Blaming Your Predecessor: Government Turnover and External Financial Assistance

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Abstract

We study the decision of a government to request assistance to a third party financial institution in the event of a credit shock, and whether this decision may be different for continuing incumbents and for newly elected governments. Continuing governments are responsible for previous fiscal decisions and, therefore, may be reluctant to publicly acknowledge the need for assistance. We first provide cross-country descriptive evidence using data on IMF programs. Next, we report quasi-experimental estimates obtained by studying a Spanish national policy introduced during the Great Recession. The Spanish government offered indebted local governments a smoother re-payment profile of outstanding short-term debt in exchange for presenting a public fiscal adjustment plan. Using a close election-regression discontinuity design, we show that newly elected local governments were roughly 30 percentage points more likely to agree on an adjustment program with the national government.

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1. Introduction

Governments facing financial difficulties often request assistance from international financing institutions (IFIs), both to fund spending in the short-run and to meet other financial obligations. This type of lending substitutes other forms of credit that would typically be supplied by private lenders but may be circumstantially unavailable at acceptable rates. Despite this exceptional nature, between 1992 and 2021 national governments signed over 1,900 different funding plans with the International Monetary Fund (IMF). The decision to engage in these types of financing agreements is shaped by the incentives and constraints faced by national governments who are the key players in requesting, negotiating and agreeing with IFIs on specific funding plans. In addition, the publicity usually associated to these agreements can affect voter perception about the state of public finances and government performance, thus affecting the long-term electoral outlook of the incumbent.

Something similar can happen with regional and local governments. In 2018, the debt of sub-national governments represented 23.2% of total public debt and 28.5% of GDP in OECD countries. These governments may also run into financial difficulties that either put them in an unsustainable fiscal path or compromise their ability to re-finance their debt at reasonable rates. Hence, it is not uncommon that in those instances, national or federal authorities take on a role analogous to the one carried out by IFIs and bail out indebted governments conditional on a fiscal consolidation program.

In this paper, we study how private incentives shape the decision of sub-national and national governments to request financial assistance to a third party institution. We argue that these private incentives depend on the tenure of officials in power. Continuing governments are responsible for previous fiscal and financial decisions and, therefore, may be reluctant to publicly accept the need for assistance. Conversely, newly elected governments can readily attribute the origin of the need for assistance to their predecessors. Parties can request financial assistance, which usually comes with presenting a public fiscal adjustment plan. Deteriorated public finances may reveal information to citizens on the quality of the government. Governments will have to face the stigma of conducting a public fiscal adjustment plan. In that context, ongoing incumbents may prefer to endure a tighter borrowing constraint in order to protect their information rents. This is not the case for new governments, whose previous debt levels reveal no information regarding their performance.

We analyze this hypothesis by conducting two separate analyses. First, we use data on

all IMF interventions at the international level between 1992 and 2021 —more than 1,900 programs with over 100 countries over three decades— to conduct a cross-country descriptive analysis of the relationship between government turnover and financial assistance. Our estimates indicate that newcomers into office are between 3 and 4 percentage points more likely to agree on a funding program with the IMF in a given year. Relative to a base rate of 12%, our results suggest that the impact of government turnover on these decisions can be substantial. While these findings are encouraging, turnover is likely to be correlated with both demand and supply-side factors associated to IFI funding. Therefore, this analysis falls short of the standards of contemporary causal inference.

Our main analysis overcomes these issues by focusing on a context in which we can deploy state-of-the-art methods to identify our parameter of interest. We do so by leveraging data on a Spanish government plan that offered a menu of two different adjustment mechanisms to indebted local governments. The Supplier Payment Plan (Plan de Pago a Proveedores) was introduced in 2012 to deal with mounting arrears of local governments. The program deployed financial resources of roughly 3% of Spanish GDP to pay local governments' suppliers. Participation was mandatory and all suppliers of Spanish local governments had the right to claim the payment of any arrears to the national government. This converted the commercial debt of Spanish municipalities to financial debt with the national government. Two options were given to municipalities in order to repay these loans. They could agree on a financial adjustment plan with the national government, which allowed access to advantageous financing conditions such as a two-year grace period, and up to ten years to repay loan and interest. Alternatively, municipalities could continue with no adjustment plan in place. In that case, repayments would be immediately enforced through retention of central government transfers until repayment was complete within five years. Thus, local governments could choose between a smoother repayment scheme which requires a public adjustment program, or a more discrete front-loaded adjustment. In this sense, the dilemma is formally similar to that of a financially constrained country which can request assistance to the IMF. Conveniently, unlike the case of some IMF stabilization programs, the Spanish Supplier's Payment Plan (SPP) does not involve any conditionality on policies beyond the establishment of a credible path to reduce debt and fiscal deficit. This removes ideological considerations from the decision to adhering to the plan, allowing us to study more precisely the effect of governments' private incentives.

We leverage data from the SPP to study whether new governments are more likely to

agree on an adjustment plan that allows for smoother transition to fiscal consolidation. Our empirical strategy for this analysis is based on a close-election regression-discontinuity design that yields exogenous variation in government turnover. This strategy is analogous to the one used to study the effect of political turnover on government performance in Akhtari, Moreira, and Trucco (2021). It enables us to avoid municipal level confounders such as the level of debt, the strength of local economic shocks and local demographic conditions when identifying the effect of government turnover on the pace of stabilization. The resulting estimates indicate a large and significant difference in the type of adjustment between new and ongoing governments: new governments are roughly 30 percentage points more likely to agree on an adjustment plan resulting in a smoother transition. We interpret this as evidence that ongoing governments are constrained by their previous tenure in office when requesting external support to finance that transition.

In complementary analyses, we show that our findings are not driven by differences across partisan lines and provide additional evidence that our headline results arise from electoral incentives. First, we show that the effect is higher, the higher the level of arrears – and the worse the signal about past performance –. Second, we conduct a survey among a subsample of Spanish mayors and find evidence consistent with our hypothesis. Finally, we find that presenting an adjustment plan exhibits a negative and significant correlation with the probability of re-election for ongoing incumbents, but not for newly elected governments.

Our paper contributes to the literature on the political economics of macroeconomic policy.¹ Specifically, we contribute to understand how political constraints affect when and how governments deal with financial difficulties. In this sense, our work relates to studies on the political determinants of stabilization and fiscal reform (for surveys of this vast literature see for example Alesina 2018; Mahmalat and Curran 2018). As highlighted in Alesina and Drazen (1991), and a large subsequent literature, the timing of fiscal adjustment will be influenced by the strength of the executives, the timing of elections or the level of social unrest (see also Alesina, Ardagna, and Trebbi 2006, Alesina and Paradisi 2017 and Passarelli and Tabellini 2017). Our contribution to this literature is two-fold. In the first place, we study how political constraints shape the type of adjustment that is carried out, by showing incumbent governments are less willing to agree on a fiscal consolidation program with third party financing even when this gives them more flexibility on the adjustment path. This results in

¹See for example the surveys in Persson and Tabellini 1999; Alesina and Passalacqua 2016; Yared 2019.

a front-loaded adjustment that can compromise the overall success of the fiscal adjustment program.² Secondly, we deploy a close election regression-discontinuity design that allows us to credibly identify our parameter of interest under relatively mild assumptions, using tools that are standard in the applied micro literature in political economics. In this, we distinguish ourselves from much of the empirical work in macroeconomic stabilization which has typically relied in panel cross-country regressions.

We also contribute to the literature on the determinants of externally sponsored financial arrangements. Previous work has shown that growth levels (Knight and Santaella, 1997), political connections with the IMF and the G7 (Barro and Lee 2005, Presbitero and Zazzaro 2012) and previous interventions of the IMF (Conway, 2007) impact the probability of a future financial arrangement with the fund. Relative to these papers, we study how electoral incentives could also shape this decision. Our research contributes to the design of stabilization programs to make them politically incentive compatible.

Our results are consistent with politicians taking decisions to avoid blame and the corresponding loss of voters support (see Weaver 1986 and Hinterleitner 2017).³ In the Spanish context, presenting an adjustment program allowed – but did not force – a relatively more gradual adjustment to local governments. Thus, it is correct to say that presenting an adjustment program was, by design, weakly dominant. Moreover, by the time of the SPP in Spain, there were good arguments to think that it was actually the strictly dominant strategy for the municipality (Blanchard and Leigh, 2013b). Hence, according to our hypothesis, ongoing incumbents are making a choice that is inefficient for the municipality to keep their information rents. This relates our work with the classic debate between the Chicago school of political economy (see for example Becker (1976), Becker (1985) or Wittman (1989)) and the Virginia school of political economy (see for example Coate and Morris (1995), Tullock (1989) or Crew and Twight (1990)). In line with the latter, we find that despite electoral competition, politicians are significantly less prone to choose the efficient alternative – presenting an adjustment plan – to protect their reputation and obtain private rents.

The rest of the paper is structured as follows. Section 2 presents a descriptive analysis at the international level. Section 3 presents the data we use in the estimation, discusses the

²As argued in DeLong, Summers, Feldstein, and Ramey (2012), Blanchard and Leigh (2013b), Blanchard and Leigh (2013a).

³A greater predisposition among new elected officials to agree on an adjustment plan, passing the buck to precedent administrations, also connects with the literature on Earnings Baths of CEOs during turnovers (see Moore 1973, Strong and Meyer 1987, Elliott and Shaw 1988 or Bornemann, Kick, Pfingsten, and Schertler 2015)

institutional setting and consequences of the SPP on municipal budgets. Section 4 presents our core empirical analysis and results. Section 5 concludes.

2. Cross-Country Descriptive Analysis

We first conduct a descriptive analysis at the international level and explore whether a change in office is associated with a higher probability of requesting financial assistance from the IMF.

For this purpose, we use the following databases. The Database of Political Institutions (DPI2020) contains various institutional features about the political organization of the country for 180 countries in the period 1975-2020. It also includes information on electoral results for democracies, as well as political orientation of the ruling party. The IMF Monitoring of Fund Arrangements (MONA) Database contains the universe of arrangements with the IMF during the period 1992-2021. This includes several funding arrangements with 124 countries during the cited time window. We obtain GDP data from the World Economic Outlook Database, which includes a time series of macroeconomic indicators for 195 countries for the period 1980-2021.

Using this data, we use a panel specification to explore the relation between a change in office and the probability of reaching an agreement to get funding from the IMF.

$$Program_{it}^{IMF} = \theta_i + \gamma_t + \beta PCh_{it} + \alpha \Delta GDP_{it} + \delta left_{it} + \lambda right_{it} + u_{it}$$
(1)

The dependent variable in equation 1 is a dummy which takes value one if country *i* signs an agreement to receive assistance from the IMF in year *t*, and value zero otherwise. θ_i are country fixed effects and γ_t are year fixed effects. PCh_{it} is a dummy that takes value 0 if the previous incumbent won the elections, and value 1 if the country is ruled by a newcomer. ΔGDP_{it} is the growth rate of national GDP in U.S. dollars. $left_{it}$ and $right_{it}$ are dummy variables that take value one if the party in office is left-wing or right-wing respectively.⁴ The coefficient of interest is β , which indicates how a change in office correlates with the probability of making an arrangement with the IMF to get funding.

In Table 1 we show the results for the relation between tenure in office and IMF financial arrangements for the period 1992-2020. We find that arrangements with the IMF are

 $^{^{4}}$ We take this codes from the DPI2020 database. The omitted variable includes center parties and parties with no clear ideological alignment.

more likely under a new government. In our baseline specification in column (1) we find that newcomers are almost 6% more likely to reach an agreement in a given year to receive financing from the IMF. These results must be interpreted with care, since there are potential endogeneity concerns. For example, it might well be the case that during world economic downturns both changes in office and IMF interventions are more common. Likewise, it is possible that countries that are ethnically or sociologically diverse are at the same time more prone to political instability and require IMF assistance more frequently. To mitigate these concerns, column (2) includes year and country fixed effects. We find that the effect remains significant, with a size of 3.7% relative to a 12% baseline probability. It is also possible that economic downturns have a differential impact across economic regions. Hence, in column (3) we account for this possibility following Bonhomme and Manresa (2015). We use the data driven process that they propose to group countries into four economic clusters, which does not affect the significance of the coefficient. Then, we estimate a separate time trend for each of the clusters. Finally, in column (4) we control for GDP growth at the country level and for the political orientation of the government. Arguably, countries with a low GDP growth could be more prone to change the government, and at the same time, they could be in higher need to sign an arrangement with the IMF. We find that after including these controls, the coefficient of interest remains of similar size and highly significant.

THE IMPACT OF LARTY C.	$(1) \qquad (2) \qquad (4)$				
	(1) IMF Program	(2) IMF Program	(3) IMF Program	(4) IMF Program	
Party Change	0.056***	0.037***	0.033***	0.037***	
	(0.010)	(0.009)	(0.009)	(0.009)	
$\Delta \text{ GDP}$				-0.001**	
				(0.000)	
Party: Right Orientation				-0.012	
				(0.022)	
Party: Left Orientation				0.011	
-				(0.018)	
Observations	3,817	3,817	3,817	3,785	
Country & Year FE	NO	YES	NO	YES	
GFE*Year	NO	NO	YES	NO	

TABLE 1					
HE IMPACT OF PARTY	Changes on IM	F Programs -	All IMF fund	ING PROGRAMS	
	(1)	(2)	(3)	(4)	
	IMF Program	IMF Program	IMF Program	IMF Program	

Notes: The Table reports OLS estimates. IMF Program is a dummy variable that takes a value of 1 if the country approves an IMF funding program in that year, and 0 otherwise. Party Change takes a value of 1 if the incumbent won the previous elections, and a value of 0 if the challenger won the previous elections. Columns (2) and (4) include country and year dummies. Column (3) includes group fixed effects interacted with year dummies, following Bonhomme and Manresa (2015). Δ GDP is the growth rate of national GDP in U.S. dollars. Political party dummies take a value of one according to the orientation of the chief executive's political party. The sample used is 1993-2020 and includes all IMF funding programs in the IMF MONA Database. Robust standard errors clustered at the country level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Although the specifications used in Table 1 seek to mitigate the omitted variable problem, the assumptions needed for exogeneity are still rather strong. Therefore, in Table 2 we use a different strategy. We restrict our attention to countries that undergo a banking crises. Using the database in Laeven and Valencia (2020) on international banking crises and IMF program interventions, we apply a similar methodology to that explained in Equation 1.

$$Program_{ic}^{IMF} = \beta PCh_{ic} + \alpha \Delta GDP_{ic} + \delta left_{ic} + \lambda right_{ic} + u_{ic}$$
(2)

where $Program_{ic}^{IMF}$ takes value 1 if country *i* got external financing from the IMF during crisis *c*, and value zero otherwise (notice that some countries suffer more than one banking crisis over the period).

As expected, once we restrict our attention exclusively to countries that are under financial distress, we find that the average probability to ask for external financial support is remarkably higher (48.4%). Interestingly, results show that even in this sub-sample, the effect of a change in office is significant, and the probability to undergo an IMF program rises between 25 and 29 percentage points under the rule of a newcomer.⁵

	(1)	(2)	(3)
VARIABLES	IMF Program	IMF Program	IMF Program
Party Change	0.285**	0.271**	0.249*
v 0	(0.133)	(0.133)	(0.133)
GDP		-0.582	-0.521
		(0.415)	(0.417)
Political Party: Right Orientation			-0.075
			(0.173)
Political Party: Left Orientation			-0.134
			(0.134)
Observations	62	60	60

 TABLE 2

 The Impact of Party Changes on IMF Program Implementations - Banking Crises

Notes: The Table reports OLS estimates. IMF Program is a dummy variable that takes a value of 1 if the country puts an IMF program in place due to the analyzed crisis, and 0 otherwise. Party Change takes a value of 1 if the incumbent won the previous elections, and a value of 0 if the challenger won the previous elections. GDP is the growth rate of national GDP in U.S. dollars. Political party dummies take a value of one according to the orientation of the chief executive's political party. The sample used is 1980-2015 and includes banking crises from Laeven and Valencia (2020). Robust standard errors clustered at the country level. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

Altogether, we provide evidence on the different propensity for ongoing incumbents and newcomers when they face the decision to ask for external financial assistance. Still, even in

⁵Due to the limited size of this sample, these regressions may not include country or year dummies.

the sub-sample of Table 2 the assumptions to claim exogeneity would be rather strong. In the next section, we use the case of Spanish Municipalities to apply state of the art techniques that allow us to make a strong case for a causal link between tenure in office and the decision to get external financial support.

3. Spain's SPP: Data and Institutional Setting

We now focus on achieving clean identification by exploring an ideal setting, which allows us to complement the previous descriptive analysis with rigorous causal estimates: The Spanish Suppliers Payment Program. This program, which was introduced during the Great Recession, offered indebted local governments the possibility to agree on an adjustment program with national authorities in exchange for a smoother re-payment profile on arrears.

3.1. Institutional Setting

3.1.1. Spanish Municipalities and Mayors

Our unit of analysis are Spanish municipalities. In 2011 there were 8,116 municipalities in Spain, each of them ruled by a separate local government. Municipalities are the lowest level of territorial administration in Spain. As recognized in the Spanish constitution (Article 140), municipalities have autonomy in managing their interests. The functions of the municipal government depend on their size, but among others, they include waste disposal, lighting, water and sewage services, land development, and the provision of several local public services.⁶ Regular municipal financing is based on transfers from the national government, which amount for approximately 50% of their income, transfers from regional governments, and local taxes. The largest local taxes are a property tax and a business tax. Moreover, during the housing bubble of 2000-2008, it was common that they sell municipal land to get extraordinary funds.

Municipalities operate as a small representative democracy, and are governed by a municipal council and a mayor. The electoral system varies depending on population size. In this paper we focus on municipalities with more than 250 inhabitants, which use a singledistrict, closed list, proportional electoral system.⁷ In these municipalities, council seats (from a minimum of 7 to a maximum of 57 in Spain's capital) are assigned following the

⁶See details in law number 7/1985 (April 2nd 1985). Ley reguladora de las bases del régimen local.

⁷Municipalities with populations under 250 inhabitants have an open list system in which voters may express multiple preferences for different candidates. Thus, we will not use these municipalities in our analyses.

D'Hondt rule, which features a 5% vote share entry threshold. The municipal mayor is elected by the council under a simple majority rule. The most voted party can appoint the mayor directly if it obtains more than 50% of the seats. If a single party does not obtain this 50%, there is a coalition building period. During this period, candidates need to receive the support of the council to be elected, but if none of the candidates obtains this support, the candidate from the most voted party is appointed as mayor. There are not term limits, and local governments cannot call for elections, which occur simultaneously for all Spanish municipalities every four years.

3.1.2. Spain's Supplier Payment Plan (SPP) and the Fiscal Adjustment Plan

The 2008-14 economic crisis caused a deterioration in public finances. This, together with a severe tightening of credit conditions led to a significant increase in the time taken by Spanish governments to pay its suppliers. By 2011, the total amount of outstanding commercial debt of the public administration in Spain amounted to 87.3bn (8.1% of GDP), compared with 57.1bn in 2007 (5.3% of GDP). This increase in commercial debt was common to all tiers of government, albeit mostly concentrated (around 75%) at the local and regional levels.

At the local level, payables (including arrears) increased from 1.5% of GDP in 2005 to 2.6% of GDP in 2011, an all-time high in the time series going back to 1995. This increase was mostly explained by a significant build-up of arrears (worth 9.8bn or 0.9% of GDP). This occurred during a period of credit rationing and after municipalities had lost both part of their fiscal income – due to the ongoing crisis –, and the possibility to get extraordinary funds selling municipal land – due to the burst of the housing bubble –. Arguably, in line with what Chiades, Greco, Mengotto, Moretti, and Valbonesi (2019) find for Italy, Spanish municipalities used arrears to substitute these forgone funding sources to finance expenditure.

Given the weak financial situation of Spanish sub-national governments and the negative impact that mounting arrears had on corporates and on broader macroeconomic dynamics (see Checherita-Westphal, Klemm, and Viefers 2016 and Delgado-Téllez, Lledo, and Pérez 2017), the Spanish government adopted various measures in early 2012. These measures aimed to improve regional and local finances, and included (1) the so-called Supplier Payment Plan or SPP (Mecanismo de Pago a Proveedores), which sought to clear the stock of arrears accumulated by both regional and local governments, and (2) the regional government liquidity fund (Fondo de Liquidez Autonómica or FLA), which secured payments to suppliers by regional governments from 2012 onwards. Alongside with these programs, new regulations were put in place to ensure that local governments did not start building up arrears again (Ley de Estabilidad Presupuestaria). In this paper we focus on the Supplier Payment Plan to explore how tenure in office affects the probability of agreeing on a public stabilization program with another institution.

In 2012 the SPP created a fund which paid arrears directly to suppliers of regional and local governments. It was funded through a syndicated loan involving the State-owned Instituto de Crédito Oficial (ICO). Any supplier who had claims against any local government had the right to go to ICO and get their bills paid with no discount. As a result, overdue commercial debt previously held by suppliers turned into financial debt in hands of the central government. Participation was mandatory for all municipalities with arrears, and payments to suppliers were made between the 28th of May and the 30th of July 2012. Overall, the ICO acting as the SPP's paying agent, injected an amount of cash worth 27.3bn (2.6% of 2011 GDP) into the real economy.⁸ Municipalities had to pay the central government an interest equal to the Spanish Treasury's funding cost plus a maximum spread of 145 basis points. These were remarkably good funding conditions compared to what regional and local governments could actually get in capital markets.

In order to minimize moral hazard, local governments were required to submit a fiscal adjustment program to the national government.⁹ Those complying with this requirement could use up to 10 years to pay back their debt with a 2-year interest-only grace period (back-loaded adjustment). Funding provided to local governments failing to meet this requirement was deducted from their share of State tax receipts over a 5-year period (front-loaded adjustment). Crucially, before submission, the plan should be discussed and approved in the *Pleno Municipal* (the local equivalent of the parliament). This gave the local opposition the chance to make salient the financial situation of the municipality and the spending cuts and tax raises proposed by those local governments for the next decade. The map in figure XXX shows the spatial distribution of municipalities with no arrears, municipalities with arrears and adjustment plan, and municipalities with arrears and no adjustment plan.

⁸This figure includes payments to suppliers of regional governments. Due to their special fiscal regime, the SPP was not operative in Navarra and the Basque Country, so these municipalities are not included in the analysis.

⁹See Heppke-Falk and Wolff (2008) for a discussion on how national government bailouts might induce moral hazard among local debt investors.

FIGURE 1 Map of Spainish Municipalities



Notes: In grey, municipalities with no arrears, in blue, municipalities which presented a plan, in red, municipalities with arrears which did not present a plan. No data for Comunidad Foral de Navarra and Basque Country.

As a result of fiscal adjustment (either with or without an adjustment plan negotiated with the central government), Spanish local governments brought their aggregate budget balance from a deficit of 0.4% of GDP in 2011 to a surplus of 0.1% in 2012, implying a 0.5% improvement in just one year, the largest fiscal adjustment recorded at the municipal level in the time series going back to 1995. With a sustained budget surplus of 0.1-0.2% of GDP since 2012, Spanish municipalities' further reduced their aggregate financial debt from over 4% of GDP in 2012 to 2.5% in 2017, implying a net reduction of more than 1.5% over five years.

3.1.3. Impact of SPP on Municipal Budgets

In this section we discuss the impact of the different adjustment options that were available to municipalities with arrears. As discussed above, municipalities facing substantial arrears in their payments to suppliers could choose between two options. Either they agreed on an adjustment plan with the national government in exchange for a smoother transition to stabilization, or they chose a more abrupt adjustment via the retention of inter-governmental transfers. We next investigate how this choice affected revenues, spending and tax rates set by municipal governments. We exploit municipal budget data to estimate:

$$Y_{jt} = \alpha_j + \delta_t + \sum_{k=2008}^{2015} \omega_k R_j \times \mathbb{1}\{t=k\} + \epsilon_{jt}$$

$$(3)$$

where j indexes municipalities and t indexes years, α_j is a municipality fixed effect δ_t is a set of time effects. R_j is an indicator taking value 1 if municipality j opted to go down the front-loaded route of using revenue retention by the central government to fund the debt transferred from their accumulated arrears, and taking value 0 for municipalities that agreed to do an adjustment plan. We consider three different outcomes Y_{jt} : the natural logarithm of central government transfer revenues per capita, the natural logarithm of total spending per capita, and the urban property tax rate levied by the municipality.

This analysis is restricted to municipalities that were forced to assume a central government loan by virtue of the SPP. As a result, the coefficients $\{\omega_k\}_{k=2008}^{2015}$ can be interpreted as the differences between municipalities with $R_j = 1$ and those with $R_j = 0$. That is, they indicate the evolution of the difference on transfers, spending and taxes between municipalities choosing the front-loaded adjustment and municipalities that did an adjustment plan.

Estimates of the sequences of coefficients are reported in Figure 2. In Panel A, we display coefficients for the difference in transfers. We observe that the difference in transfers was relatively stable before 2013 but suddenly became negative after this year, and stayed negative in the subsequent periods. We interpret this as arising from the revenue retention program itself. In the year after the SPP policy was passed, municipalities that opted for the front-loaded adjustment experience an abrupt decrease in the transfers provided by the central government.

How did this affect municipal spending? Panel B shows a relative decline in municipal spending in 2012, which is consistent with municipalities adjusting their spending levels ahead of the change in transfers. The difference then converges back to 0 in subsequent years. How is it possible that municipalities experiencing a persistent reduction in transfers managed to recover spending levels so swiftly? Part of the answer may come from the 2012 adjustment itself. Yet another contributing factor is suggested by Panel C, where we observe a sharp increase in relative property tax rates (IBI) for municipalities that opted for the



FIGURE 2 Consequences of Government Retention Scheme

Notes: These figures show point estimates and 95% confidence intervals for the effect of not presenting a plan on: the log of the transfers received from the central government (**Panel A**), the log of total municipal spending (**Panel B**), and the property tax rate (IBI) (**Panel C**), for years 2008-2015. All regressions include municipality fixed effects and year fixed effects. Figures plot the estimated coefficient for the interaction between a year dummy and a dummy takes value zero if the municipality presents an adjustment plan, and value one otherwise. Standard errors are clustered at the municipality level.

Collectively, the patterns displayed in the three panels in Figure 2 are consistent with the

¹⁰There is a large literature on macroeconomic outcomes of deficit reduction policies, see Alesina, Favero, and Giavazzi (2019) for a review or more specifically Blanchard and Leigh (2013b), which analyzes the relation between planned fiscal consolidation and growth.

consequences of a front-loaded adjustment translated into both lower spending and higher taxes. It is worth noting that these patterns cannot be given a causal interpretation unless we assume that fixed effects suffice to deal with potential differences between municipalities not only in levels but also over time. This is a rather strong assumption in our context. We present these results not to make a strong claim about the consequences of adjustment options for policy at the local level – this is not the point of the paper – but rather as suggestive evidence that the patterns we would expect to find if the front-loaded adjustment had bite on municipal finances is indeed observed in the data. That is, we see these patterns as largely descriptive, but nonetheless reassuring.

3.2. Data

To conduct our analysis, we build a municipal panel with yearly information for the period 2008-2015, combining data from several sources. Data on arrears is obtained from the Spanish Instituto de Crédito Oficial (ICO), which channeled in 2012 the payment of arrears from the central government to the suppliers of municipalities. Data on yearly municipal budgets is obtained from the database on local authority budgets, which is published by the Spanish Ministerio de Hacienda y Administraciones Públicas. It provides information on revenues and spending classified by spending category during the period 2008-2015. This classification includes variables such as government transfers, revenues for different taxes, or total spending. Also from the Ministerio de Hacienda y Administraciones Públicas we take the outstanding debt by municipality, available since 2009.

Electoral results for Spanish municipalities in the 2007, 2011 and 2015 local elections are obtained from the Spanish Ministerio del Interior. For every municipality and election year, it includes the list of all candidates and the electoral results for all running parties. Data on characteristics and demographics of the candidates are obtained from the Ministerio de Hacienda y Administraciones Públicas upon request. We also use data from Estadística del Padrón Continuo, which includes yearly information on population and population by age categories. Data on employment is obtained from the Instituto Nacional de Estadística.

Merging data from these sources, we construct a panel of municipalities for the period 2008-2015 including the vote shares obtained by all parties, several politicians' characteristics, information on municipal spending revenues, outstanding debt and arrears, information on the decision to present an adjustment plan and other municipal characteristics. We exclude from this panel municipalities with populations under 250 inhabitants, which have a different electoral system.

Municipal descriptives for our sample are presented in tables 3 and 4. In Table 3 we present the mean and standard deviation for several variables in 2011. We include population, outstanding debt per capita, total spending and revenues per capita, arrears per capita and the fraction of municipalities ruled by the biggest political parties in Spain: the center-left Partido Socialista (PSOE) and the center-right Partido Popular (PP). Panel A shows the information for all municipalities in Spain, panel B includes municipalities that participated in the SPP but did not do an adjustment plan, and panel C includes municipalities that participated in the SPP and carried out an adjustment plan. The average population of all municipalities in our sample is 5.8 thousand inhabitants. Accumulated arrears per capita are on average similar for municipalities that do not do an adjustment plan (364 euros).

Table 4 compares averages of several variables across municipalities in which the challenger (column 1) or the incumbent (column 2) won the elections in 2011. Column 3 shows whether there are significant differences among these two groups for each variable. The variables are analogous to those showed in Table 3, but we add the fraction of municipalities that conduct an adjustment plan. We observe that municipalities ruled by the challenger have lower spending and revenues per capita, are more often ruled by PP rather than by PSOE, and exhibit a higher probability to do an adjustment plan. In particular, 74.6% of the municipalities in which the challenger won the elections did an adjustment plan, while 66.8% of those in which the incumbent won do an adjustment plan. All these figures evidence that municipalities ruled by challengers or incumbents can intrinsically be different. Thus, in Section 4 we will discuss how to proceed to achieve a clean causal identification.

4. Spain's SPP: Empirical Evidence

In this section we present an empirical analysis of how new and ongoing governments differ in their propensity to agree with a third party – in our case, the Spanish national government – on an adjustment plan that allows them to smooth the pace of fiscal adjustment. Specifically, we study whether newly elected municipal governments differ from re-elected governments in the type of adjustment they choose to pay a substantial amount of arrears. We conduct this analysis using information on Spain's SPP. Then, we explore the mechanisms that could explain our results and we run a series of robustness checks.

	Panel A: All municipalities		
	Mean	Std. dev	
Population	5814.50	47427.97	
Outstanding Debt pc	251.33	416.43	
Total Spending pc	1369.38	1078.49	
Total Revenues pc	1374.78	1343.14	
Arrears pc	167.03	407.81	
Party PP	0.46	0.50	
Party PSOE	0.28	0.45	
Number Obs	8114		
	Panel B: N	Iunicipalities No Adj. Plan	
	Mean	Std. dev.	
Population	4472.17	24311.26	
Outstanding Debt pc	264.59	411.01	
Total Spending pc	1448.27	1132.00	
Total Revenues pc	1415.76	1134.21	
Arrears pc	332.95	692.06	
Party PP	0.44	0.50	
Party PSOE	0.36	0.48	
Number Obs	1337		
	Panel C: N	Junicipalities Adjustment Plan	
	Mean	Std. dev	
Population	11838.51	78259.99	
Outstanding Debt pc	363.07	343.73	
Total Spending pc	1143.09	646.78	
Total Revenues pc	1120.27	610.58	
Arrears pc	364.14	414.59	
Party PP	0.46	0.50	
Party PSOE	0.32	0.47	
Number Obs	2283		

TABLE 3Summary Statistics

Notes: This table reports means and standard deviations for each variable by municipality. It also reports total number of observations. Panel A shows summary statistics for all municipalities in Spain, including those without arrears in 2011. Panel B shows summary statistics for municipalities that did not do an adjustment plan. Panel C shows summary statistics for municipalities that followed an adjustment plan. We do not provide a separate panel for the municipalities without arrears in 2011 since they are not used in our main analyses. The descriptives shown are for the year 2011.

As discussed in Section 2, it is likely that in times of financial distress the probability of a change in office and the convenience of an externally sponsored fiscal adjustment both increase. Therefore, disentangling the causal impact of tenure in office on the the probability to agree on a consolidation program proves difficult. The large amount of Spanish municipalities which share a common electoral system and had to decide whether to present an adjustment program allow us to draw quasi-experimental estimates of this causal relation. Moreover, the design of the Spanish SPP presents a series of features that make it specially well suited to explore how politicians' private incentives might shape the decision to agree

	Mean differences and T-test			
	Challenger	Incumbent	Difference	
Population	12569.563	10974.101	1595.462	
Outstanding Debt pc	346.910	336.455	10.455	
Total Spending pc	1010.466	1125.667	-115.201^{***}	
Total Revenues pc	991.009	1108.272	-117.263^{***}	
Arrears pc	330.379	304.230	26.149	
Party PP	0.549	0.429	0.121^{***}	
Party PSOE	0.184	0.421	-0.237***	
Adjustment Plan	0.746	0.668	0.078^{***}	

TABLE 4 Descriptives and T-tests

Notes: This table reports means in 2011 for several variables for municipalities in which the challenger won the elections in 2011 (column 1), and municipalities in which the incumbent won the elections in 2011 (column 2). The last column shows the difference in means for the two groups and its significance. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

on the program.

All municipalities in our sample had elections just a few months before the Spanish SPP was put in place. Alesina, Ardagna, and Trebbi (2006) and Alesina, Furceri, Ostry, Papageorgiou, and Quinn (2020) examine the political consequences of implementing economic reforms and explain two potential sources of endogeneity related to the timing of the implementation. First, if governments have discretion on when to call for elections, they will do it before – and not after – they conduct any fiscal adjustments (Hübscher and Sattler, 2017). Second, governments may decide to postpone politically costly economic reforms depending on the level of political unrest (Passarelli and Tabellini, 2017). In Spain's SPP, both the timing of elections and the timing of the program are the same for all municipalities and independent from municipal governments' decisions. This means they are completely exogenous. Moreover, unlike many rescue programs sponsored by international IFT's, the Spanish National Government impose no conditionallity on policies - municipalities had discretion on how to attain fiscail sustainability -. This removes ideological considerations from the decision of presenting an adjustment plan.

Furthermore, there were strong reasons to think that presenting a plan to the national government was not only weakly but strictly dominant for the municipality (not necessarily for the municipal government). Besides the reasons we discussed in section 3.1, Spanish Municipalities got funds in the SPP at a cheaper rate than the one they could get in the market. We calculated a lower bound for the difference in the NPV of presenting a plan and getting a 2+10 years credit vis-a-vis not presenting a plan and paying back within five

years (see Table A.5).¹¹ The average difference in NPV per capita was 8.57 euros, which represented 80,062 euros for the average Spanish municipality with arrears. This reinforces the idea that many politicians chose not to present a plan in the Spanish SPP context for spurious reasons.

4.1. Empirical Strategy

We use a close-election regression discontinuity design (RDD) to induce exogenous variation on whether the party in power in a municipality after the 2011 election is different from the party in power before that election. To do so, we create a running variable X_j for municipality j, defined as $\Delta V_j \equiv V_j^C - V_j^I$ where V_j^I is the 2011 vote share of the incumbent at the end of the 2007 term – i.e. just before the 2011 election – and V_j^C is the vote share of the most voted party in the 2011 election (excluding the incumbent). From now on, we call these parties the *incumbent* and the *challenger*.¹² Note that ΔV_j will take positive values if the challenger wins the 2011 local election and negative values otherwise.

We use this running variable to estimate the effect of a dummy C_j (takes a value of one if the municipality elects a mayor from a new party) on a dummy P_j (takes a value of one if the municipality agrees on an adjustment plan to pay for its outstanding arrears). Spanish mayors are not directly elected by voters but appointed by the elected council. Therefore, the probability of having a new mayor ($Pr(C_j) = 1$) does not jump from 0 to 1 when ΔV_j crosses the threshold at zero – our RDD is fuzzy (Imbens and Lemieux, 2008). Thus, we estimate our parameter of interest by using two-stage least squares methods (2SLS). The estimating equations are:

$$C_j = \alpha_0 + \tau D_j + \pi_1 \Delta V_j + \pi_2 D_j \Delta V_j + v_j \tag{4}$$

$$P_j = \alpha_1 + \beta C_j + \rho_1 \Delta V_j + \rho_2 D_j \Delta V_j + u_j$$
(5)

Our parameter of interest is β , which can be interpreted as the effect of having a new

¹¹If you get a credit at a subsidized rate, the later you pay back the credit, the higher the NPV. We cannot get an individual figure for the financing costs of most municipalities in credit markets. Indeed, in spring 2012 presumably many of them did not have the possibility to get credit at all. But we can take the financing cost of Madrid (the capital and biggest city of Spain), which in 2011 had a bond trading in secondary markets, and use it as a lower bound. The average quotation of Madrid's 10 year bond yield in April 2011 was 7.5%, which represented 220 basic points (bps) relative to the 10Y Spanish treasury. Arguably, the financing cost of Madrid must be lower than the cost of other municipalities, and the risk premium was smaller in 2011 than in 2012. Hence, it seems reasonable to use it as a lower bound for municipalities' discount rate to compute the difference between the NPV of presenting and not presenting a plan.

 $^{^{12}}$ It is important to note that the word incumbent here refers to the 2007 incumbent and not the 2011 incumbent.

party in power on the probability of choosing an adjustment plan. Equations 4 and 5 correspond to our first- and second-stage, respectively. Variable D_j is defined as $D_j = \mathbb{1}\{\Delta V_j > 0\}$ and is our instrument for C_j . The third and fourth terms in the right-hand side of both equations correspond to linear terms in the running variable, estimated separately on each side of the threshold.

We estimate the parameter of interest using a local linear regression weighted by a triangular kernel. The state-of-the-art in the estimation of these parameters uses the routine proposed in Calonico, Cattaneo, Farrell, and Titiunik (2017), which incorporates data-driven procedures to select a bandwidth, adjusted standard-errors to account for the bandwidth selector and a bias correction procedure developed by the authors.¹³ We discuss the robustness to both the bandwidth choice, the choice of the kernel and the polynomial length used to adjust for the running variable in Section 4.4.

Before we can move to discuss our estimates for β we need to discuss the plausibility of some of the assumptions required for the validity of the regression-discontinuity design in our context. In the first place, we discuss the assumption of no manipulation. While parties influence electoral results through their actions, it is unlikely that they can perfectly manipulate electoral outcomes. We provide evidence consistent with this notion by looking at the histogram of the running variable around the threshold, which we report in Figure 3. The formal statistical tests described in McCrary (2008) and Cattaneo, Jansson, and Ma (2020) yield large p-values of 65% and 76%, respectively, confirming that perfect manipulation of the running variable is unlikely in our context.

To further emphasize the validity of our research design, we now analyze the covariate balancing at the threshold. Our empirical strategy ensures that pre-determined characteristics of the municipalities and the governments in power before 2011 are balanced on both sides of the threshold. Figures 4 and 5 illustrate this point. Figure 4 shows that demographic and financial characteristics of municipalities vary smoothly at the threshold. Importantly, this includes variables measuring the level of arrears and debt accumulated by municipalities by 2011. Figure 5 shows that characteristics of the incumbent government in power before the 2011 election also vary smoothly at the threshold. Appendix Tables A.2 and A.3, display formal tests for these differences at the threshold using 2SLS estimates similar to

¹³Details on these procedures can be found in Calonico, Cattaneo, and Titiunik (2014) and Calonico, Cattaneo, Farrell, and Titiunik (2017). In our case, implementation is carried out using the most recent version of the Stata rdrobust command.

Figure 3 Histogram of Running Variable – Vote Margin of Municipal Challenger



Notes: Histogram of running variable for values between -0.35 and 0.35. The p-value of the Cattaneo, Jansson, and Ma (2020) test of no manipulation is 76%.

the ones used for our main outcome of interest. For all outcomes, we observe the effect of interest is statistically insignificant at conventional levels. Thus, we conclude that our RD design successfully deals with predetermined confounders.

4.2. Main Results

We illustrate our first-stage in the top panel of Figure 6. The horizontal axis represents our running variable and the vertical axis the probability of having a new party in power at the local level after the 2011 election. Third degree polynomials are estimated separately on both sides of the threshold. Gray dots correspond to averages of the dependent variable for different bins of the variable in the horizontal axis, and vertical lines correspond to 95% confidence intervals. We observe a substantial jump in the probability of having a change in the party in power at the threshold. The gap in probability is roughly 0.5, indicating the design is fuzzy and not sharp.

The bottom panel of Figure 6 illustrates the reduced form effect of crossing the threshold on the probability of having an adjustment plan. Other elements of the graph are analogous to those described in the top panel. The discontinuity at the threshold indicates that when the challenger wins the election we observe an increase in $Pr(P_i)$ of roughly 0.15.

We now turn to our main empirical results, which are the 2SLS estimates reported in



FIGURE 4 Covariate Balancing – Municipal Characteristics

Notes: The horizontal axis represents the vote share difference between the challenger and the incumbent. From left to right and top to bottom the vertical axes represent population, household size, fraction of employed population, logarithm of municipal spending per capita, municipal public debt per capita, municipal cash holdings per capita, arrears per capita, municipal housing tax and logarithm of central government transfers. Solid lines represent third degree polynomials in the running variable estimated separately for positive and negative polynomials. Gray dots correspond to averages for bins of the running variable. Vertical lines correspond to 95% confidence intervals around these averages.

Table 5.¹⁴ Column 1 reports the effect of a change in the party in power on the probability of presenting a plan. The estimated effect of 0.3 is large and statistically significant, suggesting newly elected governments are more prone to agree on an adjustment plan than incumbents. The first-stage F-statistic is 126, well above the conventional threshold for weak instruments. In columns 2 and 3 we add controls. Column 2 includes the controls displayed in Figure 4, which are demographic and financial characteristics of municipalities.¹⁵ Column 3 includes the controls displayed in Figure 5, which are characteristics of the incumbent government

¹⁴We report the first-stage coefficients in Appendix Table A.1.

¹⁵We do not include the logarithm of municipal spending per capita because we do not have this information for many municipalities. Still, despite the change in sample size if we include this control in the regression, results remain qualitatively similar if included.



FIGURE 5 Covariate Balancing – Previous Government Characteristics

Notes: Balancing tests using the characteristics of the government in power in the period before the 2011 election. The horizontal axis represents the vote share difference between the challenger and the incumbent. From left to right and top to bottom the vertical axes represent fraction of one-party majorities, seat share of the mayor's party, fraction of minority governments, fraction of female mayors, fraction of mayors with college studies, fraction of white collar mayors, mayors' age, fraction of municipalities with PSOE major as incumbent, and fraction of municipalities with PP major as incumbent. Solid lines represent third degree polynomials in the running variable estimated separately for positive and negative polynomials. Gray dots correspond to averages for bins of the running variable. Vertical lines correspond to 95% confidence intervals around these averages.

in power before the 2011 election.

4.3. Mechanisms

The previous results show that the probability to present an adjustment plan differ depending on whether the party in power changes or not. We believe this difference is driven by the fact that a new leadership can more successfully blame the previous incumbent for the need to perform an adjustment. In this section we provide some suggestive evidence that this is indeed the case. First, we provide evidence consistent with incumbents avoiding to present an adjustment plan to protect their information rents, and finally we discard some alternative mechanisms.

FIGURE 6 Party Changes and Adjustment Plans: First-stage and Reduced-Form



Notes: In both panels, the horizontal axis corresponds to the running variable, defined as the vote-share difference between the challenger and the incumbent. The **top panel** illustrates the first stage; hence, the vertical axis measures the probability that the challenger is appointed as mayor. The **bottom panel** plots the reduced-form. Solid lines represent third degree polynomials in the running variable estimated separately for positive and negative polynomials. Gray dots correspond to averages for bins of the running variable. Vertical lines correspond to 95% confidence intervals around these averages.

4.3.1. The Role of Information Rents

Here we analyze three pieces of evidence which are consistent with incumbents avoiding to present an adjustment plan to protect their information rents. First, in Table 6, we run the main specification for three different sub-samples. We divide municipalities according

CH	CHANGE IN OFFICE & ADJUSTMENT FLANS					
	(1)	(2)	(3)			
	Adjustment Plan	Adjustment Plan	Adjustment Plan			
Party Change	0.311***	0.284***	0.272***			
	(0.101)	(0.103)	(0.106)			
Observations	1097	1019	1076			
Bandwidth	.138	.13	.148			
First-stage Fstat	112	97	108			
Controls	No	Municipality	Prev Govmnt			
2007 Incumbent	All	All	All			

 TABLE 5

 Change in Office & Adjustment Plans

Notes: The table presents two stage least squares estimates of the effect of a change in municipal government on the probability of presenting an adjustment plan. The first column does not include controls. The second column controls for the municipal characteristics analyzed in figure 4. The third column controls for the previous government characteristics analyzed in figure 5. We report local linear regressions with triangular kernel and third degree polynomials fitted at the two sides of the threshold. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

to their pre-existent level of arrears, and explore the effect of a change in office on the probability of presenting a plan. We find no effect for those municipalities in the bottom tertile of the distribution. The prevalence of presenting a plan for this subsample is 49.4%, and there is no significant difference depending on government's tenure. This changes for the second and third tertile. The average probability of presenting a plan rise above 85%, but there is a significant difference depending on whether the government had responsibilities on the previous administration. While the majority of newcomers present a plan when the level of arrears is sufficiently high, many ongoing incumbents remain reluctant to do so. We find this consistent with the fact that for challengers, the higher the level of arrears, the larger the gains of presenting an adjustment plan. This could be different for incumbents, who will send a worse signal about their previous performance the higher is the level of arrears.

Second, we explore some direct evidence in the survey that Prof. Pedro Rey-Biel and his team run in a sub-sample of 126 Spanish Mayors (project "POLICONSTRAINTS", Social Research Grant of Fundación La Caixa). This survey seeks to understand the determinants of evidence-based policy implementation. It includes 31 items including gender, age, level of studies and diverse questions surveying policy evaluation habits, relevance of different economic sectors for the municipality, willingness to get information about policy efficiency, and others. We also introduced a specific question about how to carry a fiscal adjustment.

Table 7 summarizes the answers to the subset of questions that are particularly relevant to our study. In the first question in Table 7, mayors had to answer whether they would change a policy if they get evidence that it is not working. 6.5% answered *maybe*, depend-

CHANGE IN OFFICE & ADJUSTMENT PLAN - HETEROGENEITY					
	(1)	(2)	(3)		
	Adjustment Plan	Adjustment Plan	Adjustment Plan		
Party Change	0.0420	0.367^{***}	0.502^{***}		
	(0.274)	(0.139)	(0.154)		
Observations	333	396	320		
Bandwidth	.128	.152	.117		
Plan Proportion	.494	.86	.853		
Amount of Arrears	Bottom Tercile	Middle Tercile	Upper Tercile		

TABLE 6

Notes: The table presents two stage least squares estimates of the effect of a change in municipal government on the probability of presenting an adjustment plan. The first column reports the effect for those municipalities in the bottom tertile of arrears, the second column for municipalities in the middle tertile, and the third column for municipalities in the upper tertile. We report local linear regressions with triangular kernel and third degree polynomials fitted at the two sides of the threshold. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

ing on whether this evidence is really applicable to their municipality.¹⁶ An overwhelming majority of mayors (90.7%) declared that they would actually change it. Only 2.8% declared that they would not change the policy, despite getting evidence that it is not working. Then, in a follow-up question, they were asked whether they have actually ever done it. Only 52.3% declared they have ever corrected a policy after getting evidence that it was not working. Of course, this might simply point out that half of the mayors were never aware of having implemented any flawed policies. Nevertheless, there is a question at the end of the survey which might point otherwise. It asks mayors how much they agree with the following sentence: "We are human beings and we all make mistakes. Sadly, often we cannot correct past mistakes the way we should, because the opposition would use this to make our errors more salient". We were surprised to find that as much as 20.41% percent declared to strongly agree with this sentence. We must consider we are surveying professional politicians. Therefore, we expect them to signal virtue in their answers, in line with what we find in question 1. The finding that 20.41% of them openly declared that they would not do the right thing, just so they can protect their public image, give us confidence that the mechanism that we are proposing has a bite, at least for a subset of politicians. Last question in table 7 was specifically introduced to learn about our setting. We find that three times more mayors find it easier for a newly elected government to do an adjustment relative to a government with responsibility in the previous administration (though half of the answers point out there is

¹⁶In the comment section they qualify their answer raising the following issues: Does this evidence come from a sample of similar municipalities to my own? Are the policies in the evaluation really similar to mine? Is the historical context comparable?

	Yes	No	Maybe
1. Would you change a policy if you receive rigorous evidence that it is not working, or that there are better alternatives?	90.7%	2.8%	6.5%
	Yes	No	
2. Have you ever changed a policy that was not working?	52.3%	46.7%	
	Strongly Agree	Neither Agree nor Disagree	Strongly Disagree
3. How much do you agree with the following statement: 'We are human beings and we all make mistakes. Sadly, often we cannot correct past mistakes the way we should, because the opposition would use this to make our errors more salient'.	20.4%	52.0%	27.5%
	A Newcomer	An Ongoing Incumbent	Does not make any difference
4. Suppose that a newly elected government starts the term with problems in the municipal accounts (for instance: the municipality has trouble to pay its suppliers). This situation would be easier to address for:	36.7%	13.2%	50.0%

TABLE 7 Survey to a Sample of Spanish Mayors

no difference). We find this consistent with the idea that politicians find it difficult to admit previous mistakes and act in consequence.

Finally, using data on the outcome of the following municipal elections in 2015, we explore the relation between presenting an adjustment plan to the national government and getting re-elected. Namely, we estimate the following equation:

$$R_j^{2015} = \alpha_0 + \alpha_1 I_j + \alpha_2 P_j + \alpha_3 P_j \times I_j + \gamma X_j + u_j \tag{6}$$

where R_j^{2015} is a dummy taking a value of 1 if the party in power before the 2015 election was re-elected; I_j takes a value of 1 if the party in power after the election of 2011 was the same as the one in power in 2010 before the election; P_j is a dummy taking a value of 1 if the municipality presents an adjustment plan and X_j is a set of controls including population, debt per capita and outstanding arrears per capita in 2011. The coefficient of interest is α_3 , which indicates the differential re-election probability between incumbents that presented a plan and incumbents that did not present a plan (estimated conditional on presenting a plan). Naturally, the assumptions involved for causal interpretation of α_3 are quite strong in this context, as presenting the plan is an endogenous decision by the government. Thus,

Notes: Answers to a subset of selected questions in the context of the "POLICONSTRAINTS" project, Social Research Grant of Fundación La Caixa, directed by Prof. Rey-Biel. 126 mayors from a sample of Spanish municipalities took part on this survey.

Mayor Re-elected in 2015				
	(1)	(2)		
	Re-Elected	Re-Elected		
Incumbent 2010	0.150^{***}	0.148^{***}		
	(0.0285)	(0.0288)		
Adjustment Plan	0.00259	0.0136		
	(0.0303)	(0.0306)		
Incumbent 2010#Plan	-0.0603*	-0.0673*		
	(0.0355)	(0.0358)		
Constant	0.606^{***}	0.650^{***}		
	(0.0248)	(0.0262)		
Observations	$3,\!546$	$3,\!514$		
Controls	NO	YES		

TABLE 8	
Mayor Re-elected in 2015	5
(1)	

Notes: The table shows OLS estimates with robust standard errors on the probability of re-election in 2015. We exclude from the sample municipalities with population, arrears or financial debt above the 99 percentile. The first coefficient is a dummy that takes value 1 if the mayor in 2011 after the election was the incumbent in 2010 and value zero otherwise. The second coefficient is a dummy that takes value one if the municipal government presents an adjustment plan, and value zero otherwise. The third coefficient is the interaction between the previous two. The first column controls for population, outstanding debt, arrears and a dummy that takes value one if the mayor is from Partido Popular. The second column adds province fixed effects. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

we only interpret our findings as suggestive or descriptive in this context.¹⁷.

Estimates for the coefficients in equation 6 are provided in Table 8. We observe that incumbent governments that agreed on an adjustment plan with the national government are roughly 6% less likely to be re-elected than those that did not present a plan, and this is weakly significant. Although we do not claim causality on those estimates, we find them consistent with our proposed mechanism.

4.3.2. Alternative Mechanisms: Elected Government Characteristics

A natural alternative explanation for our main finding is that something besides tenure is changing after a change in office. In table A.4 of the Appendix we conduct a 2SLS regression similar to that of our main analyses, but using as dependent variables elected government characteristics. We find that the effect of interest is statistically insignificant for all the confounders, except for the age of the elected mayor, and the party of the elected mayor.

These findings are predictable. First, mayor's age decreases to the right of the threshold. This is almost mechanical, since it is expected that newcomers are younger than incumbents. We show that our results remain the same if we control for mayor's age in the regressions.

¹⁷To deal with outliers, we exclude from the sample municipalities with population, arrears, and financial debt above the 99 percentile. If instead we use the same sample, all results maintain their level of significance

Second, the effects on political parties is also expected. PSOE was the main winner of the 2007 local elections and 2008 national elections. In the 2011 local elections there was a turn around, and PP was the main winner. Thus, if there is a change in the government, it is likely that the probability that the new mayor is from PP increases, and the probability that the new mayor is from PSOE decreases. Still, we follow a series of different strategies to account for this potential issue. First, we include controls. Second, we restrict our sample according to partisan characteristics. Third, we consider an alternative estimation strategy where we estimate the effect of parties on the probability of presenting an adjustment plan. In all cases, we find that the identity of the winning party has no influence on the probability of agreeing on an adjustment plan with the central government.

Column 2 in panel A of Table 9 includes controls to deal with the possibility that mayor age or partisan differences at the threshold drive the result in column 1. In particular, we include dummies for PP and PSOE incumbents, and control for the age of the elected mayor. The estimated coefficient of interest continues to be large and statistically significant. Columns 3 and 4 estimate our specification after restricting the sample to municipalities where the incumbent was from PSOE and from PP, respectively. We continue to find large and significant effects for both sub-samples, indicating that challengers are more likely to present an adjustment plan, no matter whether incumbents are from PP and PSOE. We do something analogous in columns 1 and 2 of panel B. We report RDD estimates obtained for the sub-samples of municipalities with PSOE and PP challengers, respectively. Again, the effect of a change in mayoral party on the probability of presenting a plan is large and positive. Both challengers from PSOE and from PP are significantly more likely to present an adjustment plan than the incumbents in their respective municipalities. Lastly, in columns 3 and 4 we provide fuzzy RDD estimates for different sub-samples based on the party in power. In column 1 we restrict the sample to municipalities ruled by PSOE in 2011, after the elections. This case amounts to comparing municipalities where PSOE was either newly elected in 2011 or had been in power in (at least) the previous period. We observe a positive and significant coefficient, of a magnitude comparable to those reported in panel A. This shows that mayors from PSOE who were challengers in the previous term are more likely to present an adjustment plan than mayors from PSOE who were incumbents. In column 2, we replicate this result for PP mayors. Albeit insignificant due to the reduced sample size, the sign and size of the coefficient shows that mayors from PP that were challengers in the previous term seem to be more likely to present a plan than mayors from PP who were incumbents.

TABLE 9					
	Leadership Change & Adjustment Plans By Party				
	(1)	(2)	(3)	(4)	
Panel A	Adjustment Plan	Adjustment Plan	Adjustment Plan	Adjustment Plan	
Party Change	0.311^{***}	0.264^{***}	0.266^{**}	0.414^{**}	
	(0.101)	(0.0837)	(0.107)	(0.204)	
Observations	1097	1067	535	248	
Bandwidth	.138	.175	.14	.152	
Specification	Baseline	Inc. Control	PSOE Inc.	PP Inc.	
	(1)	(2)	(3)	(4)	
Panel B	Adjustment Plan	Adjustment Plan	Adjustment Plan	Adjustment Plan	
Party Change	0.279^{**}	0.299^{**}	0.260*	0.350	
	(0.109)	(0.124)	(0.157)	(0.233)	
Observations	568	420	449	230	
Bandwidth	.212	.132	.189	.128	
Sample 2012	PSOE Challengers	PP Challengers	PSOE Mayors	PP Mayors	

Notes: The table presents two stages least squares estimates of the effect of a change in municipal government on the probability of presenting an adjustment plan. In Panel A, the first column is the baseline specification, the second column includes mayor's age, and dummies for PP incumbent and PSOE incumbent as controls, the third column restricts the sample to municipalities with PSOE incumbent and the fourth column to municipalities with a PP incumbent. In Panel B the first columns restricts the sample to municipalities ruled by a PSOE Mayor, the second to municipalities ruled by a PP Mayor, the third to municipalities with a PSOE challenger, and the fourth to municipalities with a PP challenger. We report local linear regressions with triangular kernel and third degree polynomials fitted at the two sides of the threshold and control for some municipality and government characteristics. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

To reassure that political affiliation is not driving our results, we modify our research design to analyze specifically whether a party is more or less likely to present an adjustment plan to smooth out the payment of arrears. We do so for both PSOE and PP, which are the two parties that control most municipalities in Spain since the late 1980s (including the 2010-2015 period). For this purpose, we estimate:

$$M_j^p = \alpha_0 + \tau D_j^p + \eta_1 \Delta V_j^p + \eta_2 D_j \Delta V_j^p + v_j \tag{7}$$

$$P_j = \alpha_1 + \beta M_j^p + \phi_1 \Delta V_j^p + \phi_2 D_j \Delta V_j^p + u_j$$
(8)

Where M_j^p is a dummy taking value 1 if municipality j appointed a mayor from party $p = \{\text{PSOE}, \text{PP}\}$ after the 2011 election, ΔV_j^p is the vote margin for party p in municipality j in that election and $D_j^p \equiv \mathbb{1}\{\Delta V_j^p > 0\}$.¹⁸ We develop the same estimation as in the case of

 $^{^{18}\}Delta V_j^p$, the vote margin for party p, is the difference in vote shares between party p and the most voted party in j after excluding p. We restrict our attention to municipalities in which p is either the mayor, or the opposition

our main RDD exercise, using the local linear methods in the routine described in Calonico, Cattaneo, Farrell, and Titiunik (2017). The parameter of interest β measures whether party p is more or less likely to opt for an adjustment plan. Results for this exercise are reported in Table 10. Columns 1 and 2 report the effect of having a PP mayor on the probability of doing an adjustment plan, and columns 3 and 4 report the effect of having a PSOE mayor on the probability of having an adjustment plan. Columns 2 and 4 include our usual set of covariates. We find insignificant effects across the board for both parties. The absolute values of the point estimates is at most 1/8 of the effects reported in Table 5, providing conclusive evidence that our main effect of interest is not driven by partisan differences in the propensity to submit an adjustment plan.

TABLE 10					
Party Mayor & Adjustment Plan					
	(1) (2) (3) (4)				
	Adjustment Plan	Adjustment Plan	Adjustment Plan	Adjustment Plan	
Party Change	-0.00807 (0.0989)	-0.0453 (0.0989)	0.0346 (0.0896)	0.0333 (0.0823)	
Observations	1215	977	1575	1333	
Controls	No	Yes	No	Yes	
Instrumented Var.	PP Mayor	PP Mayor	PSOE Mayor	PSOE Mayor	
p-value	0.935	0.647	0.700	0.686	
Bandwidth	0.190	0.189	0.227	0.237	

Notes: The table presents two stages least squares estimates of the effect of a PP / PSOE mayor on the probability of presenting an adjustment plan. The first two columns instrument for a PP mayor. The first column adds no controls, while the second column controls for arrears per capita and mayor's age. The third and fourth columns instrument for a PSOE mayor. The third adds no controls, while the fourth controls for arrears per capita and mayor's age. We report local linear regressions with triangular kernel and third degree polynomials fitted at the two sides of the threshold. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

4.4. Robustness Checks

We now discuss several complementary results to illustrate the robustness of our findings.

We repeat the main analysis with an alternative definition of the dependent variable. Before, we have defined the dependent variable as a dummy that takes a value of 1 if the municipal government presents a plan, and a value of 0 otherwise. This amounts to treating those municipalities that present a plan that is not approved (<7% of all municipalities that present a plan) the same as those that present a plan that is approved. Now we take an

leader.

alternative definition of the dependent variable, which will only take a value of 1 if the municipality presents a plan that is approved, and a value of 0 otherwise. This amounts to consider those municipalities that present a plan that is not approved together with those that do not present a plan. Arguably, one could think that plans that are not approved may not reflect the real financial situation of the council. If this is the case, the trade-off between information rents and extended financing which is highlighted in the model might not be operating, as previous incumbents that remain in office would not be revealing their true type. Table A.6 shows that changing the definition of the dependent variable to consider plans which are not approved the same as not presenting a plan makes no difference in the results.

To be sure about the robustness of our result, we also explore how sensible it is to the chosen bandwidth. As explained in Section 4.1, the estimation of our parameter of interest uses the routine proposed in Calonico, Cattaneo, Farrell, and Titiunik (2017), which incorporates data-driven procedures to select a bandwidth and adjusts standard-errors to account for the bandwidth selector. In Figure 7 we evaluate the stability of our main estimated effect for different bandwidths around the threshold. We show that regardless of the bandwidth selected, our main result is statistically significant at 95% confidence intervals.



FIGURE 7 Robustness of RD Estimates to Bandwidth Choice

Notes: The horizontal axis represents different bandwidths around the threshold. The vertical axis represents the size of the estimated effect of having a new government on the probability of presenting an adjustment plan. The solid line corresponds to point estimates for different bandwidths. Dotted and dashed lines represent 90% and 95% confidence intervals, respectively.

5. Conclusions

On April 2012, Mariano Rajoy – recently elected to preside over the Spanish central government – stated the budget his government was presenting to Parliament was "tough, unpleasant and liked by no one". The budget itself cut public spending by 27 billion euros, introduced widespread pay freezes for public employees and significant tax hikes, and was aligned with the demands of the ECOFIN, which by that time, agreed on rescuing the Spanish banking system. Rajoy promptly stated that if his socialist predecessor "had fulfilled its commitments" the budget he had presented wouldn't have been so tough.¹⁹

This example is one of many in which newly elected governments justify a fiscal adjustment, and the request of substantial third party support from the EU, by recourse to the errors of their predecessors. We study this process in this paper, by carrying out an empirical analysis yielding both compelling cross-country evidence and causal estimates of the relationship between government turnover and the probability of requesting financial support. Our results contribute to the understanding of how issues of political expediency can influence the path to financial stabilization and the resources used by governments to achieve stability.

We acknowledge that the estimates that have the highest standard of identification – i.e., the weakest identification assumptions – leverage a particular program available to Spanish local governments during the Great Recession. However, the fact that they are broadly consistent with qualitative findings from our cross-country regressions do suggest our findings may generalize across contexts.

¹⁹See for example https://www.eleconomista.es/economia/noticias/3874071/04/12/ Rajoy-los-presupuestos-son-desagradables-pero-la-alternativa-era-infinitamente-peor.html, and https://www.lavanguardia.com/economia/20120330/54279770166/presupuestos-generales-del-estado-2012. html.

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Appendix A. Appendix Figures & Tables

TABLE A.1					
First-Stages - Leadership Change					
(1) (2) (3)					
	Party Change	Party Change	Party Change		
Challenger wins Election	0.563*** (0.0530)	0.552*** (0.0558)	0.547*** (0.0526)		
Observations	1094	1020	1074		
Bandwidth	.138	.131	.148		
First-stage Fstat	112	97	108		
Controls	No	Municipality	Prev Govmnt		

Note: First-stage estimates for fuzzy regression-discontinuity. Outcome variable in all columns is a dummy taking value 1 if there was a change of the party in power in the 2011 election. In all columns we control for linear terms in the running variable estimates separately at each side of the threshold. First-stage F-statistics included in the table foot. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

	(1)	(2)	(3)
	Population (000s)	Household Size	Employment p.c.
Party Change	1.917	0.0516	-0.00732
	(5.475)	(0.0634)	(0.0291)
Observations	1995	1916	1084
	1225	0 416	0.809
p-value	0.720	0.410	0.602
Bandwidth	0.157	0.156	0.136
	Log(Spending) T	reasury Balance p	.c. Debt p.c.
Party Change	0.143	45.79	67.03
	(0.337)	(110.1)	(79.11)
Observations	1174	1969	1904
Observations	1174	1205	1294
p-value	0.672	0.077	0.397
Bandwidth	0.152	0.168	0.170
	Total Arrears p.c.	IBI Urban Rate	Log(Transfers)
Party Change	-20.54	-0.0166	0.296
	(98.63)	(0.0347)	(0.356)
Ohmennetie	1150	010	1000
Observations	1157	918	1202
p-value	0.835	0.632	0.405
Bandwidth	0.147	0.116	0.156

TABLE A.2

Note: Two stage least squares estimates. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

BALANCING CHECKS – PREVIOUS GOVERNMENT CHARACTERISTICS				
	(1)	(2)	(3)	
	One-party major	rity Seat Share M	ayor Minority Govt	
Party Change	-0.0387	-0 00495	-0 0441	
I al ty change	(0.0602)	(0.0151)	(0.0370)	
Observations	1969	1071	1140	
n-value	0 520	0.744	0.933	
Bandwidth	0.166	0.135	0.235 0.145	
	Female Mayor	Mayor has College	White Collar Mayor	
Dontry Change	0.0002	0.0864	0.0400	
Party Change	-0.0993	-0.0804	-0.0409	
	(0.0950)	(0.140)	(0.139)	
Observations	896	733	732	
p-value	0.296	0.538	0.768	
Bandwidth	0.113	0.122	0.136	
	Age of Mayor	PSOE Incumbent	PP Incumbent	
	0.007	0.0044	0.0154	
Party Change	3.907	-0.0344	-0.0174	
	(2.780)	(0.107)	(0.0987)	
Observations	753	1357	1338	
p-value	0.160	0.747	0.860	
Bandwidth	0.101	0.178	0.176	

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TABLE A.3

Note: Two stage least squares estimates. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

		GOVERNMENT OIL	
	(1)	(2)	(3)
	One-party majority	Seat Share Mayor	• Minority Govt
Party Change	0.0387	0.0157	0.0441
I ally Change	(0.0602)	(0.0107)	(0.0370)
	(0.0002)	(0.0122)	(0.0570)
Observations	1269	1072	1140
Clusters	1274	1072	1140
p-value	0.520	0.199	0.233
Bandwidth	0.166	0.135	0.145
	Female Mayor Ma	ayor has College W	hite Collar Mayor
Party Change	0.0527	-0.0176	0.136
	(0.0857)	(0.138)	(0.124)
Observations	1234	717	853
Clusters	1234	979	1277
p-value	0.538	0.898	0.276
Bandwidth	0.159	0.124	0.167
	Age of Elected May	or PSOE Mayor (2	011) PP Mayor (2011)
Party Change	-5.102**	-0.404***	0.273^{**}
	(2.321)	(0.112)	(0.114)
Observations	903	1103	1153
Clusters	1132	1103	1153
n-value	0.028	0.000	0.016
Bandwidth	0.020	0.000	0.010
Danuwium	0.144	0.109	0.140

TABLE A.4
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 BALANCING CHECKS – ELECTED GOVERNMENT CHARACTERISTICS (2011)

Note: Two stage least squares estimates. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.

TABLE A.5 NPV Difference of Presenting vs. Not Presenting an Adjustment Plan

	min	max	mean	\mathbf{sd}
All Municipalites	0.00	369.62	8.57	13.01
Mun. with Adj. Plan	0.10	110.92	8.81	9.94
Mun. with No Adj. Plan	0.00	369.62	8.23	16.49

Notes: This table reports the minimum, the maximum, the mean and the standard deviation of the difference in NPV per capita of presenting vs. not presenting an adjustment plan for municipalities with arrears. This estimation uses Madrid's March-April 2011 10Y bond yield as municipalities' discount rate. This is arguably a lower bound for the discount rate of most municipalities in March 2012, which makes our estimation also a lower bound. We report the difference for the full sample of municipalities with arrears, for those that present an adjustment plan to the national government, and for those that do not. The average size of a municipality with arrears is 9,342 inhabitants.

Alternative Definition of the Dependent Variable			
	(1)	(2)	(3)
	Adjustment Plan	Adjustment Plan	Adjustment Plan
Party Change	0.295^{***}	0.223^{*}	0.234^{**}
	(0.107)	(0.116)	(0.111)
Observations	1106	846	1091
Bandwidth	.14	.117	.15
First-stage Fstat	126	112	112
Controls	No	Municipality	Prev Govmnt
2007 Incumbent	All	All	All

TABLE A.6

Notes: The table presents two stage least squares estimates of the effect of a change in municipal government on the probability of presenting an adjustment plan. The first column does not include controls. The second column controls for the municipal characteristics analyzed in figure 4. The third column controls for the previous government characteristics analyzed in figure 5. We report local linear regressions with triangular kernel and third degree polynomials fitted at the two sides of the threshold. *, **, and *** represent 10%, 5%, and 1% significance levels, respectively.



FIGURE A.1 Covariate Balancing – Elected Government Characteristics (2011)

Notes: The horizontal axis represents the vote share difference between the challenger and the incumbent. Solid lines represent third degree polynomials in the running variable estimated separately for positive and negative polynomials. Gray dots correspond to averages for bins of the running variable. Vertical lines correspond to 95% confidence intervals around these averages.