Citizen j attends iff $\max(U_j^V, U_j^I) > U_j^A$. Since $U_j^I = -c^I > -\pi = U_j^A$ by assumption, attending weakly dominates abstaining for all citizens.

Let T_{it} denote the aggregate turnout rate in district i at election t , defined as the share of registered voters who cast a ballot. The attendance margin is effectively closed: $T_{it} \approx 1$ for all t, i .

Stage 2: Conditional on attending, casting a valid or invalid ballot

Given attendance, citizen j casts a valid ballot iff $U_j^V > U_j^I$:

$$\alpha_j \cdot FC_{it} - c^V > -c^I$$

$$\alpha_j \cdot FC_{it} > c^V - c^I \equiv \Delta c$$

$$\alpha_j > \frac{\Delta c}{FC_{it}} \equiv \alpha_{it}^*$$

where $\Delta c \equiv c^V - c^I > 0$ is the deliberation cost premium, that includes the additional informational and cognitive cost of casting a valid ballot relative to an invalid one, that is, the cost of thinking about and deciding among candidates.

α_{it}^* is the minimum preference intensity required to make deliberate valid voting worthwhile given the district's fiscal correspondence.

Citizens with $\alpha_j < \alpha_{it}^*$ find that the partisan differential produced by the fiscal structure of their province is insufficient to justify the deliberation cost premium and rationally submit an invalid ballot.

Citizens with $\alpha_j \geq \alpha_{it}^*$ find valid voting worthwhile and cast a deliberate ballot.

Notice that $\alpha_{it}^* = \Delta c / FC_{it}$ is decreasing in FC_{it} : as fiscal correspondence rises, the threshold falls and a larger share of the electorate finds valid voting worthwhile. This is the core mechanism through which fiscal correspondence reduces invalid voting.

3.5 From Invalid Ballots to the Blank-Null Distinction

This decision framework characterizes invalid voting generically, encompassing both blank and null ballots as possible responses to compulsory voting under low fiscal correspondence. However, the attribution channel operates with different weights across blank and null ballots, and this asymmetry has direct implications for the model's empirical predictions.

The decision to deposit an empty or unmarked ballot is precisely the decision modeled in Stage 2. The model predicts that the attribution channel operates primarily through blank ballots although is not entirely absent from null voting. Null ballots are heterogeneous: they include both deliberately spoiled ballots and accidentally spoiled ballots arising from voter error or unfamiliarity with the ballot format. The accidental component is governed by cognitive and informational constraints unrelated to fiscal transparency and is therefore insensitive to FC variation. The deliberate component, however, shares with blank voting a dependence on the partisan differential: a voter whose $\mathbf{Bj}$ falls below the reflection cost premium Δc may express disengagement through either a blank ballot or a deliberate null ballot, making the attribution channel operative on this fraction of null voting as well.

3.6 Aggregate Blank and Null Ballot Rates and Comparative Statics

Let α_j be distributed across the electorate with density $f(\cdot)$ and CDF $F(\cdot)$ on $[\underline{\alpha}, \bar{\alpha}]$. The aggregate blank ballot rate in district i at election t is:

$$\text{BLANK}_{it} = \Pr(\alpha_j < \alpha_{it}^*) = F\left(\frac{\Delta c}{\text{FC}_{it}}\right)$$

Proposition 1: Fiscal correspondence reduces blank and null voting but in different magnitudes.

$$\frac{\partial \text{BLANK}_{it}}{\partial \text{FC}_{it}} = f\left(\frac{\Delta c}{\text{FC}_{it}}\right) \cdot \left(-\frac{\Delta c}{\text{FC}_{it}^2}\right) < 0$$

since $f(\cdot) > 0$, $\Delta c > 0$, and $\text{FC}_{it} > 0$. Higher fiscal correspondence lowers the threshold α_{it}^* , meaning a larger share of the electorate finds the partisan differential sufficient to justify valid voting. The blank ballot rate falls. Equivalently: higher FC raises $\mathbf{Bj}$ for every voter j , pulling more citizens above the threshold at which deliberate valid voting is worthwhile.

Let $\lambda \in (0,1)$ denote the share of null ballots that are deliberate rather than accidental in province i . The aggregate null ballot rate can be decomposed as:

$$\text{NULL}_{it} = \lambda \cdot F\left(\frac{\Delta c}{\text{FC}_{it}}\right) + (1 - \lambda) \cdot \varepsilon_{it}$$

where the first term is the deliberate component governed by the attribution channel and ε_{it} captures the accidental component governed by cognitive constraints. It follows directly that:

$$\frac{\partial \text{NULL}_{it}}{\partial \text{FC}_{it}} = \lambda \cdot f\left(\frac{\Delta c}{\text{FC}_{it}}\right) \cdot \left(-\frac{\Delta c}{\text{FC}_{it}^2}\right) < 0$$

The sign is the same as for blank voting, but the magnitude is attenuated by the factor $\lambda < 1$: the FC effect on null ballots is negative but smaller than the FC effect on blank ballots. The model therefore predicts $|\gamma_{\text{null}}| < |\gamma_{\text{blank}}|$, with the ratio $\gamma_{\text{null}}/\gamma_{\text{blank}} \approx \lambda$ reflecting the deliberate share of null voting in the Argentine electorate.

Proposition 2: Attendance is independent of fiscal correspondence under binding compulsion.

Since $U_j^I = -c^I > -\pi = U_j^A$ for all citizens, the attendance decision is independent of FC_{it} :

$$\frac{\partial T_{it}}{\partial \text{FC}_{it}} = 0$$

Fiscal correspondence has no effect on turnout under binding compulsion. This is the sharpest distinction between this paper and Meloni (2026): in that paper, the operative margin is attendance, and the prediction is that lower FC reduces turnout; here, the attendance margin is closed, and lower FC instead increases blank voting.

4. Invalid Ballots in Argentine Presidential Elections

Argentina is a federal republic comprising 23 provinces and one autonomous city, Buenos Aires, which serves as the national capital. The Executive Branch, led by a President elected through universal suffrage, was originally designated for a six-year term under the National Constitution of 1853, with immediate reelection prohibited. A constitutional amendment in 1994 reduced the presidential term to four years, allowing for two consecutive terms, and introduced a two-round runoff system (*ballotage*) requiring an absolute majority or at least 45 percent of valid votes with a ten-point lead over the runner-up to avoid a second round.

Argentina's democratic trajectory over the twentieth century was repeatedly interrupted by military coups in 1930, 1943, 1955, 1962, 1966, and 1976. Democracy was restored in 1983, and the country has since conducted ten consecutive presidential elections without interruption. Voting is compulsory for citizens between 18 and 70 years old. All citizens are automatically registered to vote but must cast their ballot in the district where they have established formal residence. During the period under study, changing the district of registration required a cumbersome bureaucratic procedure, resulting in a significant number

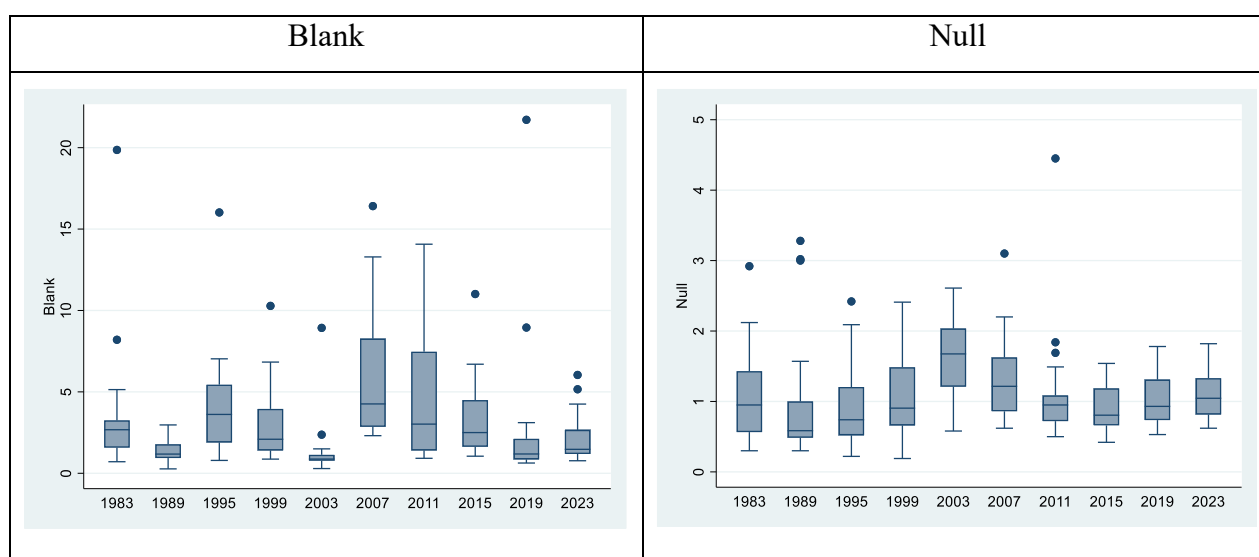
of citizens who permanently resided outside their declared district of residence. Since absentee and early voting are not permitted under Argentine electoral law, turnout is primarily affected by citizens who, on election day, are outside their registered district and therefore unable to cast a ballot.

Argentina's provinces possess constitutional autonomy to arrange their own electoral logistics, even in the context of national elections. Although the national government establishes the compulsory voting requirement, the election date, the offices on the ballot, and the vote-counting procedures, the provinces oversee the actual voting process and are entitled to schedule local elections concurrently with national ones. Provinces have the authority to adopt voting systems for local offices that differ from those employed in national elections, potentially introducing complexities to the electoral process, such as the Double Simultaneous Vote System utilized in various provinces.

4.1 Aggregate Trends in Invalid Voting

Figure 1 displays the distribution of blank and null ballot rates across the 23 provincial districts for each of the ten presidential elections from 1983 to 2023, presented as box plots that capture the median, interquartile range, and outliers of the provincial distribution in each electoral cycle.

Figure 1. **Blank and Null rates in each presidential election, 1983–2023**



Source: own calculations based on Dirección Nacional Electoral.

Note: Blank and null votes are expressed as percentage of total votes cast in each presidential election. The descriptive analysis covers 1983–2023; the panel regression covers 1989–2023 due to data availability on fiscal and socioeconomic controls.

Prima facie, the national-level evolution of invalid ballots does not appear particularly dramatic. Blank ballot rates are moderate and relatively stable across most of the sample period, with the notable exception of a pronounced spike in 2007 and a somewhat elevated distribution in the early democratic period of 1983–1989, which may reflect both the disruption of institutional arrangements inherited from the military government and the novelty of electoral participation after seven years of dictatorship. Null ballot rates follow a broadly similar pattern but with a tighter interquartile range throughout, reflecting the more bounded nature of null voting behavior relative to blank voting. Aggregate invalid ballot rates in Argentina remain below Latin American standards for most of the sample period, consistent with the country's relatively long history of compulsory voting and the institutional familiarity of its electorate with the voting process.

The moderate national-level aggregate, however, conceals the political significance of invalid voting in the Argentine context. Table 1 ranks invalid, blank, and null ballots against the field of competing presidential tickets in each election.

Table 1. Rank of invalid ballots rate in each presidential election, 1983–2023.

Year	Number of Parties	Rank		
		Blank	Null	Invalid (Blank plus Null)
1983	12	4 th	6 th	3 rd
1989	11	7 th	8 th	5 th
1995	14	4 th	6 th	4 th
1999	10	4 th	5 th	4 th
2003	18	10 th	7 th	6 th
2007	14	5 th	9 th	4 th
2011	7	6 th	9 th	6 th
2015	6	5 th	8 th	4 th
2019	6	6 th	8 th	4 th
2023	5	6 th	7 th	5 th

Source: own calculations based on Dirección Nacional Electoral.

The results are striking. For instance, in 1983, the first democratic election after the military dictatorship, the aggregate invalid ballot rate ranked third, behind only the two major parties and ahead of ten out of twelve competing tickets. In five out of nine subsequent elections — 1995, 1999, 2007, 2015, and 2019 — invalid ballots ranked fourth, placing ahead of all but three parties. Even in the most fragmented election of the sample period, 2003, when 18 parties competed, aggregate invalid ballots ranked sixth. Across the full sample, invalid ballots consistently outperformed the majority of competing presidential tickets, constituting

a more significant electoral force than the raw percentages alone suggest. The more fragmented the party system, the greater the chances of invalid ballots ranking higher, a pattern that reflects both the proliferation of small parties that fragment the valid vote and the persistence of a disengaged electorate that no expansion of the choice set has managed to mobilize into valid participation.

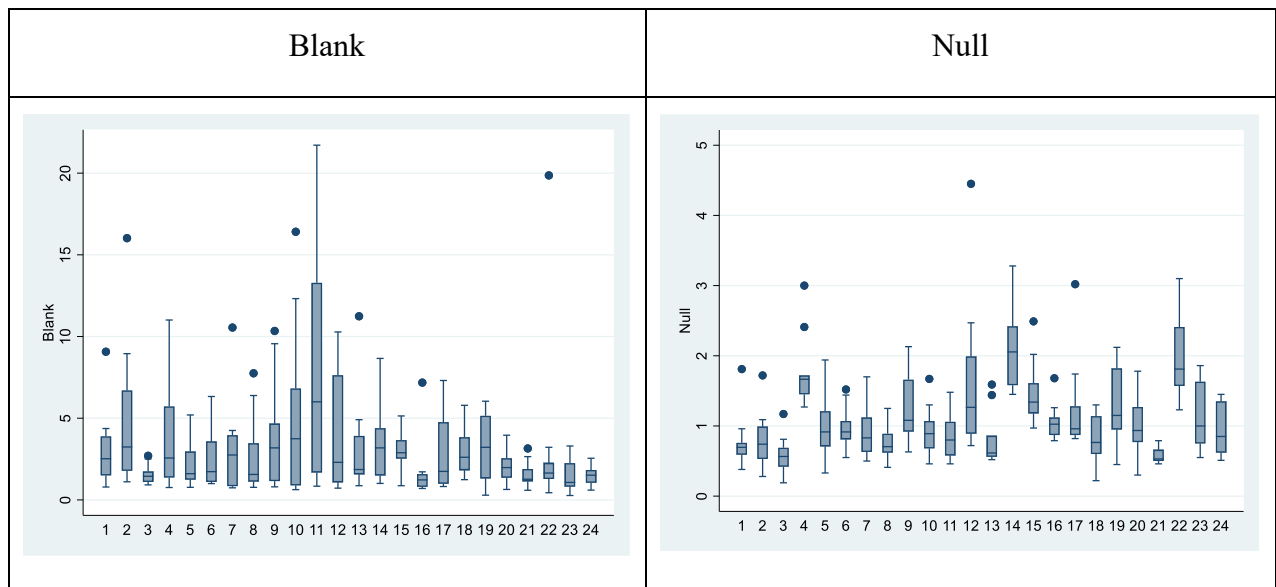
It is important to highlight a consistent pattern in the blank-null ranking differential as shown in Table 1: blank ballots rank higher than null ballots in every election in the sample, except for the 2003 election. This means that more citizens choose the deliberate form of invalid voting than the active form of spoiling one. This pattern is consistent with the theoretical distinction between the attribution-driven disengagement mechanism operating on blank voting and the more heterogeneous protest and accidental behaviors captured by null voting that motivates the blank-null decomposition in this paper.

4.2 The Subnational Dimension

The aggregate national picture becomes considerably more complex and analytically more interesting when subnational districts enter the scene. Figure 2 displays the distribution of blank and null ballot rates across the ten presidential elections for each of the 24 subnational districts, presented as box plots organized by district.

The cross-provincial variation in both blank and null ballot rates is substantial and reveals a rich heterogeneity that national averages entirely obscure. Several distinct patterns are visible. Some provinces exhibit high variability relative to their own mean across elections in both categories: Misiones and Catamarca are the most prominent examples, with wide interquartile ranges and multiple outliers in both the blank and null panels, suggesting that electoral conditions in these provinces fluctuate markedly across presidential cycles in ways that produce large swings in invalid voting behavior. Other provinces show high dispersion in only one category. For example, Tierra del Fuego exhibits pronounced variability in blank ballots but relatively stable null ballot rates, while Mendoza shows the opposite pattern: stability in blank voting alongside notable variability in null votes, suggesting that the two types of invalid ballot respond to different provincial-level conditions, precisely as the theoretical model predicts. A third group of provinces, including Río Negro and Santiago del Estero, shows low variability in both rates across elections, indicating a stable underlying structure of electoral behavior that persists regardless of national-level political conditions.

Figure 2. **Blank and Null rates by district, 1983-2023**



Source: own calculations based on Dirección Nacional Electoral.

Note: the references for the x-axis are: 1. Buenos Aires, 2. Catamarca, 3. Chaco, 4. Chubut, 5. Córdoba, 6. Corrientes, 7. Entre Ríos, 8. Formosa, 9. Jujuy, 10. La Pampa, 11. La Rioja, 12. Mendoza, 13. Misiones, 14. Neuquén, 15. Río Negro, 16. Salta, 17. San Juan, 18. San Luis, 19. Santa Cruz, 20. Santa Fe, 21. Santiago del Estero, 22. Tierra del Fuego, 23. Tucumán, 24. CABA.

The provincial outliers in the blank ballot panel are particularly revealing. The most extreme observations in the blank distribution correspond to specific province-election combinations where structural disengagement appears to have been especially acute. These outliers are not randomly distributed across the provincial distribution but tend to cluster in provinces that combine low fiscal correspondence with entrenched political hegemony, which are the precise conditions that the theoretical model identifies as the drivers of blank ballot accumulation under compulsory voting. When the partisan differential is compressed by both attribution confusion and a foreclosed effective choice set, the share of citizens rationally opting for a blank ballot reaches its highest levels.

The null ballot panel tells a somewhat different story. The cross-provincial distribution of null rates is considerably more compressed than the blank distribution, consistent with the descriptive statistics reported in Table 2, where the sample standard deviation of null rates (0.61) is less than one-fifth of the standard deviation of blank rates (3.24). This compression reflects the more bounded nature of null voting behavior: while blank voting can surge dramatically in provinces experiencing extreme fiscal disengagement and political hegemony, null voting remains relatively contained across the full range of provincial conditions. This is consistent with the model's prediction that null voting reflects a more heterogeneous set of

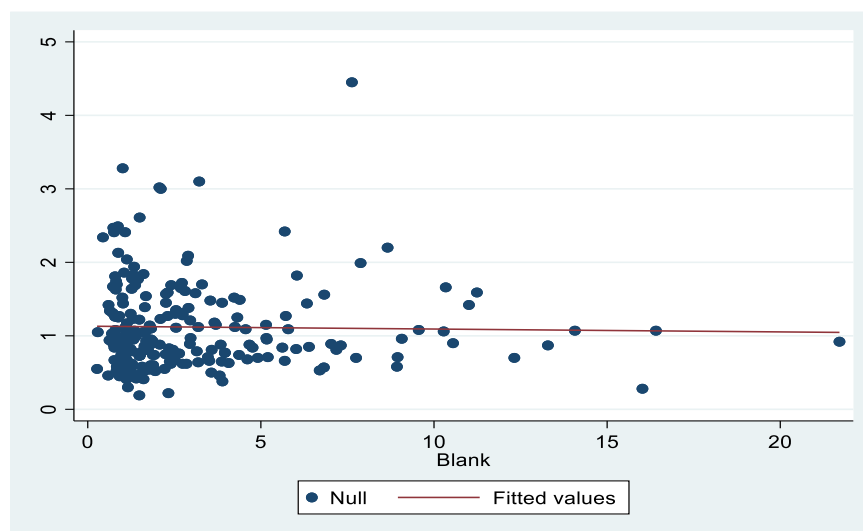
behaviors that are less sensitive to the structural fiscal and political characteristics of the province than blank voting is.

4.3 The Correlation Between Blank and Null Votes

A foundational empirical question for the analytical framework of this paper is whether blank and null ballots are driven by the same or different underlying processes. In many electoral systems, blank and null votes are positively correlated because both can be interpreted as forms of protest or rejection of available candidates, suggesting a common underlying motivation.

Figure 3 examines this question directly, displaying a scatter plot of blank against null ballot rates across all 207 province-election observations in the sample, with a fitted regression line. The result is unambiguous: there is no evident positive correlation between blank and null ballot rates in the Argentine provincial panel. The fitted line is slightly negative but essentially flat, and the scatter of observations shows no systematic pattern linking the two variables. Province-elections with high blank rates are not particularly likely to exhibit high null rates, and vice versa.

Figure 3. **Correlation of Blank and Null ballots across provinces, 1989-2023**



Source: own calculations based on Dirección Nacional Electoral.

This finding has a crucial implication for the empirical strategy of the paper. The absence of a positive correlation between blank and null votes across Argentine provinces confirms that the two types of invalid ballot are not driven by the same underlying process and cannot be treated as interchangeable expressions of a common motivation. They respond to different

determinants and reflect the behavior of different voter types: the structurally disengaged citizen who deposits an empty ballot under compulsion as a deliberate but low-cost response to attribution confusion, and a more heterogeneous population of null voters that includes both politically alienated citizens who deliberately spoil their ballot as a targeted protest and citizens who submit an accidentally invalid ballot due to voter error, unfamiliarity with the ballot format, or cognitive constraints.

The flat correlation in Figure 3 is the descriptive foundation for the blank-null decomposition that constitutes the central methodological and theoretical contribution of this paper, and it provides direct empirical support for the model's prediction that the attribution channel operates primarily through blank ballots and is attenuated for null ballots.

5. Data and Empirical Strategy

5.1 Data and Variables

The empirical analysis is based on a balanced panel of 23 out of 24 Argentine districts observed across 9 presidential elections spanning the period 1989–2023, yielding 207 province-election observations. Electoral data were drawn from the *Dirección Nacional Electoral (DNE)* and fiscal data from the *Dirección Nacional de Coordinación Fiscal con las Provincias*, which provides harmonized provincial public finance series covering revenues, expenditures, and transfers for all 23 provinces over the full sample period. The province of Río Negro and the initial election of 1983 were excluded from the sample due to missing socioeconomic data¹.

Dependent variables. The paper estimates three dependent variables, each measured at the province-election level. The first is *Blank*, defined as the number of blank ballots cast in province i at presidential election t expressed as a percentage of total ballots cast. The second is *Null*, defined as the number of null or spoiled ballots cast as a percentage of total ballots cast. The third is *Invalid*, defined as the sum of blank and null ballots as a percentage of total ballots cast, so that $Invalid_{it} = Blank_{it} + Null_{it}$. Estimating the three dependent variables separately rather than only the aggregate is theoretically motivated: as argued in Section 3, blank and null votes are associated with different underlying mechanisms and the attribution

¹ Notice that the descriptive analysis covers all 24 subnational districts (23 provinces plus the federal district, the city of Buenos Aires) while the panel regression covers 23 districts due to data availability of the province of Río Negro regarding socioeconomic controls.

channel developed in this paper predicts a stronger effect on blank ballots than on null ballots.

Key explanatory variable. The central explanatory variable is Fiscal Correspondence (FC_{it}), defined as the percentage of Own revenues as in relation to non-discretionary provincial revenues. Subnational districts receive revenues from four sources: own tax revenues, non-tax revenues (fees, duties, and fines), automatic intergovernmental transfers determined by a formula established by law (Federal Tax-sharing Agreement, FTSA), and royalties accruing from natural resource extraction. Own revenues comprise two components: own tax revenues, consisting of all taxes levied and administered by the provincial government; and non-tax revenues, comprising fees and duties derived from specific administrative and regulatory services provided by the province, and fines derived from the exercise of state police power in the face of non-compliance with provincial regulations. Royalties accruing from natural resource extraction are included in the denominator as a non-discretionary revenue source governed by constitutional and legal entitlement rather than by electoral bargaining. FC is constructed as:

$$FC_{it} = \frac{\text{Own Revenues}_{it}}{\text{Own Revenues}_{it} + \text{Automatic Transfers}_{it} + \text{Royalties}_{it}}$$

Where $FC_{it}=1$ indicates full fiscal correspondence meaning that the district finances all its non-discretionary spending from own revenues, and $FC_{it}=0$ indicates pure transfer dependency. Discretionary transfers are excluded from both numerator and denominator because their variation is partly determined by the political bargaining between the provincial governor and the national executive (Jones et al. 2002), which would introduce endogeneity into the measure and contaminate its interpretation as a structural fiscal characteristic.

The theoretical predictions developed in Section 3 implies, first that $\gamma < 0$: higher fiscal correspondence is associated with fewer blank and invalid ballots, as the attribution channel compresses the partisan differential B_j toward zero in transfer-dependent provinces, making the deliberation cost premium Δc expensive for a larger share of the electorate. Second, the effect is concentrated in blank ballots and attenuated for null ballots, since null voting reflects a more heterogeneous set of behaviors less sensitive to fiscal attributability: $|\gamma_{blank}| \gg |\gamma_{null}|$.

One interpretive limitation of the FC measure deserves explicit acknowledgment. FC simultaneously captures two related but distinct theoretical concepts. First, FC measures

fiscal transparency. This is the attribution channel through which the paper's model operates. Second, FC is also a measure of fiscal capacity in the sense of Besley & Persson (2009): provinces with high own-revenue shares have demonstrated the institutional ability to raise taxes from their own bases, which is precisely what the fiscal capacity literature defines as state capacity. The paper cannot empirically distinguish between these two interpretations. A finding that higher FC reduces blank voting is consistent with both: either voters in high-FC provinces have shorter and more observable fiscal transmission chains (the attribution channel) or voters in high-FC provinces live under governments with greater institutional capacity that generates more accountable and responsive governance (the fiscal capacity channel). The robustness check in Section 6.4 — which shows that provincial public employment per capita is uncorrelated with blank voting and leaves the FC coefficient unchanged — partially addresses the state capacity concern by showing that bureaucratic size does not drive the result. However, since Besley & Persson (2009) define fiscal capacity precisely as the ability to raise own revenues, and since FC is constructed from own revenues, the state capacity and fiscal transparency channels cannot be fully separated with the available data. The paper is agnostic between these two mechanisms at the empirical level and claims only that higher own-revenue share, regardless of whether this reflects greater fiscal transparency or greater fiscal capacity, is associated with lower blank voting rates.

Socioeconomic controls. Following the socioeconomic tradition in the invalid voting literature (Power & Garand 2007; McAllister & Makkai 1993), the model includes two variables capturing the informational and demographic structure of the provincial electorate.

Education is defined as the ratio of the percentage of the provincial population that has achieved college-level education to the percentage of the population with incomplete elementary schooling. Higher values of this ratio indicate a more educated electorate relative to the most educationally excluded segment. The expected sign on invalid voting is ambiguous: more educated electorates make fewer unintentional errors, which would reduce null voting, but more educated voters may also be more likely to cast a deliberate blank ballot as an informed protest when no candidate is deemed satisfactory, consistent with the distinction between education as a cognitive resource and education as a political resource discussed in Section 2.

Population is defined as the percentage of the provincial population aged 70 or older at election t . Citizens over 70 who choose to vote do so voluntarily, which means they are a self-selected group of engaged voters. However, their engagement does not necessarily

translate into valid voting for at least two reasons. First, cognitive and physical constraints: elderly voters may face greater difficulty navigating the ballot, particularly in elections with complex concurrent contests, multiple factions under the Double Simultaneous Voting System (DSVS), or long candidate lists, increasing the probability of unintentional errors that produce invalid ballots (Bercoff et al., 2024). Second, in provinces dominated by hegemonic political machines, clientelistic networks may mobilize elderly citizens to vote even after they are legally exempt, through the same patronage mechanisms that mobilize the rest of the captive electorate (Stokes, 2005). These mobilized-but-disengaged elderly voters, brought to the polls by machine pressure rather than by genuine political interest, may be more likely to cast blank ballots precisely because they are participating without a meaningful electoral preference. Both socioeconomic control variables are constructed from the Household Survey (EPH) produced by the Argentine Bureau of Statistics (INDEC).

Institutional controls. The institutional tradition is represented by five variables capturing the informational demands, competitive structure, enforcement conditions, and formal rules governing each provincial electoral context.

Reelection is a dummy variable taking value 1 if the incumbent governor of province i seeks reelection on the same date as the presidential election, and 0 otherwise. The expected sign of this variable on invalid and blank ballots is theoretically ambiguous and depends on which of two opposing mechanisms dominates. On one hand, a concurrent gubernatorial reelection bid raises the political salience of the election day, potentially mobilizing voters who hold strong preferences about the gubernatorial contest into casting a deliberate valid ballot, which would reduce invalid voting and imply a negative coefficient. On the other hand, voters who oppose the incumbent governor but perceive no viable alternative may express their dissent through a blank ballot precisely because the reelection contest makes the stakes of the election more visible, implying a positive coefficient on blank ballots. For null ballots the prediction is clearer: the heightened salience of a reelection contest is expected to reduce voter inattention and ballot completion errors, implying a negative coefficient. Given these competing forces, we treat the sign of *Reelection* on total invalid and blank ballots as an empirical question, while maintaining the theoretical prior of a negative sign for null ballots.

DSVS is a dummy variable taking value 1 if the gubernatorial election in province i is held under the Double Simultaneous Vote System concurrently with the presidential election, and 0 otherwise. *DSVS* is expected to be positively associated with invalid vote rates because

increases ballot complexity and the cognitive demands placed on voters, raising the deliberate cost premium Δc for all voters.

Fatigue is defined as the number of elections held in province i in the same calendar year as the presidential election but prior to it. This definition includes gubernatorial contests as well as mandatory primaries called PASO —a Spanish acronym for *Primarias Abiertas Simultáneas y Obligatorias* — introduced for national elections in 2009 and also adopted in some districts before local elections.

Margin is defined as the percentage difference between the vote share of the winning party and that of the runner-up in the provincial presidential contest, capturing the degree of local electoral competitiveness.

Turnout is defined as total ballots cast as a percentage of total registered voters in province i at presidential election t . Under compulsory voting, variations in turnout across provinces and elections reflect differences in enforcement intensity, fine levels, and the administrative ease of compliance rather than voluntary participation decisions. Higher turnout increases the pool of voters, which may raise the absolute number of invalid ballots cast by would-be abstainers who are compelled to appear. *Turnout* is included in the institutional group on these grounds, while acknowledging that turnout and invalid voting may share a common upstream determinant: the attribution confusion about the fiscal consequences of the election, which motivates the instrumentation strategy described in Section 5.2.

Protest controls. The protest tradition (Power & Garand 2007; Ugglá 2008; Cohen 2018) is represented by three variables capturing the economic and political conditions that generate voter dissatisfaction with the available electoral alternatives.

Unemployment is the provincial unemployment rate measured in the quarter immediately preceding presidential election t , drawn from the INDEC. Higher unemployment is expected to generate economic grievances that translate into protest voting and higher invalid ballot rates, operating primarily through the null ballot margin.

GDPpc is real gross domestic product per capita in province i in the year preceding presidential election t , expressed in constant pesos. Lower provincial income is expected to be associated with higher invalid voting both through the socioeconomic exclusion mechanism, reducing the cognitive resources available for valid ballot completion, and through the generation of economic grievances that produce protest behavior.

Hegemony is defined as the number of consecutive presidential election victories of the presidential candidate supported by the provincial governor. This variable captures the degree of political hegemony at the subnational level: provinces where the same national-provincial coalition has dominated presidential elections across multiple consecutive cycles are expected to exhibit higher invalid vote rates, as voters who oppose the hegemonic coalition face a choice set that feels structurally foreclosed, raising the effective reflection cost premium for deliberate valid voting beyond what fiscal correspondence alone would predict.

Table 2 reports descriptive statistics for all variables included in the analysis.

Table 2. **Descriptive statistics**

Variable	Obs	Mean	Std.dev.	Min	Max
Dependent variables					
Invalid	207	4.2394	3.2914	0.82	22.63
Blank	207	3.1382	3.2411	0.27	21.71
Null	207	1.1015	0.6123	0.19	4.45
Key explanatory variable					
FC (avg t-1 to t-4)	207	25.6560	17.2562	5.1	92.5
Control variables					
Unemployment (t-1)	207	7.7261	4.3742	0.5	21
GDP pc (t-1)	207	12981.8	9128.3	3625.6	40869.6
Hegemony (t-1)	207	1.6039	1.9946	0	8
Turnout Rep (t-2)	206	75.9992	5.6189	51.82	89.83
Margin Rep (t-2)	206	1.5142	20.7497	-53.02	62.97
Reelection	207	0.1449	0.3529	0	1
DSVS	207	1.6232	8.6391	0	76
Invalid Rep (t-2)	205	7.1781	6.3968	0.38	41.82
Blank Rep (t-2)	205	4.4226	4.4340	0.19	30.38
Null Rep (t-2)	205	2.7556	3.6590	0.08	24.47
Fatigue	207	0.5411	0.6588	0	2
Education (t-1)	203	0.4688	0.4483	0.06	3.85
Population	207	5.8531	2.4044	0.8	14.1

Source: own calculations. Electoral data from DNE; fiscal data from Dirección Nacional de Coordinación Fiscal con las Provincias and socioeconomic data from INDEC.

5.2 Empirical Strategy

The baseline empirical model is a two-way fixed effects estimator of the form:

$$Y_{it} = \alpha_i + \lambda_t + \gamma \cdot FC_{it} + \mathbf{X}'_{it}\boldsymbol{\delta} + u_{it}$$

where Y_{it} is one of the three dependent variables — *Blank*, *Null*, or *Invalid* — in province i at presidential election t ; FC_{it} is the four-year average of the fiscal correspondence measure

described below; X_{it} is the vector of socioeconomic, institutional, and protest controls described in Section 5; α_i are province fixed effects absorbing all time-invariant provincial characteristics such as geography, historical settlement patterns, institutional legacies, and structural economic features that could jointly determine fiscal structure and invalid voting; λ_t are election fixed effects absorbing all shocks common to all provinces in a given electoral cycle, including national economic conditions, the quality of the presidential candidate field, and aggregate fluctuations in national tax revenue that drive automatic transfer flows; and u_{it} is the idiosyncratic error term. The parameter of central interest is γ , for which the theoretical model predicts $\gamma < 0$: higher fiscal correspondence is associated with fewer blank and invalid ballots, with the effect predicted to be stronger for blank than for null ballots.

The key explanatory variable in the baseline specification is not contemporaneous FC but its four-year average over the presidential period preceding election t . Specifically:

$$\bar{FC}_{it} = \frac{1}{4} \sum_{k=1}^4 FC_{i,t-k}$$

Where $t - k$ indexes the four fiscal years preceding the presidential election year. This construction serves two complementary purposes. First, $\bar{FC}_{it}$ is the operationalization of the model's core construct: the attribution confusion mechanism operates through the accumulated fiscal experience of voters over the electoral cycle rather than through any single-year fiscal observation. A voter's attribution confusion about the fiscal consequences of the presidential election is produced by sustained fiscal non-correspondence over the years during which the incumbent administration governs, not by the fiscal position in any particular year. Second, averaging over the four pre-election years removes the election-year observation from the measure, addressing the concern that contemporaneous FC could be deflated by end-of-electoral-cycle discretionary spending surges that temporarily reduce the own-revenue share, or inflated by pre-electoral tax relief, both of which would introduce simultaneity bias into the estimate of γ .

The four-year pre-election average construction of $\bar{FC}_{it}$ also attenuates the concern that province-level economic shocks could jointly reduce own tax revenues and raise political discontent which may end up increasing blank voting. A single-year shock to own revenue collection would move the four-year average by only one quarter of its magnitude, requiring implausibly large and sustained economic deterioration to generate the estimated coefficient

through this channel. Furthermore, all socioeconomic controls capture the economic conditions preceding the election rather than contemporaneous shocks. To the extent that fiscal structures respond slowly to economic conditions, as the institutional literature suggests, the four-year average of FC represents a structural characteristic of the province rather than a cyclical response to short-run economic fluctuations, further reducing the plausibility of the omitted variable interpretation

A related identification concern is reverse causality: provinces with higher blank voting rates may attract greater political attention from the national executive, who responds by increasing discretionary transfers which would generate a negative coefficient on FC even in the absence of any causal effect of fiscal correspondence on ballot behavior. The construction of FC directly addresses this concern by excluding discretionary transfers from both numerator and denominator, eliminating the channel through which reverse causality would operate. The four-year pre-election average further insulates the measure from any election-cycle adjustment in discretionary transfers timed to provincial political conditions

To ensure all regressors are predetermined with respect to the dependent variable, all explanatory variables, except for *Margin* and *Turnout*, were lagged one period. *Margin* and *Turnout* were instrumented using data from the congressional election held two years prior to presidential election t in province i . Conditions in midterm elections are strong predictors of the corresponding circumstances in the subsequent presidential election, and both are plausibly exogenous to the presidential invalid vote rate because they are determined two years earlier under a distinct electoral calendar involving different offices and candidate sets. In the instrumental variables estimation presented in Section 6.3, the validity of these instruments is assessed using the Kleibergen-Paap statistic for under identification, the Cragg-Donald and Kleibergen-Paap F -statistics for weak identification against Stock-Yogo critical values, and the Hansen J -statistic for overidentification.

A potential specification concern is that *Turnout* may partially mediate the effect of FC on invalid voting: if low fiscal correspondence produces attribution confusion that simultaneously reduces turnout and raises invalid vote rates through the intensive margin mechanism modeled here. Controlling for *Turnout* on the right-hand side absorbs part of the causal pathway from FC to invalid ballots. To evaluate how sensitive the results are to this concern estimates of both including and excluding *Turnout* from the baseline specification are reported. The stability of the coefficient on *FC* across the two specifications confirms that

mediation through turnout does not materially affect inference on the parameter of central interest.

The exclusion restriction requires that the congressional margin affects presidential blank and invalid voting only through its effect on the presidential margin, with no independent direct effect on presidential ballot content. This restriction is plausible on two grounds. First, Argentine congressional elections are conducted under a closed-list proportional representation system in which voters choose party lists rather than individual candidates and usually only the top of each list is publicly known. Congressional elections therefore primarily reveal provincial partisan balance and structural political competitiveness rather than candidate-specific information that could independently shape presidential ballot decisions. Second, the congressional election is held two years before the presidential election, and any direct impact from the congressional result would need to persist across two years of intervening political activity such as candidate nominations, campaign dynamics, and presidential debates, before manifesting in presidential ballot content. It is implausible that such a direct channel operates independently of the updated information about presidential competitiveness that the congressional margin provides. The congressional margin is therefore best understood as an institutional signal of provincial partisan balance whose only operative channel into presidential blank and invalid voting runs through its predictive power for the presidential margin.

A final methodological note concerns the causal interpretation of the estimated coefficients. The two-way fixed effects specification with lagged controls and instrumental variables for *Margin* and *Turnout* represents a rigorous observational design, but it does not fully establish causality in the strict experimental sense. The paper addresses the most salient threats to identification such as reverse causality from discretionary transfers that was eliminated by construction of the FC measure; common national shocks that were absorbed by election year fixed effects; time-invariant provincial characteristics that were treated by province fixed effects; and short-run economic shocks that were attenuated by the four-year averaging of FC and the lagged controls. However, the design cannot rule out all time-varying provincial confounders. In particular, within-province changes in FC may partly reflect fiscal reform efforts by governors who simultaneously raise own revenues and run more accountable administrations which may generate a negative FC-blank correlation through an accountability channel that is observationally equivalent to the fiscal transparency channel. The paper cannot empirically distinguish between these two interpretations, as acknowledged

in Section 5.1. For this reason, the empirical contribution of the paper is best understood as establishing a robust and theoretically motivated association between fiscal correspondence and blank voting rather than a clean causal effect. The finding is robust across multiple specifications, estimators, samples, and time periods, and is consistent with the theoretical mechanism developed in Section 3. Whether the association reflects the fiscal transparency channel, the fiscal capacity channel, or both remains an open question that future research with more granular data, for example, individual-level data linking voter fiscal exposure to ballot behavior, could address.

6. Discussion of Results

6.1 Baseline Estimates

Table 3 presents the baseline estimates from the two-way fixed effects specification with time effects and standard errors clustered at the province level. The dependent variable is the share of invalid ballots in columns I and II, blank ballots in columns III and IV, and null ballots in columns V and VI. Odd-numbered columns include the lagged congressional counterpart of each dependent variable and congressional turnout as additional controls; even-numbered columns drop these variables, which are jointly insignificant and whose exclusion leaves all other coefficients essentially unchanged.

The within-province R-squared of 0.43–0.45 for blank ballots indicates strong explanatory power on the margin the specification actually estimates. The low between-province R-squared (0.008 to 0.060) reflects the fact that province fixed effects absorb the large cross-provincial differences in fiscal structure, leaving identification to within-province changes in FC over the electoral cycle. The within-province standard deviation of FC is 4.24 percentage points, about 25% of the overall standard deviation of 17.26, meaning identification comes from province-specific deviations in FC from the national electoral-cycle trend after removing time-invariant provincial means. Election year fixed effects absorb national cycles that would otherwise confound the estimate, leaving only idiosyncratic provincial fiscal dynamics. A one within-province standard deviation movement in FC is associated with a change of 0.49 percentage points in blank voting, roughly 16% of the sample mean, a modest but economically meaningful effect. The long-run cross-provincial relationship between fiscal architecture and blank voting, though theoretically central, is not directly identified in this specification.

Table 3. Two-way fixed effects estimation

Variables	Invalid		Blank		Null	
	I	II	I	II	I	II
FC	-0.1331*** 0.0389	-0.1305*** 0.0378	-0.1150*** 0.0388	-0.1131*** 0.0379	-0.0161* 0.0079	-0.0162* 0.0079
Unemployment (t-1)	-0.0635 0.0731	-0.0624 0.0728	-0.0962 0.0632	-0.0951 0.0649	0.0312* 0.0152	0.0318** 0.0145
GDP pc (t-1)	-0.0002*** 0.0001	-0.0002*** 0.0001	-0.0002*** 0.0001	-0.0002*** 0.0001	0.00000 0.00000	0.00000 0.00000
Hegemony (t-1)	0.4511* 0.2231	0.4617** 0.2065	0.4354* 0.2145	0.4493** 0.1984	0.0132 0.0249	0.0126 0.0222
Margin Rep (t-2)	-0.0170* 0.009	-0.0174* 0.0092	-0.0169* 0.0089	-0.0168* 0.0091	-0.0011 0.0018	-0.0011 0.0018
Turnout Rep (t-2)	-0.0125 0.042		-0.0123 0.0369		-0.0013 0.0122	
Reelection	1.7163** 0.7899	1.5984** 0.7679	2.0985** 0.7763	1.9674** 0.7573	-0.3458*** 0.101	-0.3464*** 0.1003
DSVS	-0.0303 0.0177	-0.0279 0.0166	-0.0330* 0.0162	-0.0309* 0.0153	0.0031 0.0031	0.0032 0.003
Fatigue	-1.4124** 0.5217	-1.4037** 0.536	-1.3517** 0.5132	-1.3635** 0.524	-0.0289 0.0541	-0.0276 0.054
Invalid Rep (t-2)	-0.0176 0.0281					
Blank Rep (t-2)			-0.0075 0.0375			
Null Rep(t-2)					0.0284** 0.0118	0.0285** 0.0116
Education (t-1)	1.3669* 0.7201	1.3682* 0.7139	1.3854** 0.6478	1.3873** 0.6363	-0.0183 0.1885	-0.0159 0.187
Population	0.263 0.1709	0.2615 0.1748	0.2591 0.1653	0.266 0.1664	-0.0197 0.0278	-0.0196 0.0276
Constant	7.0273** 3.3041	5.8154*** 2.051	5.4132* 2.8773	4.3309** 1.9474	1.4827 0.9364	1.3891*** 0.3919
R-squared within	0.4347	0.4305	0.4493	0.4452	0.3253	0.3252
R-squared between	0.0080	0.0088	0.0603	0.0606	0.0173	0.0170
R-squared overall	0.1135	0.1166	0.1797	0.1789	0.1197	0.1195

Note: Standard errors are reported in parenthesis below coefficient.

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

The central finding of the paper is clear and robust across all specifications: *FC* exerts a negative and statistically significant effect on Invalid, Blank, and Null votes. The FC coefficient is significant at the 1% level for Invalid and Blank ballots, and at the 10% level

for Null ballots. These results survive the inclusion and exclusion of the congressional controls without meaningful change in magnitude or precision, indicating that the finding is not driven by the choice of dynamic specification.

this negative sign.

The negative sign of the *FC* coefficient is consistent with the attribution channel grounded in rational ignorance: in transfer-dependent provinces, the long and opaque automatic transfer transmission chain is not worth decoding at individual cost, which is predicted to compress the partisan differential toward zero. Fiscally autonomous provinces generate systematically lower rates of blank and invalid voting because the partisan differential is sufficiently large to justify deliberate valid participation for a larger share of the electorate.

Among the remaining controls, *GDP per capita* lagged one period enters negatively and significantly at the 1% level for both Invalid and Blank outcomes, indicating that richer provinces exhibit lower rates of invalid voting. This result is consistent with two complementary interpretations that reinforce each other. First, higher income reduces the relative cost of information acquisition, making it less rational to cast a blank ballot out of ignorance or indifference. Second, and more relevant to the protest voting interpretation, voters in wealthier provinces have more to gain from the electoral outcome in material terms: when per capita income is high, the fiscal and economic consequences of the election are larger in absolute magnitude, raising the expected benefit of casting a deliberate valid ballot. Conversely, in poorer provinces where material living standards are lower and public transfers constitute a larger share of household income, voters may perceive that no candidate credibly offers a path to improvement, a form of political disillusionment that manifests as blank protest voting. Under this interpretation, *GDP per capita* and *FC* operate through related but distinct channels: *FC* captures the structural erosion of fiscal attributability at the provincial budget level, through the attribution confusion mechanism that compresses the partisan differential, while *GDP per capita* captures the voter-level stake in the election outcome. Both reduce the incentive to cast a deliberate invalid ballot when they are high, but for different reasons: the former because rational ignorance about the long automatic transfers transmission chain compresses the partisan differential, reducing the expected benefit of deliberating about which candidate to support; the latter because material prosperity raises the value of getting the electoral choice right.

The *Hegemony* variable, measuring the degree of historical single-party dominance in the province, enters positively and significantly at the 5 to 10% level for Invalid and Blank, consistent with the interpretation that political capture reduces the perceived meaningfulness of electoral competition and encourages expressive invalid voting. In provinces where the same coalition has dominated presidential elections across multiple consecutive cycles, opposition voters face a choice set that feels structurally foreclosed, raising the effective deliberation cost premium for deliberate valid voting beyond what fiscal correspondence alone would predict. Low fiscal correspondence and political hegemony are not independent phenomena but mutually reinforcing ones: the governor receives high automatic transfers and extracts discretionary transfers through legislative bargains with the national executive, uses those transfers to sustain the patronage networks that reproduce his dominance, and delivers electoral support in return.

Given that the fiscal outcome is determined by the governor's relationship with the center rather than by the presidential ballot, a self-reinforcing dynamic emerges that simultaneously deepens confusion among provincial citizens and forecloses the effective electoral choice set, increasing the invalid ballot rates. The *Hegemony* coefficient therefore captures something the FC coefficient alone cannot: the additional compression of the partisan differential that occurs when political dominance removes any credible alternative regardless of the fiscal transparency of the transmission chain.

The *margin of victory* in the preceding congressional election enters negatively and significantly at the 10% level for Invalid and Blank: a larger margin is associated with fewer invalid ballots in the subsequent presidential election, suggesting that settled provincial electoral alignments reduce the incentive for blank protest voting, possibly because strong party organization in less competitive provinces is more effective at converting potential blank balloters into valid ballot casters.

The *Reelection* indicator is positive and significant at the 5% level for Invalid and Blank, a result discussed in detail in Section 6.2. The *Fatigue* variable, measuring the cumulative number of elections held before the presidential election, enters negatively and significantly at the 5% level for Invalid and Blank, a result we interpret as a mobilization effect: voters in provinces with denser electoral calendars become more politically informed rather than more fatigued, consistent with the hypothesis that repeated electoral exposure raises voters' ability to connect electoral choices to policy outcomes, reducing the attribution confusion that generates blank ballot behavior. *Education* enters positively and significantly at the 5 to 10%

level for Invalid and Blank in the OLS specification. This positive sign resolves the theoretical ambiguity noted in Section 5.1 in favor of the political resource interpretation of education (Driscoll & Nelson, 2014): in the Argentine context, education raises the probability of deliberate blank protest rather than reducing ballot completion errors, suggesting that the more educated voters in the sample are sufficiently politically informed to use the blank ballot as a conscious signal of dissatisfaction when no candidate is deemed satisfactory. The population share over 70 years of age, included to capture the partial exemption from compulsory voting for elderly citizens, is positive but statistically insignificant throughout. *Unemployment* lagged one period is not significant for Invalid or Blank.

6.2 Decomposition: Blank and Null Ballots

A distinguishing feature of the results is the asymmetry between blank and null ballots, both in the magnitude of the FC effect and in the behavior of several other regressors. This asymmetry is theoretically informative and directly confirms the prediction of the model that the attribution channel operates primarily through the deliberate disengagement margin and is attenuated for the more heterogeneous null ballot category.

The ratio of the blank to null estimated coefficients is approximately 7:1, indicating that the attribution channel operates almost entirely through the blank ballot margin. This is consistent with the theoretical prediction of Section 3. The 7:1 ratio is precisely the empirical confirmation of Proposition 1's prediction that $| \gamma_{blank} | \gg | \gamma_{null} |$.

The decomposition also reveals a striking sign reversal in the *Reelection* variable. For Invalid and Blank outcomes, Reelection enters positively and significantly: incumbent reelection contests are associated with approximately 1.6 to 2.1 additional percentage points of blank and invalid voting. For Null ballots, the coefficient is negative and significant at the 1% level, at approximately -0.35 percentage points. One interpretation of this pattern is that reelection elections mobilize informed protest: voters who oppose the incumbent but perceive no viable alternative express their dissent deliberately through a blank ballot, while the higher salience of a reelection contest simultaneously reduces the rate of accidental null voting by inducing greater voter attention to the mechanics of ballot completion. This interpretation is consistent with the asymmetric education effect discussed above and with the broader distinction between deliberate and accidental invalid voting embedded in the model.

The dynamic term for *Null Rep* is positive and significant at the 5% level, while the analogous terms for *Invalid Rep* and *Blank Rep* are not significant. This indicates that null voting exhibits moderate cross-election persistence while blank voting does not. Persistent null voting may reflect stable province-level factors such as voter unfamiliarity with ballot procedures or structural barriers to ballot completion, whereas blank voting responds more readily to the contemporaneous fiscal and political environment captured by *FC* and *Hegemony*.

Unemployment enters positively and significantly for *Null* but is not significant for *Blank* or total *Invalid*, suggesting that economic distress generates accidental or protest-driven null voting, adding further support to the interpretation of null ballots as capturing a distinct behavioral phenomenon from the attribution-driven blank protest voting that is the model's primary prediction.

6.3 Magnitude of the Effects

The effect of *FC* is not only statistically significant but economically large. The sample mean of *FC* is 25.7 percentage points with a standard deviation of 17.3 percentage points, reflecting wide variation across Argentine provinces from highly self-sufficient jurisdictions (minimum 5.1%) to almost entirely transfer-dependent ones (maximum 92.5%). Taking the preferred OLS estimate of -0.131 for total *Invalid* ballots, a one standard deviation increase in *FC* is associated with a reduction of 2.3 percentage points, approximately 54% of the sample mean of 4.2%. For *Blank* ballots the analogous calculation yields a reduction of 2.0 percentage points against a sample mean of 3.1%, a proportional reduction of roughly 63%. For *Null* ballots the effect is substantially smaller: 0.28 percentage points relative to a mean of 1.1%, a proportional reduction of about 25%. The 7:1 ratio of blank to null effects in the descriptive decomposition is therefore confirmed in magnitude terms: the attribution channel reduces blank voting by roughly two and a half times the proportional reduction it produces in null voting.

Moving a province from the sample mean to one standard deviation above — the difference between a moderately and a highly fiscally autonomous province— is associated with a reduction in blank voting of roughly two thirds of its average level. This magnitude confirms that the fiscal structure of provincial public finance is a first-order determinant of invalid ballot behavior in Argentine presidential elections, operating at a scale that rivals or exceeds the effects of income, political competition, and electoral calendar complexity.

To contextualize this magnitude, Martinez i Coma & Werner (2019), in their cross-national study of invalid voting, find that enforced compulsory voting raises invalid vote rates by approximately 3 to 5 percentage points, implying a proportional effect of 60 to 100% of the cross-national mean of 4 to 5%. The effect of a one standard deviation increase in fiscal correspondence on blank voting in this paper, 63% of the provincial mean, is therefore comparable in proportional terms to the single largest institutional predictor identified in 417 elections across 73 countries. For Latin America specifically, Power & Garand (2007) find that enforced compulsory voting raises invalid rates by 2 to 4 percentage points which result in a proportional effect of 25 to 50% of the regional mean, while standard measures of electoral disproportionality generate proportional effects of 6 to 13%. The FC effect on blank voting substantially exceeds these institutional benchmarks within the region. Cohen (2018) finds that political fragmentation in Latin American raises invalid rates by 1 to 3 percentage points, a proportional effect of 12 to 37%, again smaller than the FC effect documented here. These comparisons suggest that subnational fiscal architecture operates as a first-order determinant of invalid voting, quantitatively comparable to the compulsory voting mechanism itself and substantially larger than standard institutional and political determinants in the Latin American context. Two caveats apply: the cross-study comparisons are imperfect because the dependent variables, samples, and identification strategies differ, and because our FC effect is identified from within-province variation over time rather than from cross-sectional differences, meaning it captures the dynamic rather than structural component of fiscal correspondence².

6.4 Robustness

The baseline estimates in Table 3 are subjected to three robustness checks. The first addresses potential endogeneity of the margin of victory and voter turnout regressors. The second examines whether the result is driven by the natural resource heterogeneity of oil-producing provinces. The third tests for structural stability of the FC effect across the pre- and post-2001 crisis subperiods.

Table 4 presents instrumental variables estimates obtained with province and time fixed effects and heteroskedasticity-robust standard errors. The *margin of victory* and voter *turnout* in the presidential election are treated as endogenous and instrumented by their congressional

² The Martinez i Coma & Werner and Power & Garand estimates are identified from cross-national or cross-country variation that typically capture structural differences between units and tend to be larger in magnitude than within-unit effects, as in this paper. This suggests the FC effect reported here may be a conservative lower bound on the true structural relationship.

counterparts measured two years prior. *FC*, is treated as predetermined and enters as a regular regressor, since its construction already excludes any contemporaneous electoral feedback.

Table 4. **Instrumental variable estimation with fixed effects and robust standard errors**

Variables	Invalid		Blank		Null	
	I	II	I	II	I	II
FC	-0.1454*** 0.0457	-0.1465*** 0.047	-0.1278*** 0.0443	-0.1286*** 0.0455	-0.0167* 0.0091	-0.0171* 0.009
Unemployment (t-1)	-0.1092 0.1137	-0.0915 0.0807	-0.1383 0.1108	-0.1232 0.0798	0.0280** 0.0136	0.0298** 0.0123
GDP pc (t-1)	-0.0002** 0.0001	-0.0002** 0.0001	-0.0002** 0.0001	-0.0002** 0.0001	0.0000 0.0000	0.0000 0.0000
Hegemony (t-1)	0.397 0.2503	0.3924** 0.1988	0.3852 0.2467	0.3824** 0.1946	0.0098 0.0234	0.0075 0.0205
Magin Rep	-0.0392* 0.0222	-0.0392* 0.0225	-0.0379* 0.0207	-0.0378* 0.0215	-0.0026 0.0038	-0.0026 0.0039
Turnout Rep	-0.0813 0.2165		-0.0704 0.2084		-0.0059 0.0247	
Reelection	1.7818** 0.7359	1.5717** 0.6968	2.1514*** 0.723	1.9417*** 0.6896	-0.3380*** 0.0926	-0.3415*** 0.0936
DSVS	-0.0217 0.0186	-0.0201 0.0183	-0.0252 0.0184	-0.0234 0.0181	0.0037 0.0029	0.0037 0.0029
Fatigue	-1.7694*** 0.486	-1.6549*** 0.497	-1.7061*** 0.4817	-1.6060*** 0.4895	-0.0518 0.0754	-0.0412 0.0604
Invalid Rep	-0.0076 0.0306					
Blank Rep			-0.0146 0.0411			
Null Rep					0.0333** 0.0138	0.0335** 0.0137
Education (t-1)	1.0218 0.8181	1.0913 0.812	1.0644 0.7397	1.1201 0.7414	-0.0406 0.1668	-0.0337 0.1602
Population	0.3123 0.215	0.3191 0.2134	0.3115 0.2087	0.3217 0.2091	-0.0185 0.03	-0.0183 0.0299
Under id test Kleibergen-Paap rk	16.343	13.889	16.446	13.889	14.918	12.866
Weak id test - Cragg- Wald F	20.429	43.866	21.718	43.866	19.210	38.676
Weak id test Kleibergen-Paap rk	14.181	25.504	14.681	25.504	13.210	23.247
Hansen J test	0.000	0.000	0.000	0.000	0.000	0.000
Endogeneity test Chi-sq - p-value	0.2716	0.0966	0.3033	0.1137	0.3987	0.393

Note: Standard errors are reported in parenthesis below coefficient.

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

The Kleibergen-Paap rk LM test rejects under-identification at well below the 1% level in every column. The Kleibergen-Paap rk Wald F statistics range from 13.2 to 25.5, comfortably exceeding the Stock-Yogo critical value for 10% maximal IV size and ruling out weak instrument concerns. The endogeneity test yields p-values between 0.097 and 0.399 across all columns, failing to reject exogeneity of the instrumented regressors at conventional levels in every specification, which supports the use of OLS as the preferred estimator. Substantively, the IV estimates are very close to the OLS baseline: the FC coefficient for Invalid ballots is -0.145 to -0.147 versus -0.131 to -0.133 in Table 3, a difference of roughly 10% in magnitude that is not statistically meaningful. Results for Blank and Null ballots are similarly stable. All remaining coefficients are stable in sign, magnitude, and significance across the two tables.

As a second check, the three main oil-producing provinces: Neuquén, Chubut, and Santa Cruz, whose fiscal structure is affected by hydrocarbon royalties, were excluded from the preferred OLS estimation. On the reduced sample of 20 provinces the *FC* coefficient remains negative and statistically significant at the 5% level for both *Invalid* and *Blank* ballots, confirming that the result is not an artifact of the natural resource heterogeneity embedded in the full sample. Full results are available from the author upon request.

As a third check, the structural stability of the FC effect across the pre- and post-2001 crisis subperiods was tested by interacting *FC* with a post-2001 indicator. The interaction term is not significant in any specification, indicating that the relationship between fiscal correspondence and invalid voting is stable across subperiods and reflects a deep structural feature of Argentine fiscal federalism rather than a crisis-driven or conjunctural phenomenon. The post-2001 indicator itself enters negatively and significantly, capturing a common downward level shift in invalid voting after the crisis that is unrelated to the within-province variation in fiscal correspondence that identifies the *FC* effect, and likely reflecting the broader realignment of Argentine electoral politics and the reconstruction of intergovernmental fiscal relations following the 2001 collapse. Taken together, the three robustness checks confirm the stability and reliability of the baseline findings across alternative estimation strategies, samples, and time periods.

A fourth check tests Proposition 2 directly. If the rational ignorance mechanism operates on the intensive margin and compulsory voting closes the attendance margin, FC should have no significant effect on turnout in the same sample. Estimating the baseline specification with turnout as the dependent variable yields a coefficient statistically indistinguishable from zero

(Table 1A, Appendix). This confirms that the FC effect is concentrated on the ballot content margin and is not confounded by a residual attendance margin effect.

A fifth check addresses the concern that FC may proxy for provincial state capacity rather than the fiscal transparency of the presidential-fiscal transmission chain. State capacity was proxied by provincial public employment per 10,000 inhabitants and included as an additional control in the baseline specification. Two features of this variable are worth noting before examining the results. First, the simple correlation between Employment and FC is -0.34 , indicating that transfer-dependent provinces tend to have larger public bureaucracies, not smaller ones. In the Argentine context this is consistent with the patronage interpretation: governors in transfer-dependent provinces use public employment as a clientelistic instrument financed by transfers (Jones et al. 2002; Gervasoni 2010). This pattern makes the state capacity alternative explanation less plausible on its own terms: low-FC provinces are not characterized by weak administrative capacity in Argentina, but by a particular political economy in which fiscal transfers sustain large patronage-based public sectors. Second, the *Employment* coefficient is statistically indistinguishable from zero across all three dependent variables and all specifications, while the FC coefficient is essentially unchanged in magnitude and significance (Table 2A, Appendix). Taken together, the moderate negative correlation and the null Employment result confirm that the FC effect reflects the fiscal transparency of the presidential-fiscal transmission chain rather than a state capacity gradient. While these results reduce the plausibility of a pure state capacity confound, they cannot fully separate the fiscal transparency channel from the fiscal capacity channel, since both are reflected in the FC measure itself. The paper therefore acknowledges this interpretive limitation, as discussed in Section 5.1.

As a final check to grasp the omitted variable concern, the one-quarter and one-year lag of Unemployment and GDPpc respectively, was replaced by four-year averages over the same pre-election window used for FC, ensuring that all time-varying controls capture accumulated conditions over the electoral cycle rather than single-year observations. The FC coefficient is unchanged in magnitude and significance across all specifications, confirming that the result is not driven by a correlation between short-run economic shocks and the fiscal measure (Table 3A, Appendix).

7. Conclusions

This paper has examined a question that the existing literature on invalid voting has not previously asked: does the fiscal architecture of subnational government shape the rate at which citizens, compelled to vote, cast invalid ballots? The central finding is that higher fiscal correspondence is associated with significantly lower invalid and blank ballot rates in presidential elections. The result is consistent with the attribution channel grounded in rational ignorance: when provincial budgets are dominated by automatic transfers, the transmission from presidential electoral choice to observable fiscal outcome runs through the long and opaque automatic transfers chain that rational voters do not invest in decoding given the near-zero private benefit of a single ballot. The partisan differential is compressed toward zero by attribution confusion, and the deliberation cost premium becomes prohibitive for a share of the electorate. Provinces where own revenues are large and voters can connect their ballot choice to observable fiscal outcomes, generate systematically lower rates of blank and invalid voting. The blank-null decomposition constitutes another empirical contribution of the paper. The *FC* effect operates overwhelmingly through blank ballots which is precisely what the theoretical model predicts. Blank voting is an intentional act requiring a conscious decision to submit an unmarked ballot; it is therefore the margin on which the compression of the partisan differential induced by low *FC* and attribution confusion should be most visible. Null ballots operate through two distinct channels: the primary one comprises accidentally spoiled ballots arising from voter error or unfamiliarity with the ballot format, governed by cognitive constraints unrelated to fiscal transparency. The secondary channel mirrors blank voting: attribution confusion in transfer-dependent provinces compresses the partisan differential, making deliberate null protest more likely. The failure of existing studies to disaggregate them has obscured both the fiscal and subnational political dimensions of invalid voting.

The fiscal mechanism is not the only subnational channel through which provincial arrangements shape national electoral participation. Two additional findings extend the paper's argument beyond fiscal structure. The *Hegemony* variable is consistent with the interpretation that entrenched political dominance raises the effective deliberation cost premium for intentionally valid voting: opposition voters in hegemonic provinces face a choice set where no viable alternative exists, making the partisan differential insufficient to justify valid participation regardless of the level of fiscal correspondence. In provinces where the same coalition has won presidential election after presidential election, opposition voters

face a rational calculus that tilts toward blank balloting rather than deliberate valid participation.

The *Reelection* variable adds a further dimension. Provinces where the incumbent seeks reelection concurrently with the presidential election exhibit significantly higher blank ballot rates but significantly lower null ballot rates — a sign reversal that reveals how gubernatorial reelection bids sort voters between the two types of invalid ballot. The heightened salience of a local reelection contest mobilizes politically engaged voters toward deliberate blank protest while simultaneously reducing accidental null voting among more attentive citizens. This confirms that the influence of local governors on national elections operates not only through fiscal patronage and machine mobilization but also through the direct electoral salience of concurrent gubernatorial contests that reshapes the composition of invalid voting independently of fiscal structure.

Taken together, *FC*, *Hegemony*, and *Reelection* establish a coherent and empirically supported argument: subnational fiscal and political arrangements matter for how citizens vote in national elections. Low fiscal correspondence produces attribution confusion through rational ignorance: the long and opaque automatic transfers transmission chain that ends up in provincial fiscal outcomes is not worth decoding at individual cost, compressing the partisan differential and pushing voters toward blank ballots rather than deliberate valid participation; political hegemony raises the deliberation cost premium by foreclosing viable electoral alternatives; and gubernatorial reelection produces institutional sorting between different types of non-participation. These three mechanisms are distinct in their theoretical logic but complementary in their empirical expression, jointly accounting for a substantial share of the variation in blank voting across Argentine provinces and elections that standard national-level determinants leave unexplained.

This paper connects two bodies of Argentine political economy research that have developed in parallel without previously intersecting. The fiscal federalism literature has established that transfer dependency distorts political incentives at every level of the federal system, for instance, sustaining patronage networks, weakening fiscal accountability, and reproducing political hegemony across electoral cycles. The invalid voting literature has established that blank and null ballot rates vary systematically across provinces in ways that existing socioeconomic, institutional and protest controls only partially explain. This paper shows that the unexplained variation in the latter is partly accounted for by the mechanisms documented in the former: the same fiscal architecture that distorts legislative incentives and feeds

clientelistic networks also generates attribution confusion among provincial citizens, severing the link between electoral participation and perceived fiscal consequences and converting structurally disengaged voters into blank balloters under compulsory voting. The citizen who casts a blank ballot in a low fiscal correspondence, hegemony-dominated province is not making a random or uninformed choice: they are responding, in the only way compulsory voting permits, to a subnational political economy that has systematically removed the conditions under which a valid vote feels either fiscally meaningful or politically consequential.

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Appendix

Table 1A. **Baseline specification with *Turnout* as the dependent variable**

Two-way fixed effects estimation

Variable	Dependent variable	
	turnout	turnout
Turnout Rep (t-2)	0.4086*** 0.0549	
vfi9avg1	0.0354 0.0378	0.0622 0.0544
Unemployment (t-1)	-0.1092 0.067	-0.3004*** 0.0863
GDP pc (t-1)	0.0000 0.0001	0.0002 0.0002
Hegemony (t-1)	0.1935** 0.0832	0.3919** 0.1744
Margin Rep (t-2)	0.0008 0.0077	-0.0007 0.0065
Reelection	0.4527 0.3704	0.567 0.55
DSVS	0.0202* 0.0112	0.0096 0.0154
Fatigue	-1.3879*** 0.4001	-1.7895*** 0.5648
Education (t-1)	-0.4437 0.5786	-1.1756 0.9336
Population	0.0122 0.1513	-0.0476 0.1485
Constant	47.8277*** 4.5262	76.7425*** 2.3073
Year effects	yes	yes

Table 2A. **Baseline specification including *Employment* as explanatory variable**

Two-way fixed effects estimation

Variables	Dependent variables		
	Invalid	Blank	Null
Employment (AVG)	-0.0230 0.0253	-0.0236 0.0246	-0.0013 0.0056
FC	-0.1286*** 0.0386	-0.1105*** 0.0383	-0.0159* 0.0087
Unemployment (t-1)	-0.0679 0.0735	-0.1009 0.0668	0.0312** 0.0143
GDP pc (t-1)	-0.0002*** 0.0001	-0.0002*** 0.0001	0.0000 0.0000
Hegemony (t-1)	0.4449* 0.2167	0.4296* 0.2120	0.0126 0.0219
Magin Rep	-0.0159* 0.0087	-0.0156* 0.0086	-0.0010 0.0019
Reelection	1.7591** 0.7898	2.1407** 0.7825	-0.3434*** 0.0984
DSVS	-0.0338 0.0203	-0.0366* 0.0188	0.0030 0.0034
Fatigue	-1.4218** 0.5297	-1.3645** 0.5186	-0.0288 0.0554
Education (t-1)	1.6210* 0.8073	1.6451** 0.7448	-0.0029 0.1817
Population	0.2782 0.1719	0.2760 0.1660	-0.0189 0.0291
Invalid Rep (t-2)	-0.0151 0.0289		
Blank Rep (t-2)		-0.0061 0.0390	
Null Rep (t-2)			0.0289** 0.0123
Constant	7.2584*** 2.5226	5.7026** 2.4493	1.4514*** 0.3483
Year effects	Yes	Yes	Yes

Note: *Employment* is defined as number of provincial public employees per 10,000 inhabitants in province *i* at election *t*.

Table 3A. **Baseline specification including *Average Unemployment* as explanatory variable**

Two-way fixed effects estimation

Variables	Dependent variables		
	Invalid	Blank	Null
FC	-0.1272*** 0.04	-0.1086** 0.0402	-0.0177* 0.0086
Unemployment (t-1)	0.0205 0.0586	-0.0127 0.0578	0.0302* 0.0149
GDP pc (t-1)	-0.0002*** 0.0001	-0.0002** 0.0001	0 0
Hegemony (t-1)	0.4284* 0.2197	0.4099* 0.2148	0.0157 0.0243
Magin Rep	-0.0182** 0.0085	-0.0177** 0.0084	-0.001 0.0017
Reelection	1.5908* 0.8089	1.9677** 0.7943	-0.3465*** 0.0947
DSVS	-0.0282 0.0188	-0.0320* 0.0175	0.0041 0.0028
Fatigue	-1.4460** 0.5244	-1.3914** 0.5095	-0.0264 0.0573
Education (t-1)	1.107 0.6823	1.0657 0.6368	0.0659 0.1972
Population	0.3113* 0.1697	0.3156* 0.1621	-0.0241 0.0274
Invalid Rep (t-2)	-0.0075 0.031		
Blank Rep (t-2)		0.0005 0.0399	
Null Rep (t-2)			0.0250* 0.0124
Constant	4.7018** 1.9523	3.1045 1.9588	1.5476*** 0.453
Year effects	Yes	Yes	Yes