

Do Fiscal Transfers Affect Local Democracy? Lessons from Chilean Municipalities

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ABSTRACT

Extant literature concurs that fiscal transfers affect local democracy when they grant subnational governments nontax revenue. Yet there is nonetheless a mismatch between this concept and existing measures, which consider the whole transfers local governments receive, including both tax and nontax revenue. This article studies the Fondo Común Municipal (FCM), the most important intergovernmental grant in Chile, and provides a novel measure of nontax revenue. It uses this measure alongside the whole FCM transfer to test the rentier hypothesis. On the one hand, it shows that both measures increase the incumbent party vote share, although the effect of our measure is smaller. On the other hand, it finds that the FCM transfer has an impact on the probability of reelection and the competitiveness of elections, but this effect disappears when using our measure. Overall, the findings suggest that rents from transfers do not lead to strong electoral dominance in unitary states.

Keywords: Subnational democracy, fiscal federalism, rents, nontax revenue, decentralization, unitary states

There is ample evidence that democracy does not spread evenly within countries. Several scholars from different regions of the world, especially from Latin America, have documented the persistence of practices that harm democracy in subnational units. Whether conceptualized as subnational authoritarianism (Gibson 2013), hybrid regimes (McMann 2006; Gervasoni 2010, 2018), undemocratic regimes (Giraudy 2015), illiberal structures (Behrend and Whitehead 2016), or electoral domains (Fonseca and Pino 2022), the literature on subnational democracy has consistently demonstrated that local incumbents can use less-than-democratic

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forms of governance to limit political contestation. To understand why some subnational units are more democratic and competitive than others, scholars have focused on either the characteristics of subnational units or their links to the national government (Giraudy 2015).

The first branch of this literature concentrates on the specific features of the units under study, such as their economic structure, geographic location, demographic size, and the spatial dimensions of political mobilization. For example, evidence from Russia shows that subnational democracy may thrive in regions where individuals do not depend economically on the state (McMann 2006) or where geographic proximity to the West allows diffusion processes to influence the politics of undemocratic regions (Lankina and Getachew 2006). Likewise, Gerring et al. (2015) and Kouba and Došek (2021) have found that the size of subnational units affects local democracy, as demographically smaller districts suffer from lower levels of contestation. Similarly, the persistence of undemocratic practices in the more backward states of Brazil is largely explained by the fact that clients can be isolated by conservative machines in areas with small populations, high poverty, and limited communication with large urban centers (Montero 2012).

While the second branch of studies acknowledges that the characteristics of the subnational units are relevant, it emphasizes that local governments are constrained by an overarching institutional framework that links the national and subnational political arenas. Hence, subnational democracy is mostly understood as the result of national-local interactions. For instance, Gibson (2013) convincingly explains that the maintenance of subnational authoritarian regimes is the result of a boundary control strategy: undemocratic incumbents prevail when conflict remains localized and are threatened when conflict becomes nationalized. In a similar vein, Giraudy (2015) argues that presidents use fiscal and partisan powers to stabilize or destabilize undemocratic governors, who, in turn, utilize their own political resources to counteract presidential encroachments. As a result, Giraudy notes, undemocratic regimes can be either reproduced by the national government or, alternatively, self-reproduced.

Likewise, Fonseca and Pino's 2022 study of Colombian departments reports that while local machines are crucial to create electoral domains, local bosses consolidate their power by developing linkages with national-level politicians. Similarly, as Eaton and Prieto (2017) note, subnational authoritarian elites in Colombia have used their influence over national legislators to secure the support of paramilitary leaders, which helps them obtain votes.

Among the explanations that emphasize the interactions between subnational and national institutions, the study of the effects of fiscal arrangements on subnational democracy has been particularly fruitful. Since Desai et al. (2005, 814) observed that revenues from budgetary transfers from the central government transform regions reliant on these "unearned" sources of income into rentier regions, scholars have utilized rentier state theories to explain variation in subnational democracy. In particular, they have found that highly redistributive revenue-sharing institutions create rentierism by granting some subnational governments sizable amounts of

income that do not accrue from taxing local citizens. This external income thus corresponds to rents from the perspective of the recipient subnational government and is expected to trigger political dynamics similar to the resource curse (Gervasoni 2010, 2018; Brollo et al. 2013; Morrison 2015; Morrison and Litschig 2015).

Specifically, two consequential studies have theorized the key concepts used in the literature, which encompass different types of rents with the same causal attributes; namely, Gervasoni's "fiscal rents" (2010, 2018) and Morrison's "nontax revenue" (2015). Whereas the concept of fiscal rents refers to "revenues accruing to a state from an external source, that do not depend on broadly taxing the domestic economy, and that are not necessarily proportional to its size" (Gervasoni 2010, 306, 2018, 129), nontax revenue is defined as "revenue that does not accrue from taxing citizens of the recipient government" (Morrison 2015, 45). Although both concepts are not equal, they are very similar and, more importantly, agree about the conditions under which fiscal transfers create rentierism.¹ Indeed, Gervasoni (2018, 134) and Morrison and Litschig (2015, 87) correctly note that not all fiscal transfers generate rents. It is only when subnational governments receive more money in fiscal transfers than they pay out in taxes to fund those grants that incumbents receive rents. In other words, if subnational governments receive fiscal transfers that are larger than what these jurisdictions contribute to the common pool of taxes, rentier dynamics are expected to emerge (Gervasoni 2018, 137; Morrison 2015, 45).

Although this literature has significantly expanded our understanding of how fiscal transfers shape local democracy, the difficulties of collecting data on the exact amount subnational governments contribute to intergovernmental transfers has meant that measures that closely match the concept of nontax revenue have been hard to construct. As a matter of fact, existing studies that address the effects of fiscal rents use the total amount of fiscal transfers the center grants to subnational governments, irrespective of the latter's contribution to these funds (e.g., Desai et al. 2005; Gervasoni 2010; 2018; Brollo et al. 2013; Morrison 2015; Díaz-Rioseco and Alberti 2022). For instance, Desai et al. (2005, 822) operationalize unearned income streams from intergovernmental transfers as grants from the federal budget, which includes different funds transferred to the Russian regions, such as equalization grants and federal programs. Similarly, Gervasoni's measure of fiscal (federalism) rents considers all transfers from the federal government (2010, 319, 2018, 156–57). This includes, among other components, the so-called *Coparticipación Federal de Impuestos* (CFI)—which is an automatic grant with no spending restrictions that constitutes the bulk of federal transfers to the Argentine provinces—but also some earmarked and discretionary transfers that are smaller in magnitude but also important.

Also focusing on Argentina, Díaz-Rioseco and Alberti (2022, 10) use the CFI transfer to gauge fiscal rents. Likewise, Brollo et al. (2013, 1771) and Morrison and Litschig (2015, 91) use discontinuities based on population thresholds in the allocation of *Fundo de Participação dos Municípios* (FPM), a largely unconditional grant that represents the majority of revenue for Brazilian municipalities. Like the studies above, the authors use the whole transfer without considering what is paid out by recipient subnational units to fund it.²

As a result, current measures include both tax and nontax revenue and consider that all subnational governments are, to varying degrees, rentier. Nevertheless, only when subnational governments receive more revenues than what taxpayers pay in those territories do fiscal transfers create rents, and even in these cases, not all transfers subnational governments receive constitute nontax revenue. As an illustration, take three local governments that receive US\$100 each in fiscal transfers. Following existing studies' measurement strategy, we would consider that each local government has received US\$100 in nontax revenue. However, each local government has contributed different amounts in taxes to fund those intergovernmental transfers. Local government 1 contributed US\$150 to the common pool. Hence, rather than receiving nontax income, it is a net contributor that has been taxed in the amount of US\$50. In turn, local government 2 contributed exactly US\$100 to the common pool and, therefore, has not received nontax revenue. And local government 3 contributed US\$60 to the common pool, which makes it the only net recipient of nontax revenue. Nevertheless, the correct amount that should be considered for analytical purposes is US\$40 and not US\$100, as existing measures would do.

We aim to provide a more accurate measure of nontax revenue by studying the Municipal Common Fund (*Fondo Común Municipal*, FCM), the most important intergovernmental transfer in Chile. Studying this fiscal transfer has several advantages. First, the FCM is automatically and unconditionally transferred to all municipalities according to a fixed formula and has no spending restrictions. As a result, the transfer approaches the key properties of rents, as mayors receive fiscal windfalls over which they have discretion.

Second, this grant is a large equalization transfer aimed at financing most municipalities and reducing intermunicipal fiscal disparities by transferring income from better-off to less-well-off municipalities (Eaton 2004; OECD 2017). Therefore the transfer is highly redistributive and is the main source of income for most municipalities, turning the vast majority of subnational governments into rentier units. Third, taking advantage of the country's rich administrative data, we are able to identify the actual portion of the FCM that corresponds to nontax revenue. More specifically, we can collect information on municipal budgets and trace what municipal governments receive from the FCM, as well as the share of the different taxes they pay out to finance the fund. Consequently, we provide a novel measure of fiscal rents that is theoretically closer to the concept of nontax revenue, and ask whether it affects electoral contestation.

Using our measure of nontax revenue, we tested extant hypotheses of fiscal rentierism with panel data from Chilean municipalities (2005–16) using three different dependent variables commonly used in the literature: the incumbent party vote share, its probability of reelection, and the margin of victory. On the one hand, we show that the FCM transfer, which includes both tax and nontax revenue, drastically increases incumbent parties' vote share, their probability of reelection, and the difference in the vote shares between the winner and the runner-up in the mayoral election. On the other hand, when using our measure of nontax revenue, our results show important differences in terms of statistical and substantive significance. As do

previous studies, we find that fiscal rents increase the incumbent party vote share. However, the coefficient size is about three times smaller compared to the one obtained with the FCM transfer. Additionally, when we use our measure of fiscal rents, we find that the statistical association between fiscal rents and the probability of reelection disappears. The same occurs with the margin of victory.

Overall, our results show that nontax revenue does help incumbent parties to obtain more votes, although this advantage falls short of the strong electoral dominance typically described in rentier units. Thus, using a measure that includes all the transfers subnational governments receive leads to an overestimation of the negative effects of nontax revenue.

This study offers two main contributions to existing research on the politics of fiscal transfers. First, it provides a novel measure that allows us to identify what effectively constitutes nontax revenue, and thereby to evaluate the effects of fiscal rents. Therefore, since these measures are generally hard to construct, future research on rentierism should be careful to study fiscal transfers that are effectively redistributive and avoid using other type of grants. For instance, studies of rentierism should not consider transfers allocated on the principle of derivation, as it ensures that each subnational government receives a share of revenue from the central government that is proportional to the amount of resources contributed. Second, it expands the scope of previous research on fiscal rentierism, which has focused solely on federal democracies. This is paradoxical because central governments in unitary countries play a prominent role in financing local governments when they decentralize public services (Boadway and Shah 2009), which implies that rentier effects might also emerge in unitary democracies. We therefore propose a set of conditions necessary for rentier effects to emerge in unitary states.

NONTAX REVENUE AND SUBNATIONAL DEMOCRACY

Intergovernmental grants are an important source of external income for local governments. These grants can take the form of foreign aid at the national level or fiscal transfers at the subnational level, and have been crucial for explaining how the fiscal bases of states shape political regimes (e.g., Smith 2008; Djankov et al. 2008; Gervasoni 2010, 2018; Bueno de Mesquita and Smith 2009; Morrison 2015; Morrison and Litschig 2015). In particular, subnational research suggests that regional and municipal governments that receive more money in fiscal transfers than they contribute in taxes to fund those grants turn into rentier units, thereby reducing contestation in local elections.

Recent studies on Latin American federations have examined the political dynamics of fiscal transfers and have confirmed the existence of rentier effects. Indeed, Gervasoni's groundbreaking research (2010, 2018) focuses largely on the effects of fiscal federalism in Argentina, where revenue-sharing institutions redistribute revenues obtained in the wealthier and larger provinces to the demographically smaller ones, providing several provinces with fiscal rents that are larger than what these districts contribute to the common pool of taxes.

Consistent with his theory, Gervasoni finds that provinces that receive larger per capita transfers from the federal government are less democratic, as incumbent governors control large budgets relative to the size of their local economies. As a result, rentier governors have enough nontax revenue to undermine citizens' economic autonomy by increasing spending in patronage and clientelism, awarding procurement contracts to local businesses, and dominating the provincial media advertising market.

Also working on Argentina, Díaz-Rioseco and Alberti (2022) confirm these findings but note that fiscal transfers undermine provincial democracy only when all or most of those revenues are controlled by the provincial government, thereby depriving lower levels of government from access to fiscal rents that would enhance their fiscal autonomy enough to electorally challenge the incumbent party.

Additionally, studies on Brazilian local governments confirm the rentier effects of fiscal transfers by studying the political effects of the FPM, which is also a redistributive transfer with few strings attached that tends to benefit less populated municipalities. Since the FPM is financed by income and industrial taxes that come disproportionately from jurisdictions with larger and richer tax bases, the fund is highly redistributive and therefore is likely to breed rentierism (Morrison 2015; Morrison and Litschig 2015). In particular, two studies have found strong evidence that this fiscal transfer helps parties and mayors entrench themselves in power. Brollo et al. (2013) find that a windfall of fiscal rents increases the reelection probability of incumbents by raising spending on corrupt activities and reducing the quality of mayoral challengers. Second, Morrison and Litschig (2015) also document that nontax revenue generates higher reelection rates for incumbent parties. They note nevertheless that this effect is largely explained by an increase in public spending, as mayors use fiscal rents to provide constituents with benefits.

FISCAL RENTIERISM IN UNITARY STATES

Two typical features of decentralized arrangements breed rentierism by redistributing income to poorer or demographically smaller jurisdictions: vertical and horizontal fiscal gaps. Vertical fiscal gaps are created when expenditures are decentralized to a greater extent than taxation. This implies that local taxes have to be supplemented with different types of intergovernmental transfers in order to allow subnational governments to carry out their administrative tasks (Boadway and Shah 2009). Table 1 shows the average vertical fiscal gaps for both unitary and federal countries.³ This fiscal gap is important in both types of states, but it is larger in unitary systems, which implies higher levels of transfer dependency.

In practice, fiscal transfers intended to deal with vertical fiscal gaps are highly redistributive around the world (Boadway 2006). The reason is that they usually include some implicit equalization criteria for assignment, which implies that all subnational governments receive transfers, but the size of such transfers depends partially on their fiscal capacities, size, or needs (Wilson 2007).

Table 1. Fiscal Gap in Federal and Unitary States

Fiscal Gap by Revenue		N
Federal states	62.78%	14
Unitary states	72.18%	72

Source: Authors' elaboration based on data gathered from the IMF's Government Finance Statistics (2019).

Horizontal gaps, by contrast, emerge because subnational governments at the same level possess different fiscal capacities, which might generate disparities in the quality of public services that citizens from different subnational jurisdictions receive. As a result, fiscal transfers that seek to offset horizontal fiscal gaps do so by explicitly equalizing fiscal capacities, which implies redistributing revenues from richer to poorer subnational governments (Boadway and Shah 2009). The redistributive nature of most fiscal transfers worldwide means that, by definition, these transfers subsidize incumbents of the benefited subnational governments with nontax revenue, especially in unitary settings.

Nevertheless, the institutional differences between federal and unitary states entail that the latter's higher dependence on redistributive intergovernmental transfers are not sufficient for spurring rentier effects. In federal states, sovereignty is shared between the national and subnational levels, whereas in unitary countries, the state is governed as a single power and subnational governments exercise only the powers that the central government delegates or devolves (OECD 2017). Thus, the critical difference between these two state types is the higher insulation and autonomy of subnational politicians with respect to the center in federal than in unitary states (Wibbels 2005).

Consequently, one of the main strategies local politicians in federal countries have implemented to concentrate power and reduce competition—namely, the use of fiscal rents to create a political support base that allows them to manipulate local political institutions—is not available for subnational incumbents in unitary states. It should be noted, however, that this strategy that local politicians in federal countries use is available only for incumbents of administrative units that have the autonomy to modify laws and institutions. In settings where local politicians cannot manipulate the rules of the political game, the main strategy to build party hegemony is to resort to informal—and even illegal—arrangements (Gibson 2013). These arrangements include clientelism, patronage, and nepotism, which are common practices undemocratic mayors in unitary countries use to strengthen their electoral base and buy political loyalty (Došek 2019).

For local rulers to be able to spend on these informal or illegal practices, however, they must use discretion in spending the fiscal rents they receive from redistributive transfers. For example, research on Indonesia, a highly decentralized unitary country, has shown that although local governments depend heavily on central government

transfers, no rentier effect is observed, as national legislation imposes strict restrictions on the way these transfers may be spent (Buehler et al. 2021).

Additionally, for rentier effects to emerge in unitary countries, there must be some level of administrative decentralization that delegates the implementation of certain public policies to local governments or grants them the autonomy to create public policy programs. This is crucial, as local politicians need to be able to claim credit for the implementation or creation of policy programs to reap the electoral benefits of policymaking, which is amplified when policies clearly belong to one level of government (Niedzwiecki 2018). Thus, when local politicians have discretion to spend fiscal rents from intergovernmental transfers, they can decide on which policies to spend this income or create policies that are electorally advantageous, which allows them to claim the credit. In doing so, politicians are more likely to spend on policies that are visible, as this is necessary for citizens to be able to attribute responsibility to a particular politician for the benefit obtained from that policy (Niedzwiecki 2018).

In short, for rentier dynamics to emerge in unitary settings, there are two necessary preconditions. First, subnational governments need to be fully or partially funded by redistributive intergovernmental transfers that have no significant strings attached, so that local incumbents are able to spend them as they see fit, including on informal practices. Second, local governments must be responsible for the creation or implementation of some public policies to use nontax revenue to fund them and claim credit for them.

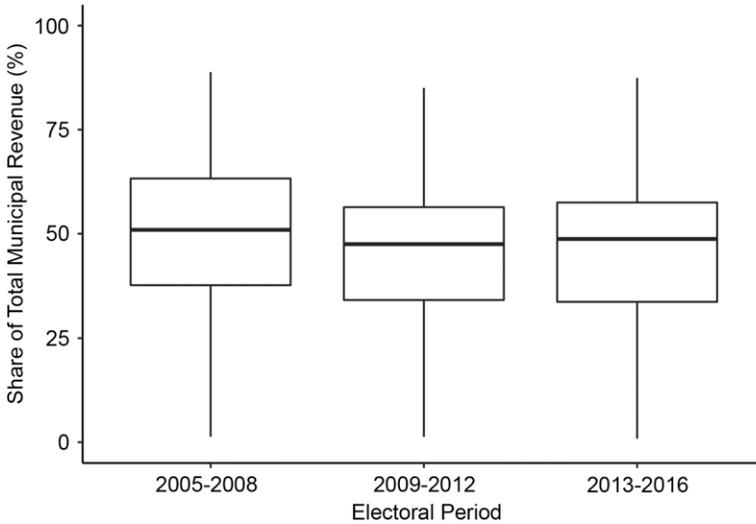
LOCAL GOVERNMENTS AND NONTAX REVENUE IN CHILE

Chile is a centralized democracy that has gradually transferred important spending responsibilities to municipal governments (Eaton 2004). The country has a three-tiered administrative structure that comprises the national level, 16 regions, and 345 municipalities. Presidents are elected every four years with no possibility for immediate reelection. Chile lacks a strong intermediate level of government, as chief executives of regional governments (*intendentes*) were appointed by the president until 2021, when the first direct elections of governors were held. Nevertheless, there are still appointees from the center, the presidential delegates, who share government responsibilities with the regional executive. Mayors hold four-year terms and can be immediately reelected.

As do local governments in most countries, Chilean municipalities rely heavily on intergovernmental grants to finance their spending. On the one hand, fiscal reliance on the FCM makes Chile a good case to study the effects of fiscal rentierism. On the other, the central government delegates important responsibilities to the local level, which allows mayors to claim credit for their programs and to build an important support base.

In terms of municipal financing, the FCM is the largest fiscal transfer of the local government funding system and constitutes the main source of revenue for most municipalities. Indeed, as the boxplot in figure 1 shows, the FCM has been a stable

Figure 1. Municipal Fiscal Reliance on the FCM, by Electoral Period

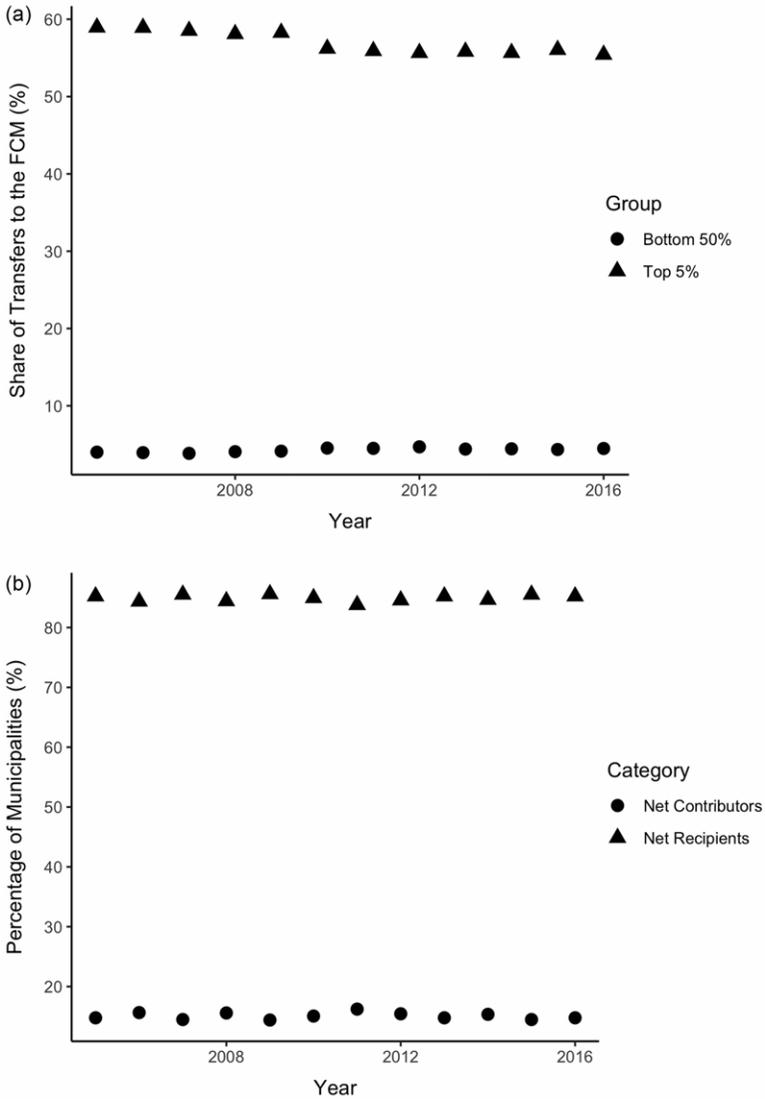


source of municipal revenue over time and represents nearly half of the total municipal revenue for the median municipality for the period under study.⁴

Additionally, the FCM is an automatic and unconditional transfer with no strings attached. As a result, the transfer accrues to municipal coffers like “manna from heaven” and grants incumbents discretion over spending, which is critical for using fiscal transfers for political purposes (Jensen and Wantchekon 2004). More importantly, the FCM is a highly redistributive transfer that creates the ideal conditions for fiscal rentierism by reallocating revenue collected by all municipal governments in favor of less-well-off jurisdictions. Specifically, given the concentration of tax bases in few municipalities, the FCM results in a strong “Robin Hood” effect, in that it establishes an equalizing scheme in which richer local governments subsidize poorer ones by sharing a significant part of their tax income. (OECD 2017).

As figure 2a shows, the richest 5 percent of municipalities contributed an average of approximately 58 percent of the total income of the FCM fund, whereas the bottom 50 percent of municipalities funded an average of nearly 4 percent of the FCM resources during the period under study. In other words, richer municipalities subsidized the poorer ones by contributing a disproportionate amount of tax revenue to the common pool of taxes that funds the FCM. Also, as shown in the figure 2b, few municipalities are net contributors, while the vast majority of local governments are net recipients, as the transfers received from the fund outweigh their contribution to it. Thus the FCM creates rentierism by redistributing income in favor of less-well-off

Figure 2. (a) Share of Total Transfers Contributed to the FCM, by Year. (b) Net Contributors and Net Recipients, by Year



municipalities. Following existing research, we should observe strong rentier effects across Chilean municipalities.

As for municipal responsibilities, several decentralization reforms over the last decades have increased municipal governments' attributes and resources, which has

turned mayors into important political figures (Eaton 2004). Chilean municipalities have both exclusive and shared responsibilities with other government levels. Exclusive responsibilities include preparing, approving, and modifying the municipal land use plan; promoting community development; enforcing transit and public transportation measures; management of public cleanliness; enhancing of public spaces; and construction and urbanization-related issues. Municipal governments also share other obligations with the national government in myriad areas, such as primary and secondary education; primary health care; social assistance; training, promotion of employment, and economic development; tourism, sports, and recreation; urbanization and urban and rural roads; construction of housing and sanitary infrastructure; public transportation and traffic; risk prevention and emergency services; public security; and promotion of equity between men and women (OECD 2017, 86).

Even though these are shared responsibilities, it is worth noting that local governments can provide these public goods and services either directly, using resources from their own budget, or in connection with the central government, which funds these activities through earmarked transfers (Paredes and Rivera 2017). As a result, municipal governments with access to fiscal rents may create their own programs in several of these areas and thereby claim credit for their implementation. Indeed, municipalities typically spend a significant portion of their budgets directly providing social services, promoting labor productivity and opportunities, building sports and recreational facilities, and constructing and maintaining public lighting, parks, roads, and sidewalks (Paredes and Rivera 2017).

Furthermore, responding to one of citizens' primary concerns, mayors have also conducted programs in the area of public security by putting together local security forces, also known as citizens' security (*Seguridad Ciudadana*). Although these are shared responsibilities, according to public opinion polls, the majority of citizens believe that areas such as public security, employment and training, social assistance, public lighting, support to neighborhood committees, and maintenance of urban infrastructure are the primary responsibility of municipal governments (CPP UC 2016). Thus, mayors are able to claim credit for the creation or implementation of programs in these areas, thereby reaping the electoral benefits that increase their incumbency advantage.

Additionally, mayors may use fiscal rents to engage in informal practices, such as patronage and clientelism. Regarding patronage, research has shown that mayors' discretion over public employment has led them to use municipal hiring as a strategy for voter mobilization and to build a support base (Corvalan et al. 2018; Došek 2019; Ordóñez 2023). Although there are certain legal restrictions that limit public employment, these only establish the maximum percentages of the municipal revenues—which include the FCM—that can be spent to hire municipal bureaucrats. Consequently, mayors who receive a higher share of fiscal rents from the FCM have more income to engage in patronage.

As for clientelism, mayors use fiscal revenue for electoral purposes through different means. For instance, Barozet (2008) shows that they offer employment and

housing to boost their probability of success. Similarly, Pribble (2015) notes that mayors use the Municipal Labor Intermediation Office to claim credit for ensuring employment opportunities, whereas Ordóñez (2023) finds that mayors provide public resources to municipal councilors in exchange for loyalty, thereby undermining local horizontal accountability. Likewise, Došek's 2019 study of subnational democracy in Chile shows that less-than-democratic mayors build a strong support base mainly by delivering private goods to their constituents and local social organizations.

THE MUNICIPAL COMMON FUND

The FCM is an equalization grant that aims to reduce intermunicipal fiscal disparities and provide most municipalities with the resources to accomplish their tasks (Eaton 2004; OECD 2017). It operates as a common pool of local taxes, which is subsequently redistributed among all municipalities, according to a formula-based equalization scheme. The fund is self-financed, as all municipalities contribute a share of their tax revenues (property tax, business tax, vehicle tax, vehicle transfer fees, and revenue from traffic violation fines) and simultaneously, all receive transfers from it. It is important to note that the Chilean structure of local taxes does not allow municipalities to influence tax bases or to set tax rates (OECD 2017). Indeed, the central government defines the rules by which municipalities levy taxes and set local tax rates, which is why local taxes in Chile work more like national taxes allocated to municipalities (OECD 2017).

The most important local tax revenues are taxes on property, business, and vehicles, which constitute the main sources of funding of the FCM. In effect, the portion of these taxes shared with the FCM represents almost the totality of the funds that make up the common pool of FCM revenues (OECD 2017). Property taxes constitute the main source of tax revenue, and municipalities must provide 60 percent of that revenue to the FCM. The central government determines the tax rate as well as the real estate that is exempt from taxation, which depends on the property value estimated by Chile's Internal Revenue Service (IRS). Furthermore, the central government collects this tax on behalf of municipal governments. National legislation dictates that the municipalities of Santiago, Providencia, Las Condes, and Vitacura, which concentrate property taxes nationwide, must contribute an additional 5 percent, thereby sharing 65 percent of their property taxes.

Municipal governments also collect vehicle taxes from motor vehicle owners. The tax rate is set by the central government and is the same for all municipal governments. According to national legislation, all municipalities must provide 62.5 percent of the vehicle taxes collected to the fund. Municipalities levy business taxes for commercial activities. Municipal governments have little room to maneuver concerning this tax, as they are heavily constrained by national legislation, which establishes that the tax rate must range between 2.5 and 5 percent (OECD 2017). Furthermore, it is the IRS, not the municipal government, that is the institution responsible for defining the value of a company's capital.

Given the territorial concentration of commercial activities, national legislation mandates that the municipalities of Providencia, Las Condes, and Vitacura share 65 percent of the revenue from selling licenses to business, whereas the municipality of Santiago is obliged to share 55 percent. The remaining municipalities are exempt from sharing this tax. In addition to these taxes, municipal governments are required by law to share 50 percent of the fees they charge for vehicle transfers and traffic violation fines, although these fees represent a marginal amount of the fund.

Regarding the allocation rules of the fund, national legislation determines the distribution formula, which is based on an algorithm that combines four different criteria in order to address horizontal imbalances in terms of resources and needs, in the following percentages. First, 10 percent is allocated depending on the percentage of people living in poverty in a municipality relative to the overall national percentage. Municipal poverty levels and the national average are calculated by the central government, specifically by the Ministry of Social Development. Second, 25 percent is equally allocated across all municipalities.⁵

Third, 30 percent is assigned depending on the number of properties exempt from the territorial tax. The IRS is the institution responsible for defining the properties that are exempt from paying taxes, based on a national law. It is important to note that about two-thirds of the properties in the country are exempt from paying a property tax, which implies that this tax is concentrated in the few richest municipalities of the country (OECD 2017).

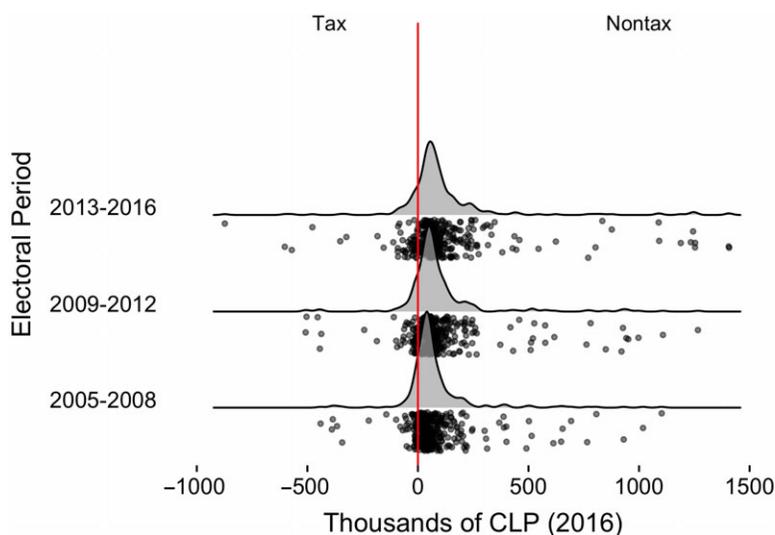
The last 35 percent of the allocation is distributed depending on the municipalities' per capita own revenue (the portion of taxes on property, business, and vehicles that municipalities are not obliged to contribute to the FCM, and other minor local fees and fines) of the preceding year, relative to the national average. To calculate this amount, the formula also includes nonresidents who live for limited periods of time in the municipality. This information is provided by the National Tourism Service.

DATA

Identifying which part of an intergovernmental transfer constitutes nontax revenue is critical to assess the validity of extant theories of fiscal rentierism, as rentier effects should be observed only when fiscal institutions allocate transfers that are larger than the taxes levied to fund the common pool of taxes that finances those grants. We provide a novel measure of fiscal rents by gauging the actual nontax revenue that municipal governments receive, which enables us to depart from existing measures that take the whole amount of fiscal transfers, lumping together tax and nontax income.

We calculate both the FCM transfer and the FCM nontax. Both variables are expressed in per capita terms and in thousands of 2016 Chilean pesos (CLP). To contextualize, in 2016 the exchange rate was approximately 667 CLP per 1 USD. Appendix A online reports descriptive statistics for these variables and all the variables used in the analysis.

Figure 3. Distribution of the FCM Nontax, by Electoral Period



To compute the FCM transfer, we calculated the per capita amount of FCM each municipality received, regardless of its contribution to the fund. For the FCM nontax, we subtracted the amount of money municipalities contributed to the FCM from the revenue they received from it and then divided that amount by the total municipal population. The data to construct this variable were gathered directly from municipal budgets, which were used to trace the amounts each municipality paid out to the FCM in the tax categories described above.⁶ It should be noted that the data we used to calculate what municipal governments contributed to the fund are available from 2005 on.

Figure 3 shows the distribution of the per capita FCM nontax. Municipalities that lie below zero are net contributors, whereas the vast majority of local governments receive fiscal rents from the FCM, as the transfers received from the fund outweigh their contribution to it.

Our main independent variables are the (logged) per capita FCM transfer and the FCM nontax. It should be noted that this second variable, unlike the first one, includes negative values, which indicate net contributors to the fund. In order to construct this variable, we assigned net contributors a value of zero; that is, municipal governments with no nontax revenue. Accordingly, we used the log of this variable plus 1.

We gauged the effect of fiscal rents on electoral contestation by focusing on three dependent variables commonly used in the literature. First, we measured the incumbent party vote share in municipal elections.⁷ Higher values of this variable signal a larger advantage for the incumbent party. Second, we used a dummy variable

to measure whether the incumbent party is reelected or not (1 = reelected). Third, we calculated the margin of victory between the winner and the runner-up in municipal elections. This variable captures the overall competitiveness of municipal elections. Thus, lower values of this variable indicate smaller margins and, therefore, more competitive elections.

We gathered the data to construct our electoral variables from the Chilean Electoral Office (SERVEL) for mayoral elections held in 2008, 2012, and 2016. It is worth noting that the measurement of subnational democracy has sparked a heated debate among scholars. Despite the lack of consensus on this matter, many experts equate the existence of less-than-democratic subnational units with electoral dominance. Therefore, our three measures center on access to power and cover different aspects of electoral democracy, focusing especially on levels of contestation. Nevertheless, we are aware that our indicators concentrate only on an electoral dimension of local democracy and thereby leave out dynamics related to the exercise of power, such as abuse of power, which some authors have used in their conceptualizations of hybrid regimes (Giraudy 2015).

To account for potential confounders, we controlled for several sociodemographic, fiscal, and political variables. For sociodemographic variables, we controlled for municipal size. As Gerring et al. (2015) and Kouba and Došek (2021) have demonstrated, the size of municipal electorates has a strong effect on electoral contestation. Following these studies' measurement strategies, we controlled for the (logged) number of eligible voters, which, in the case of Chile, is the number of citizens who are 18 years old or older. In addition, we controlled for the municipal poverty rate as a proxy for local development.

For the fiscal variables, we controlled for the total amount of all fiscal transfers that municipalities received from the central and regional governments and divided it by the total municipal population. This variable includes several types of transfers, both earmarked and discretionary, but does not include the FCM transfer that municipalities receive. We also included a variable measuring the revenue municipalities received from mining activities, as resource rents may affect local political dynamics along the lines of the resource curse theory.⁸ Additionally, we controlled for the revenue municipalities collected on their own, and added a dummy variable controlling for whether a municipality was a net contributor to the fund (1 = net contributor).

Furthermore, we added a control to gauge tax effort. As noted above, municipalities in Chile have very limited control over their tax bases (OECD 2017). It could be argued nonetheless that municipalities still have some leeway to influence the tax on commercial activities, as they can set the tax rate within the range determined by national legislation. Accordingly, we proxied tax effort using the share of commercial licenses paid to a given municipality over the total number of municipal commercial licenses. All the data for these potential confounders are publicly available at the Chilean National System of Municipal Information (SINIM) and reported in constant 2016 CLP (thousands).

Regarding political variables, we controlled for two variables. Given that prior studies have found that interactions between politicians across levels of government may either hinder or strengthen the electoral dominance of local incumbents (Gibson 2013; Giraudy 2015), we controlled for political alignment between the mayor and the national president. We coded this as the share of the four-year period that mayors were aligned with the central government. We also added a dummy variable indicating whether the incumbent mayor ran for reelection (1 = incumbent runs for reelection).

EMPIRICAL STRATEGY

Our sample covers 345 municipalities over 3 electoral terms.⁹ Since the electoral variables were only available every four years (2008, 2012, and 2016), all independent and control variables were averaged over the four-year mayoral terms (2005–8; 2009–12; 2013–16). By doing so, we avoided duplicating observations for nonelectoral years and thereby artificially increasing statistical significance (Wilson and Butler 2007).

To evaluate the effect of fiscal rents on contestation, we estimated the following model:

$$y_{it} = \alpha + \beta * \log(1 + NonTaxRevenue) + \gamma'X_{it} + \delta_i + \tau_t + \varepsilon_{it} \quad (1)$$

where y_{it} is the level of contestation in municipality i in election t . Our outcomes of interest are the vote share of the incumbent coalition, its probability of reelection, and the margin of victory between the winner and runner-up. $NonTaxRevenue_{it}$ is a measure of fiscal rents from nontax revenue received by municipal governments. As explained earlier, we used two measures for this variable: FCM transfer and FCM nontax per capita. X_{it} is the set of sociodemographic, fiscal, and political covariates. δ_i and τ_t are municipal and election fixed effects, respectively. The final element, ε_{it} , is the error term.

The coefficient of interest is β ; namely, the effect of nontax revenue over the different measures of contestation. Since we estimated a level-log model, β captures the marginal effect of percentage increases over the level of the outcome variable. In other words, the coefficient of interest indicates that a change of 1 percent in nontax revenue received by municipal governments produces a variation of $\beta/100$ units in contestation.

The identification assumption of this strategy is that, conditional on the covariates and the fixed effects, the nontax revenue variable is uncorrelated with the error term (e.g., $Cov(NonTaxRevenue, \varepsilon_{it} | X_{it}, \delta_i, \tau_t) = 0$). This assumption is plausible for several reasons. First, the FCM is granted by national fiscal institutions according to a formula that distributes grants automatically under parameters defined and measured by the national government, which, in addition, are relative to the national average of all municipalities. Second, as noted, local taxes in Chile work more like national taxes allocated to municipalities (OECD 2017). Indeed, the central government collects the property tax, which is the most important of all the taxes, whereas Chilean municipalities directly collect some tax revenues, but following tax rates and strict rules set by the central government through national legislation.

Moreover, we are able to control for tax effort in order to account for the limited fiscal leeway municipalities have. Third, our estimation strategy allows us to absorb potential time-invariant confounders that may cause bias in our models (e.g., institutions, historical factors, political and organizational cultures, geography, etc.), as well as temporal dynamics and common shocks that might have affected all municipalities in each electoral term (e.g., economic crisis, electoral cycles, etc.).

RESULTS

We begin by reporting in table 2 the estimates of equation 1 for our three dependent variables. All models include the full set of controls and use robust standard errors clustered at the municipality level. Models 1, 3, and 5 report results using our measure of fiscal rents, whereas specifications 2, 4, and 6 use the FCM transfer. Since our models are level-log, our estimates represent the semielasticity of two different measures of fiscal rents with respect to our measures of contestation. That is, our coefficients of interest represent the effect of a percentage increase in fiscal rents on local contestation.

Consistent with existing theories, both coefficients measuring the effect of fiscal rents on incumbency advantage are positive and statistically significant. In other words, municipal reliance on nontax revenue is associated with a higher vote share for the incumbent party. Thus we find support for the rentier hypothesis. Nevertheless, there is an important difference in terms of substantive significance, as the magnitude of the marginal effect varies significantly depending on the measure of fiscal rents we use. As shown in columns 1 and 2, the effect magnitude of the FCM transfer (0.17) is about three times larger than that of the FCM nontax (0.06). This suggests that incumbent parties in municipalities that benefit from transfers of nontax revenue do increase their vote share, but in radically different magnitudes.

For instance, consider an increase of about 25 percent in nontax revenue, which represents the percent change for the median municipality between the second (2016 CLP\$ 46830/2016 USD\$ 70.19) and third (2016 CLP\$ 58380/2016 USD\$ 87.50) electoral periods. Using the coefficient of model 1, this percentage increase in fiscal rents is expected to boost the incumbent party vote share by 1.5 percentage points, which is equivalent to 0.09 standard deviations of the dependent variable. Considering the same percentage increase but using the coefficients of model 2, we observe that the FCM transfer affects the incumbent party vote share by a much greater magnitude. Indeed, an increase of 25 percent in the amount received from the FCM transfer is associated with a rise of 4.3 percentage points; that is, an increase of 0.26 standard deviations. To contextualize these results, the incumbent coalition won nearly 4.5 percent of the elections in our sample by a margin of, or less than, 1.5 percent, whereas it won about 12.5 percent of the elections by a margin of, or less than, 4.3 percent. Therefore, using the FCM transfer measure, we could conclude that the incumbent party would have obtained a much higher vote share and won a larger percentage of the elections.

Table 2. Fiscal Rents and Electoral Contestation

	(1)	(2)	(3)	(4)	(5)	(6)
	Incumbent Party Vote Share	Incumbent Party Vote Share	Incumbent Party Reelection	Incumbent Party Reelection	Margin of Victory	Margin of Victory
FCM Nontax (ln)	0.06* (0.024)		0.15 (0.079)		0.04 (0.027)	
FCM Transfer (ln)		0.17** (0.054)		0.42* (0.171)		0.11* (0.052)
Municipal size (ln)	0.15 (0.107)	0.27* (0.119)	0.59* (0.271)	0.91** (0.334)	0.16 (0.085)	0.23* (0.102)
Poverty rate	0.00 (0.002)	0.00 (0.002)	-0.00 (0.005)	-0.00 (0.005)	0.00 (0.002)	0.00 (0.002)
External revenue pc (ln)	-0.00 (0.016)	-0.01 (0.016)	-0.00 (0.051)	-0.01 (0.051)	0.04* (0.016)	0.03* (0.016)
Own revenues pc (ln)	0.05 (0.031)	0.03 (0.031)	0.17 (0.100)	0.13 (0.101)	0.04 (0.034)	0.02 (0.033)
Mining revenues pc (ln)	-0.02 (0.029)	-0.01 (0.030)	0.01 (0.074)	0.02 (0.074)	0.02 (0.031)	0.02 (0.031)

(continued on next page)

Table 2. Fiscal Rents and Electoral Contestation (*continued*)

	(1)	(2)	(3)	(4)	(5)	(6)
	Incumbent Party Vote Share	Incumbent Party Vote Share	Incumbent Party Reelection	Incumbent Party Reelection	Margin of Victory	Margin of Victory
Tax effort	0.00 (0.001)	0.00 (0.001)	0.00 (0.002)	0.00* (0.002)	-0.00 (0.001)	-0.00 (0.001)
Net contributor	-0.00 (0.045)	-0.01 (0.052)	-0.15 (0.133)	-0.16 (0.150)	0.01 (0.053)	0.00 (0.052)
Political alignment	-0.02 (0.014)	-0.02 (0.014)	-0.07 (0.046)	-0.06 (0.045)	-0.01 (0.015)	-0.01 (0.015)
Incumbent mayor	0.12*** (0.015)	0.12*** (0.015)	0.25*** (0.042)	0.25*** (0.042)	0.02 (0.015)	0.02 (0.015)
Constant	-1.47 (1.117)	-3.19* (1.348)	-6.68* (2.894)	-10.94** (3.913)	-1.68 (0.923)	-2.71* (1.183)
Observations	951	951	977	977	975	975
R squared (within)	0.12	0.12	0.07	0.07	0.03	0.03
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes
Election FE	Yes	Yes	Yes	Yes	Yes	Yes

Cluster-robust standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Moving to our next dependent variable, models 3 and 4 report OLS estimates of linear probability models (LPMs) in which the outcome variable is a binary indicator that equals 1 if the incumbent party is reelected and 0 otherwise. Following Angrist and Pischke (2009), we prefer the LPM over nonlinear estimators for three reasons. First, the results for LPM are easier to interpret, which allows us to directly compare the coefficients obtained using the two alternative measures of fiscal rents we study. Since we are interested not in prediction but in understanding the marginal effects of nontax revenue, the fact that we can obtain predictions that may lie outside the range of the values of the binary dependent variable is not an issue.

Second, unlike nonlinear models, LPMs do not require strong distributional assumptions, and their coefficients are similar to the marginal effects estimated after logit or probit models, especially for average and near-average values of the covariates (Wooldridge 2010). Third, nonlinear models are less straightforward and might have problems estimating models with fixed effects and panel data, which is precisely the type of data we are working with. Please note that while the LPM is our preferred specification, in appendix D we report logit estimates. The results are consistent with the LMP models presented here.

As shown in column 4, the FCM transfer has a substantively important effect on the probability of reelection that is statistically significant, which supports the findings of previous research on fiscal rentierism. Indeed, if we increase the amount of fiscal rents that municipalities receive by 1 percent, the probability of reelection for the incumbent party increases by 0.4 percentage points. To provide some context, the increase in 25 percent that represents the percent change for the median municipality between the second and third electoral periods is expected to increase the likelihood of reelection by 11 percentage points. This result, then, provides strong support for the fiscal rentier hypothesis.

Interestingly, using our measure of fiscal rents raises important differences in terms of substantive and statistical significance. First, as model 3 shows, the size of the coefficient (0.15) of our measure of fiscal rents is considerably smaller than the traditional measure of fiscal rents. If one compares these two measures, the marginal effect of FCM transfer is about three times larger than the one of the FCM nontax. Second, and more important, the marginal effect of our measure of fiscal rents is not statistically significant.

The variable *Electoral margins*, unlike the previous dependent variables, measures the overall competitiveness of municipal politics. Once again, the two measures of fiscal rents yield different results. In effect, the FCM transfer has a positive and statistically significant effect on the margin of victory (column 6). More specifically, a 1 percent increase in the FCM transfer is predicted to increase the margin of mayoral victory by 0.1 percentage points. If we continue with the same example used above and augment fiscal rents by 25 percent, the margin of victory between the winner and the runner-up is expected to increase by 2.8 percentage points.

To contextualize, the winning mayor defeated the runner-up in nearly 10 percent of the elections in our sample by a margin of, or less than, 2.8 percent. This result suggests that elected mayors who run municipalities that receive plenty of fiscal rents

win by larger margins of victory than their counterparts in municipal governments less benefited by fiscal institutions. However, the coefficient for the FCM nontax shows very different results. Specifically, model 5 shows that the size of the coefficient is about 2.75 times smaller and the statistical association between fiscal rents and competitiveness disappears.

Taken together, our results are mixed and add nuance to the oft-noted idea that fiscal rents are not compatible with subnational democracy. We find that fiscal rents benefit incumbent parties by increasing their vote share. Yet there are important differences in the magnitude of the coefficients between the two measures of nontax revenue we use, which has a direct implication for the substantive significance of the results. In all of the models, using the FCM transfer leads to larger standard errors and coefficients that are about three times larger than those obtained when using the FCM nontax. Consequently, the results suggest that fiscal rents do not boost the incumbent party vote share by very large amounts. Similarly, we find that fiscal rents do not increase the incumbent party's probability of reelection and do not reduce the competitiveness of mayoral elections. Overall, our results suggest that while fiscal rents help incumbent parties win votes, the effect is not large enough to create the strong electoral dominance that translates into higher reelection rates and less competitive mayoral elections.

As a final analysis, in appendix E we study the effect of fiscal rents on municipal spending. In particular, we assess whether nontax revenue increases (logged) per capita spending on municipal investment, public employment, and transfers to the municipal health and education sectors, which are shared responsibilities with the central government. While investment reflects expenditures on public goods and services municipalities directly provide as part of their exclusive and shared responsibilities, which are mainly driven by the construction, enhancement, and maintenance of public infrastructure, spending on employment is a proxy for patronage. Likewise, spending on the education and health sectors reflects transfers that municipalities might make to complement the central government funding that already supports these public services. Our results find that the FCM nontax is associated with higher spending on investment as well as patronage, which indicates that mayors spend on municipal activities that are visible and that allow them to claim credit for the allocation of resources. We find no effect on transfers to the health and education sectors, which are those in which is harder for voters to attribute responsibility (Niedzwiecki 2018, 30). We also test the effect of FCM transfers on these spending outcomes and, as with the main results, we find differences with FCM nontax.

CONCLUSIONS

Existing research contends that nontax revenue affects local democracy. Yet there is nonetheless a mismatch between the concept of fiscal rents from intergovernmental grants and the measures used to operationalize it, as these include the whole transfers that subnational governments receive, without distinguishing between the tax income

they contribute to those grants and the nontax revenue they receive. This study has sought to provide a measure that more closely matches the concept of fiscal rents by studying the political effects of the FCM.

Taking advantage of rich administrative data in Chile, we traced all the contributions municipal governments make to the fund, as well as the amount they receive from the FCM. With this information, we calculated a measure of the actual nontax revenue municipal governments receive and compared the results to those obtained using the whole FCM transfer, which is equivalent to the measures previous studies have used.

The results show mixed findings regarding different measures of contestation and indicate that using the whole FCM transfer as a measure of nontax revenue leads to an overestimation of the negative political effects of fiscal rents on subnational democracy. Using a more precise measure of nontax income confirmed the results of previous research in federal democracies regarding incumbency advantage; that is, that fiscal rents increase the incumbent party's vote share. Nevertheless, our findings also show important differences in terms of substantive significance, as the size of the coefficient when using our measure of nontax revenue is much smaller. Thus, we find that nontax revenue increases incumbency advantage, but not by a landslide. At the same time, our results indicate important differences with regard to other relevant measures of contestation: the incumbent party's probability of reelection and the competitiveness of mayoral elections. When using our measure of fiscal rents, the statistical relationship between nontax revenue, as measured by the FCM transfer, and these variables disappears. Overall, our results suggest that while nontax revenue helps incumbent parties obtain more votes, it does not lead to the strong electoral dominance observed in undemocratic subnational regimes in federal democracies previously studied.

Our findings are likely to apply to wide set of cases, provided that they fulfill the two conditions that lead to rentier politics in unitary cases we highlighted in our argument. First, local governments must be funded by redistributive transfers that local executives can spend discretionally. This is pivotal, because only in these cases can subnational incumbents use fiscal transfers to spend both on public goods and informal practices to build political loyalty and limit competition. Second, local governments must have administrative responsibilities that allow incumbents to claim credit for their programs. Citizens' attribution of responsibility is fundamental for local politicians to be able to reap the electoral benefits related to the provision of public goods and services. By contrast, in countries where local officials are not elected or lack important levels of fiscal or administrative autonomy, rentier effects are unlikely to emerge.

As a final observation, it is worth noting that, owing to our focus on a unitary case, we cannot conclude that nontax revenue does not have a strong negative effect on subnational democracy in federal settings. This is because subnational incumbents in federal states may have other mechanisms to limit competition not available to their counterparts in unitary systems. For instance, when federal laws grant subnational units the autonomy to modify their own legislation and institutions, having access to

nontax revenue provides local incumbents with resources to muster political support to change the rules of the game in their favor (Gervasoni 2010, 2018; Gibson 2013). Added to the informal practices that incumbents in both unitary and federal states draw on to increase their electoral advantage, having the capacity to change local institutions and laws amplifies the effect rents have on subnational democracy. Consequently, the fact that incumbents in these settings are able to use these two strategies together may explain why nontax revenue weakens subnational democracy.

Therefore, scholars using rentier state theories should be aware that the constitutional structure of countries might mediate the political effects of nontax revenue, depending on whether the mechanisms to skew democratic competition rely on informal practices, the manipulation of institutions, or both. Nevertheless, in order to assess these potential differences, we need more precise measures of nontax revenue.

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CONFLICT OF INTEREST

The authors declare none.

SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit <https://doi.org/10.1017/lap.2023.16>

NOTES

1. Since both conceptualizations agree that fiscal transfers that exceed what subnational governments contribute to the common pool of taxes that fund those transfers constitute rents, we use the terms *fiscal rents* and *nontax income* interchangeably.

2. To be more precise, Desai et al. (2005, 822) use the share of regional budget revenues that comes from the federal budget. Gervasoni (2010, 319, 2018, 156–57) uses the annual federal transfers per capita (adults), which he averages over the four years of each gubernatorial term. In addition, Gervasoni (2018, 157) uses another measure to gauge fiscal rents originating from fiscal federalism; namely, federal transfers per capita divided over the provincial gross geographical product per capita. Díaz-Rioseco and Alberti (2022) use CFI per capita, which

they also average over each gubernatorial term. Broлло et al. (2013, 1770–71) use the amount of FPM transfers received by each municipality. More specifically, they use the average amount of FPM transfers for all the years of the mayoral term but excluding electoral years. Morrison and Litschig (2015, 91) use the per capita FPM transfer.

3. Following the literature on fiscal federalism, the fiscal gap represents the share of external revenue of total subnational revenue and is calculated as $1 - (\text{state taxes} + \text{local government taxes}) / (\text{state revenues} + \text{local government revenues})$. The list of federal countries for which we found data from the IMF to build a measure of fiscal gap include United Arab Emirates, Australia, Austria, Belgium, Bosnia and Herzegovina, Brazil, Canada, Switzerland, Germany, Federated States of Micronesia, Mexico, Nepal, Russia, United States of America. The list of unitary countries is the following: Albania, Armenia, Azerbaijan, Burkina Faso, Bulgaria, Belarus, Chile, China, Ivory Coast, Colombia, Cape Verde, Costa Rica, Cyprus, Czech Republic, Denmark, Ecuador, Spain, Estonia, Finland, France, United Kingdom, Georgia, Greece, Guatemala, Croatia, Hungary, Indonesia, Ireland, Iceland, Israel, Italy, Japan, Kazakhstan, Kenya, Kyrgyzstan, Cambodia, Kiribati, South Korea, Lithuania, Luxembourg, Latvia, Moldova, North Macedonia, Malta, Myanmar, Mongolia, Mauritius, Malawi, Netherlands, Norway, New Zealand, Panama, Peru, Palau, Poland, Portugal, Paraguay, Romania, Rwanda, Senegal, El Salvador, Somalia, Serbia, Slovakia, Slovenia, Sweden, Thailand, Turkey, Uganda, Ukraine, Uzbekistan, and South Africa.

[Authors: to save space, would you consider moving the lists of countries to the supplemental material? (and alphabetizing them?)]

4. To be more precise, the FCM represents 51, 48, and 49 percent, respectively, of municipal revenues for the median municipality for each electoral period. Similarly, it represents 49, 45, and 45 percent for the average municipality. To provide some context, fiscal reliance on the FCM is similar to that of transfers used in other studies of fiscal rentierism. For instance, Morrison and Litschig (2015, 87) report that the FPM in Brazil constitutes about 52 percent of municipal revenues.

5. Before 2008, the component related to the 25 percent was distributed differently. While 10 percent was distributed equally to all municipalities, 15 percent was allocated on the basis of population.

6. Since 2006, the central government has been including a direct transfer to the FCM. While we cannot trace where the central government levies these resources, this amount constitutes only about 1 percent of the FCM between 2006 and 2016. We graph the share of this contribution to the FCM by year in appendix B.

7. Chile has a multiparty system in which competition is structured around party coalitions. In particular, for mayoral elections, each coalition presents one candidate. Thus, our measure of incumbent party vote share considers the vote share of the party coalition that seeks reelection.

8. Mining royalties can also be considered nontax income, as these are collected by the central government but then distributed to regional (50 percent) and municipal governments (50 percent) where mining activities are located. It is worth noting that mining royalties are considerably minor as compared to the FCM and are allocated only to a portion of the country's municipalities.

9. We excluded from our sample noncompetitive elections in which only one candidate ran for mayor. Additionally, for the models that test incumbent party advantage, the sample does not include municipalities in which the incumbent party did not run for reelection.

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