

Lopes da Fonseca, Mariana

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**LAME BUT LOYAL DUCKS**

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Mariana Lopes da Fonseca

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

# Lame but Loyal Ducks

Mariana Lopes da Fonseca<sup>†\*</sup>

<sup>†</sup>University of Göttingen  
mariana.da-fonseca@wiwi.uni-goettingen.de

## Abstract

This paper analyzes the consequences of an electoral reform introducing mayoral term limits at the municipal level in Portugal. Relying on a difference-in-difference methodology and a novel method that accounts for anticipatory effects of reforms, this study explores variation between and within municipalities to capture the economic and political consequences of limiting the number of consecutive mayoral terms. In contrast to the usual lame duck effect in the literature, I find that term limited mayors decrease current expenditure and reduce both user charges and tax rates. Lame ducks send positive fiscal signals possibly in an attempt to maximize the electoral perspectives and re-election probability of their party in the coming elections. Still, political turnover significantly increases as a result of the electoral reform.

**Keywords:** reform; politics; incentives

**JEL codes:** D72, H00, H72

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\*Department of Economics, University of Goettingen, Platz der Goettinger Sieben 3, 37073 Goettingen, Germany, Tel: +49(0)-551-394-929.

# 1 Introduction

Term limits have their roots in ancient Greece and are still an electoral feature present in many democracies worldwide as means to check individual power. Yet, term limits are not consensual. Whilst proponents emphasize the pro-democratic aspects of term limits, opponents regret the non-capitalization on experience and competence of long-term officials.

There are however several aspects that need to be taken into account when discussing term limits. Opinions might differ as to which branches or level of political administration should be term limited. If on the one hand, officials holding the highest offices in a country are in general term limited and that is well-accepted if not expected of a strong democracy. On the other hand, evidence on the impact of term limits on sub-national level politics and finances is not persuasive. In fact, lame ducks, i. e. elected officials reaching the end of their tenure, have the reputation of being less responsive towards the electorate as well as less responsible in performing their duties. In as much as Besley and Case (1995a, p. 793) wonder ‘... why term limits exist at all’.

Most existing studies however, only look at the U.S. experience and focus in particular on legislative term limits. In this context much of the economic evidence relates to how term limits affect pork barrel politics (Carey et al., 1998; Bernhardt et al., 2004; Aidt and Shvets, 2012). This paper in turn, contributes to the short empirical literature on the effects of gubernatorial term limits on local policy choices and additionally on the local political environment. In order to credibly and causally identify these effects I rely on a natural experiment at the municipal level in Portugal: an electoral reform introducing mayoral term limits as off 2006. Particularly, the law establishes a limit of three consecutive terms after which an incumbent mayor may no longer stand for re-election. Term limits were first binding in the 2013 local elections for 150 municipalities, over half the total number

of municipalities in Portugal. I implement a difference-in-difference (DiD) design relying on between- and within-variation and controlling for anticipatory effects when appropriate to identify the impact of term limits on a number of fiscal and political outcomes.

The DiD estimates suggest a significant reduction on the level of the property tax rate as well as on user charges and total current expenditures. These results are in line with the existence of a lame duck effect as policy choices of term limited incumbents significantly differ from those of re-election eligible incumbents. However, the classical moral hazard interpretation of lame duck terms does not apply to this context. In fact, these results combined with the fact that the mayoral resignation rate goes up in term limited municipalities suggest that lame ducks are concerned with the re-election prospects of their affiliated party and try to convey a positive signal to the electorate through responsible local policy choices. Despite these attempts however, term limits led to a significant increase in the rate of political turnover.

## 2 Literature on Term Limits

The literature on the effect of term limits on economic policy choices is mainly theoretical and part of the broader field of political agency literature. The latter consisting of political implementations of principal-agent models of reputation building offering theoretical explanations for electorally induced economic distortions in a comprehensive manner. From general policy choices to more specific issues, e. g. yardstick competition in tax setting (Besley and Case, 1995b) or the political budget cycle (Nordhaus, 1975).

Two main messages steam from this literature. First, and borrowing the principal-agent terminology, that the political agent is induced to act – or build a reputation of acting – in behalf of the principal, i. e. the electoral district, by the democratic institutional mech-

anism of periodic elections.<sup>1</sup> Second, that such dynamics are compatible with a rational forward-looking electorate in a context of asymmetric information, as shown e. g. in Rogoff (1990) with regards to political budget cycles. In particular, state of the art literature relies on signaling models of reputation-building where re-election seeking incumbents try to signal their superior ability to voters, who since Ferejohn (1986) are generally modeled as a performance-oriented electorate, in order to increase their likelihood of re-election.<sup>2</sup> In this context, fiscal policy is often used to signal an incumbent's ability.

Yet, periodic elections as a controlling mechanism and reputation-building through signaling activities as an effective strategy, both hinge on the political agent's will or freedom to run for re-election. This point was first addressed in the seminal work by Barro (1973). His approach of attributing a finite and commonly known time horizon to officeholders, determined by the existence of term limits, creates a last-term effect where there is no control over the officeholder's behavior. As reputation building is no longer a concern, there is a situation of moral hazard where politicians will choose their own optimal last-term policy. Barro (1973) refers to this last-term effect as the lame-duck effect, and in line with his analysis lame-duck terms are generally characterized by a departure from the optimal policy choice.

This reputation-building framework creates a clear and testable hypothesis: that officeholders behave differently contingent on whether they are unable or eligible to stand for re-election. Having fiscal policy as the channel through which signaling takes place further implies that term limits might have an impact on fiscal performance. Still, empirical tests on the lame-duck effect are scarce.<sup>3</sup> Apart from two studies that rely on cross-country variation, the existing literature on gubernatorial term limits focuses exclusively on the

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<sup>1</sup>Often referred to in the literature as the accountability aspect of elections. (citations)

<sup>2</sup>Other theories are also increasingly discussed in the context of the impact of term limits on policy choices, such as strategic fiscal policy in view of binding the future regime (citation).

<sup>3</sup>In fact, most of the empirical literature focuses on legislative term limits and in particular on their mass introduction in the U.S. for state legislators in the nineties. See e. g. Daniel and Lott Jr. (1997), Moncrief et al. (2004) or Carey et al. (2006).

U.S. experience.<sup>4</sup> In what is the most cited paper on the issue, Besley and Case (1995a) show that gubernatorial term limits are related to an increase on sales taxes, income taxes and government expenditure per capita as well as a decrease on real state minimum wage for a sample of all states between 1950 and 1986. However, only the results pointing to an increase in government expenditure survive an extension of the sample period, from 1986 to 1997, in Besley and Case (2003). In addition, the literature also connects term limits to higher levels of state public capital stocks and investment flows during the 80's (Crain and Oakley, 1995), and an overall higher volatility in deficits and revenues between 1969-1989 (Crain and Tollison, 1993). List and Sturm (2006) in turn, extend the literature to secondary policy decisions. For a sample of U.S. governors between 1970 and 2000, they find that environmental policy is substantially different in years where a governor may or may not run for re-election, with changes to environmental policy hinging on the composition of the electorate. As a result, the current empirical evidence has been shaped by the U.S. institutional context which in general fits the reputation-building framework previously described.

### **3 Institutional Details**

#### **3.1 Local Politics and Finances**

This paper relies on the Portuguese main sub-national level of government, i. e. municipalities, as a laboratory to study the impact of introducing mayoral term limits on local public finance and politics. In Portugal, there are in total 308 municipalities, the equiva-

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<sup>4</sup>The studies relying on cross-country variation, by Johnson and Crain (2004) and Dalle Nogare and Ricciuti (2011), produce conflicting results. While the former establishes that for 48 democracies between 1972 and 1990 gubernatorial term limits are correlated with higher government revenues and expenditures, the later shows no significant differences between term-limited chief executives and non-term-limited ones with regards to social and welfare spending and fiscal deficit for a sample of 52 democracies during the period from 1977 to 2000. In addition, Johnson and Crain (2004) also provide evidence on heterogeneous effects of a single-term rule versus two-term rule.

lent to a U.S. town/city. The focus is upon the 278 mainland municipalities for increased comparability and due to different institutional details regulating the autonomous regions of Azores and Madeira. Municipalities are responsible for several aspects of the local public administration from the supply of public goods to territorial organization, promotion of local development and external cooperation.<sup>5</sup> For the purpose, there are two political institutions at this level, the executive municipal council and the legislative municipal assembly.

The mayor is the top chief executive position in a municipality. He is the head of the municipal council, which is composed by an additional four to ten councilmen depending on the municipality's population size.<sup>6</sup> The three-terms limitation introduced by the electoral reform is directed exclusively at the mayoral position. In Portugal however, there are no direct mayoral elections per se. Instead, the mayor is the first name on the winning list running for the municipal council elections. For this reason, these are the relevant election results used in the empirical analysis.

Elections for the municipal council are defined exogenously from the perspective of the local authorities. They take place simultaneously countrywide every four years with a proportional representation system of closed lists in place. Parties and independent lists of organized registered electors may contest the elections with seats being distributed according to the D'Hont method. Local politics are dominated by the local branches of the main parties represented in the national parliament.<sup>7</sup>

On the financial side, the laws regulating local governments in Portugal are bound by the principle of decentralization. Municipalities have their own assets, finances and personnel. Still, and as is the case with several local governments across Europe, spending decentralization outweighs revenue decentralization. Conditional and unconditional trans-

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<sup>5</sup>Law No. 159/99 in *Diário da República* 215, Series I-A, 14th September 1999.

<sup>6</sup>Two exceptions are the Lisbon and Oporto municipalities with 16 and 12 councilmen, respectively.

<sup>7</sup>These are the center-left Socialist Party (PS), the center-right Social-Democrats (PSD), the Communist Party (PCP) and the right-of-center Popular Party (CDP-PP).



fers from higher levels of government still represent the main source of municipal funding. However, despite the reduced fiscal autonomy, in the past years there has been an increase in the relative importance of both local taxes and user charges.

Municipalities present their current and capital accounts yearly. The empirical analysis focuses on the former as these are of an operative and year-by-year nature.<sup>8</sup> On the revenue side of the current accounts I focus on the few items entirely under the control of the municipality: the local property tax and user charges.<sup>9</sup> Unlike other municipal taxes whose rate and/or base is set by higher tiers of government and thus exogenous to local authorities, the local property tax rate is set at the beginning of each year by the municipality and, since a reform in 2003, within a range of 0.3% and 0.5% for urban properties.<sup>10</sup> I also investigate whether any changes on the property tax rate eventually had a significant impact on local tax revenues as a whole. Likewise, user charges are also set on a yearly basis by the municipality. However, the scope of services provided by the municipalities is very heterogeneous with no systematic records on the type of service and prices charged. I thus look into the revenues from fines and fees as a proxy to identify the impact of term limits on the level of user charges in the municipality. Finally, on the expenditure side I study the impact of a binding term limit on the current aggregate expenditure which primarily encompasses expenditures with personnel and current transfers to lower levels of government.<sup>11</sup>

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<sup>8</sup>Capital accounts often involve long-term commitments and are thus less susceptible to change.

<sup>9</sup>Since a reform in 2007 of the local corporate income tax, mayors also choose this tax on a range of 0-1.5%. Due to the small time-span of available data I do not consider this tax in the following analysis.

<sup>10</sup>The tax rate is 0.8% for rural properties.

<sup>11</sup>There are two local administrative units in Portugal, the municipalities and the parishes. Parishes are the lowest sub-national level. There are currently 3,902 parishes and each municipality consists of at least one parish.

## 3.2 Electoral Reform

On July 25th 2005, the draft Law on the implementation of term limits for local officeholders was discussed and approved in Parliament leading up to the 49/2005 Law from August 29th 2005, which entered into force on January 1st 2006. In its essence the law provides for a three consecutive terms limitation for mayors after which they are not allowed to re-run for the municipal council elections in the same municipality. However, upon entering into force it established that all incumbent mayors could re-run in the following 2009 elections. As a result, term limits were only first binding in the 2013 elections for incumbent mayors serving their at least third consecutive term at the time. In total, 150 mayors were precluded from re-running by the law, leaving 150 municipalities to have open-seat elections for the municipal council.

The timeline of the reform creates an interesting natural experiment. First, the law was voted right before, and came into force right after, the 2005 local elections held in October. Second, upon entering into force in 2006 it allowed all current mayors one last chance at re-running for the position in 2009, creating a stand-by period where the law was already in existence but not yet effective. Third, it was finally applied in the 2013 local elections to 150 municipalities. As only around half the municipalities were bound by the term limits in 2013 I can rely on both between- and within-municipality variation to identify the impact of gubernatorial term limits on local policy choices.

## 4 Empirical Model

A DiD framework is the most appropriate quasi-experimental regression method in the present setting. The objective is to compare particular fiscal and political outcomes in treatment and control municipalities for the time-frame under study. The main focus is upon implementation effects, the impact of the introduction of term limits once they were

effective in the 2013 local elections. Results are provided in two different sets. First I effectively compare the whole last electoral term in treated municipalities, leading to the term limited elections, with the past and contemporaneous control electoral terms. Second, I restrict the sample to electoral years only, i. e. the 2013 electoral year is compared with the previous electoral years (1993, 1997, 2001, 2005, 2009).<sup>12</sup> For the purpose, I construct a dummy variable,  $TL_{i,t}$ , that assigns municipalities to treatment. It equals one for every municipality-year between 2010-2013 in which the incumbent faces a binding term limit in the 2013 elections and zero otherwise. Inference is based on variants of the following DiD model

$$Y_{i,t} = \delta_0 TL_{i,t} + \beta X_{i,t} + \gamma_i + \gamma_t + \gamma_s \times t + \gamma_{s,t} + \epsilon_{i,t} \quad (1)$$

where  $Y_{i,t}$  is any of the outcome variables under study and  $X_{i,t}$  is a vector of socio-economic and political control variables described in more detail in the following section. The model is fully identified by including municipality and year fixed effects –  $\gamma_i$  and  $\gamma_t$ , respectively – however I also include in some specifications, for robustness purposes, district trends and district-year fixed effects. The former, denoted by  $\gamma_s \times t$ , to control for district-specific trends and the latter,  $\gamma_{s,t}$ , to allow for unobservable district-specific variables to vary across time.

Last and foremost, internal validity of a DiD framework hinges on the common trends assumption. In short, the trend in each of the dependent variables under study must be the same for all municipalities in the absence of treatment. This assumption can be tested by looking at the trends in treatment and control municipalities in the pre-treatment period. Figure 1 provides the plots for the different fiscal variables under study; (a) the property tax rate, (b) tax revenues, (c) revenues from fines and fees and (d) total current

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<sup>12</sup>For the political variables it only makes sense to focus on electoral years, when variables actually change.

expenditures. The graphs provide no evidence of differential trends that could undermine the empirical design.

However, the same does not hold for the local political variables. Significant anticipatory effects of the electoral reform during the stand-by period are visible on the local political environment as evidenced in Table 1. Consequently, in order to credibly identify the effect of the treatment I rely, in addition to the estimation of equation 1, on a new methodology proposed in Malani and Reif (2015) that controls for anticipation effects of reforms. I opt for a quasi-myopic rather than the exponential discounting model because the stand-by period during which anticipation effects can occur is known and finite. This approach is estimated based on the following general model

$$Y_{i,t} = \delta_0 T L_{i,t} + \delta_j \sum_{j=1}^S D_{i,t+j} + \beta X_{i,t} + \gamma_i + \gamma_t + \gamma_s \times t + \gamma_{s,t} + \epsilon_{i,t} \quad (2)$$

where the additional parameters  $D_{i,t+j}$  are dummy variables equal to 1 if a reform takes place in year  $t + j$ . The number of leading indicators that address anticipation is  $S = 2$  as there are two elections during the stand-by period between the vote and application of the electoral reform.

## 5 Data

This paper combines data on public finances and electoral results at the Portuguese municipal level. The National Electoral Commission's (*Comissão Nacional de Eleições*) and the General Directorate for Internal Affairs's (*Direcção Geral da Administração Interna*) websites provide the data on all electoral results since the first democratic local elections of 1976. Data are provided at the party level per municipality and consist on the number of votes and seats allocated to each party. In order to ascertain the incumbency status of the mayor I matched the data on electoral results with the names of the members of the

municipal council – in particular the mayor – provided in the Official Map by the National Electoral Commission published in *Diário da República*. The Official Maps however, are only available from 1993 onwards setting a lower bound to the time-span of my analysis.

Data on local public finances are publicly available and can be retrieved from the General Directorate for Local Authority's (*Direcção Geral das Autarquias Locais*) website for the years from 2003 onward. For the previous years it is provided in the institution's annual publication entitled Municipal Finances (*Finanças Municipais*). I use the logarithm of the per capita values of the deflated tax revenues, revenues from fines and fees and aggregate current expenditure. Variables are deflated to the year 2005 by the national consumer price index from the World Economic Outlook Database of the International Monetary Fund and the annual data on resident population per municipality is obtained from the Portuguese National Statistics Institute (INE). The resulting dataset collects complete information on financial accounts and electoral results for the period between 1990-2013.<sup>13</sup> This time frame encompasses the six past elections which took place in 1993, 1997, 2001, 2005, 2009 and 2013.

Following the previous literature I rely on a set of control variables including municipal population size, a measure of municipal economic activity proxied by night time light observations, and three political variables indicating whether there is a majority in the municipal assembly, whether the same party is in control of both the municipal council and assembly and whether the mayor is left-leaning.<sup>14</sup> Both the municipal population size and the political control variables are based on the data previously described. The measure of economic activity proxied by night light output over the years under study for each municipality is constructed by combining the following two databases in ArcGis: geodata on Portuguese municipal boundaries and location from The Global Administrative

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<sup>13</sup>Due to the reform of the local property tax rate in 2003, I only rely on data for this particular variable from the reform year onwards.

<sup>14</sup>The mayor is considered left-leaning if he is a representative of either the center-left PS of the Communist Party.

Areas database GADM, i. e. a spatial database collecting the location of the world’s administrative boundaries, and data on night light output collected by the Defense and Meteorological Satellite Program satellites and treated and made available by the Earth Observation Group from the National Geophysical Data Center of the National Oceanic and Atmospheric Administration.

## 6 Results and discussion

### 6.1 Local Policy Choices

Table 2 collects the DiD coefficient estimates of the dummy variable  $TL_{i,t}$  measuring the average implementation effect of term limits on the fiscal variables under study. Panel A. reports coefficient estimates of the average implementation effect for the whole electoral terms while Panel B. focuses on election years exclusively. All specifications include municipality and time fixed effects. Model (2) includes in addition district-specific time trends and model (3) adds district-year fixed effects. Specifications (4), (5) and (6) replicate (1), (2) and (3), respectively, but including control variables. As can be observed both the magnitude and significance of the coefficient estimates is consistent across specifications and with or without control variables indicating that estimates are robust to omitted variables (Altonji et al., 2005). In the following and for interpretation purposes I focus on model (6) as it provides the most conservative specification.

Results suggest that term limited incumbents significantly reduce the local property tax rate during the entire lame duck term and in particular in the election year. Specifically, the average treatment effect amounts to a 0.013 and a 0.026 percentage points reduction in the tax rate for the four years term and for the year 2013 only, respectively. The estimated impact on the aggregate municipal tax revenues is consistently negative, presumably as a consequence of the reduction of the local property tax rate, but only significant for the

election year itself, where the reduction is stronger. That the reduction in is less robust than the average treatment effect on the level of the property tax rate is probably due to the fact that it encompasses the proceeds from other taxes not directly under the control of the municipality. The average effect amounts to a 7% decrease in tax revenues which translates to 8€ per capita or around 282.000€ for the average municipality.

Coefficient estimates for the average effect of term limits on the revenues from fines and fees are likewise negative and significant for both the entire term and the election year, and of a higher magnitude for the latter. This result suggests that lame ducks decrease user charges along with the decrease in the local property tax rate, the two revenue instruments entirely at their disposal. Revenues from fines and fees are around 15 and 23% lower implying a reduction of about 79.300€ and 121.600€ on the municipal income of an average municipality during the electoral term 2010-2013 and for the election year 2013, respectively.

Finally, incumbents facing a term limit incur significantly lower current expenses. The coefficient estimates for the average treatment effect are again consistently negative but, in contrast to previous results, more significant for the whole electoral term than for the election year. The decrease in current expenditures is around 4% which amounts to close to 600.000€ in an average municipality.

As a robustness test I restrict the sample to the last two electoral terms, i. e. 2006-2009 and 2010-2013, and re-estimate the results. A shorter time series rules out any effects that might be picked up due to the length of the baseline time-frame. Coefficient estimates are collected in Table 3 and typically follow baseline estimates in terms of sign, magnitude and significance lending further robustness to the assessed results.

## 6.2 Local Politics

As aforementioned, there are visible anticipatory effects from the electoral reform on local politics during the stand-by period from 2005 to 2009. In fact, Table 1 points to an increase in electoral competition on the one hand, against a strong status quo bias on the other hand with officeholders increasingly re-running and being re-elected by the voters. Both effects may be problematic for parties whose mayor faces a term limit in the 2013 elections since parties do not enjoy the incumbency advantage that the candidates do and in addition have to face a more competitive political environment.

Coefficient estimates of the average impact of term limits on the different political outcomes are collected in Tables 4 and 5. The former provides the results from estimating equation 1 and the latter from the quasi-myopic model defined in equation 2. Whilst for the myopic model in Table 4 results for all specifications are provided as for local policy choices in the previous section, for the quasi-myopic model and for compactness only coefficient estimates from the most conservative specification of equation 2 are presented in Table 5.<sup>15</sup>

Results in general suggest that the myopic model under- or over-estimates the average treatment effect depending on whether the anticipatory effect that took place in the stand-by period was in accordance or at odds with the implementation effect in the 2013 election year. In the following I will focus on the results from the quasi-myopic model as these measure the true treatment effect more accurately.

In municipalities where the term limit was binding the number of mayoral candidates significantly increased as shown by the positive coefficient on the number of contesting parties. And so did the number of parties represented in the municipal council. In addition there was a significant decrease in the number of majoritarian councils with the difference in the seat margins between winner and runner-up decreasing significantly. These results reflect a even more meaningful change in voting patterns as seats are distributed according

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<sup>15</sup>Results are consistent across all specifications, which are not shown but available upon request.



to the D'Hont method, known for benefiting parties that are more successful at the polls.<sup>16</sup> Also, in municipalities where the term limit was effective political turnover increased significantly. Finally, also mayoral resignation significantly increased in the electoral term leading up to the term limited election.

### 6.3 Discussion

The introduction of term limit at the Portuguese local elections level provides an opportunity to analyze a setting where partisan considerations may shape lame ducks' policy choices. The anticipatory effects of the reform on the local political environment already provided a clue to the imminent implementation effects due in the 2013 elections coming from an increase in electoral competition. Local policy choices in term limited municipalities might have been a response to the changing political environment.

Given the evidence on lower re-election prospects of incumbent parties running a new candidate (Lopes da Fonseca, 2015), lame ducks acting on their own accord or along party's directives pursued significantly different policy choices compared to re-election eligible mayors. Contrary to the evidence in the literature supporting a moral hazard phenomenon related to lame duck terms, the level of the property tax rate decreased causing a decrease in the overall tax revenues, user charges as proxied by the revenues from fines and fees also decreased, and so did aggregate current expenditures. Signals however did not come only from the fiscal side, an observable increase in the mayoral resignation rate points to a concern in delivering the office to a fellow party member councilman and future mayoral candidate, all probably on behalf of the party's electoral prospects.

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<sup>16</sup>Coefficient estimates for a majority of votes and vote margin are not shown due to redundancy of the results and for compactness.

Nevertheless, as the results on the impact of the reform on political outcomes show there are low to no returns to the effort exerted by term limited mayors as political turnover significantly increases along with electoral competition in the 2013 elections.

One last aspect that has been overlooked so far relates to the fact that the focus on electoral years only may be picking up effects from a political budget cycle. In particular, the average treatment effect on current expenditures, though quantitatively similar, is more significant for the whole electoral term than for the election year only. Meaning that lame ducks significantly decreased expenditures compared to non-term limited mayors but this reduction was not as pronounced in the electoral year. This can be either because they spent more in 2013 than in the remaining years in the electoral term or because the control mayors also spend less on electoral years.

## 7 Extensions

### 7.1 Mayoral Resignation

As an extension of the results I take a closer look at the municipalities whose mayor resigned in the 2010-2013 electoral term. As these resignations were presumably strategic, it is interesting to explore whether they were accompanied by more forceful signals on the financial side and better political outcomes. For the purpose I create an additional dummy variable indicating municipalities where the mayor resigned and an interaction term between this dummy and the term limits one. I re-estimate equation 1 with the additional parameters in order to investigate differences in policy choices and equation 2, i. e. the quasi-myopic model, to explore different political outcomes. Coefficient estimates are collected in Tables 6 and 7.

Evidence on local policy choices in Table 6 is presented as the baseline results, with panel A. providing the average treatment effect for the four years electoral terms and panel

B. for the election years. Coefficient estimates for the impact of term limits are consistent with baseline estimates for both panels. In addition, whilst the average resigning mayor significantly increases expenditures, that is not the case for mayors resigning in term limited elections as shown by the coefficient estimates of the interaction term. Also of relevance is the fact that tax revenues are significantly lower for the treated municipalities. These results are in line with the reasoning that term limited mayors exerted a significant effort in providing positive fiscal signals in an attempt to improve the electoral prospects of their party in the coming elections. Mayors that resigned presumably did so to leave the office to their party's future mayoral candidate. This strategy enables both the electorate to become familiar with the candidate before the electoral campaign and the candidate to try to garner recognition from the positive fiscal signals of the current policy choices.

Despite the effort, Table 7 shows that the average impact of the reform on local politics did not differ significantly between municipalities where the term limit was effective and the mayor did or did not resign. Still, whilst the impact of a resigning mayor on political turnover is on average positive and significant, that is not the case for the term limited resigning mayors in the 2013 elections. In fact, the interaction term is significantly negative for most specifications, even if it does not survive the more conservative specification.<sup>17</sup> In line with the baseline results, this extension also suggests little political returns to the party from the effort exerted by term limited mayors on their behalf.

## 8 Conclusion

The introduction of mayoral term limits in Portugal is used as a natural experiment in order to assess both the impact of a lack of re-election incentives on local policy choices and shorter mayoral perspectives on the local political environment. The framework of

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<sup>17</sup>Results not shown but available upon request.

the analysis is based on the 278 Portuguese municipalities for the period 1993-2013. Term limits, first effective in the 2013 elections affected over half the municipalities providing a treatment and control group suitable for exploring between and within municipal variation. The empirical analysis relies on a DiD design accounting for anticipatory effects of the reform.

In contrast to the U.S. centered literature, results provide evidence of lame ducks exerting considerable effort in sending positive fiscal signals to the electorate presumably on behalf on their party. A significant increase in the mayoral resignation rate further suggests that lame ducks take into consideration the electoral prospects of their party running a new mayoral candidate. These efforts and concerns are however of little consequence as political turnover significantly increases in the face of overall more competitive electoral races. It is the first study to my knowledge showing the effect of term limits in a context of party loyal lame ducks.

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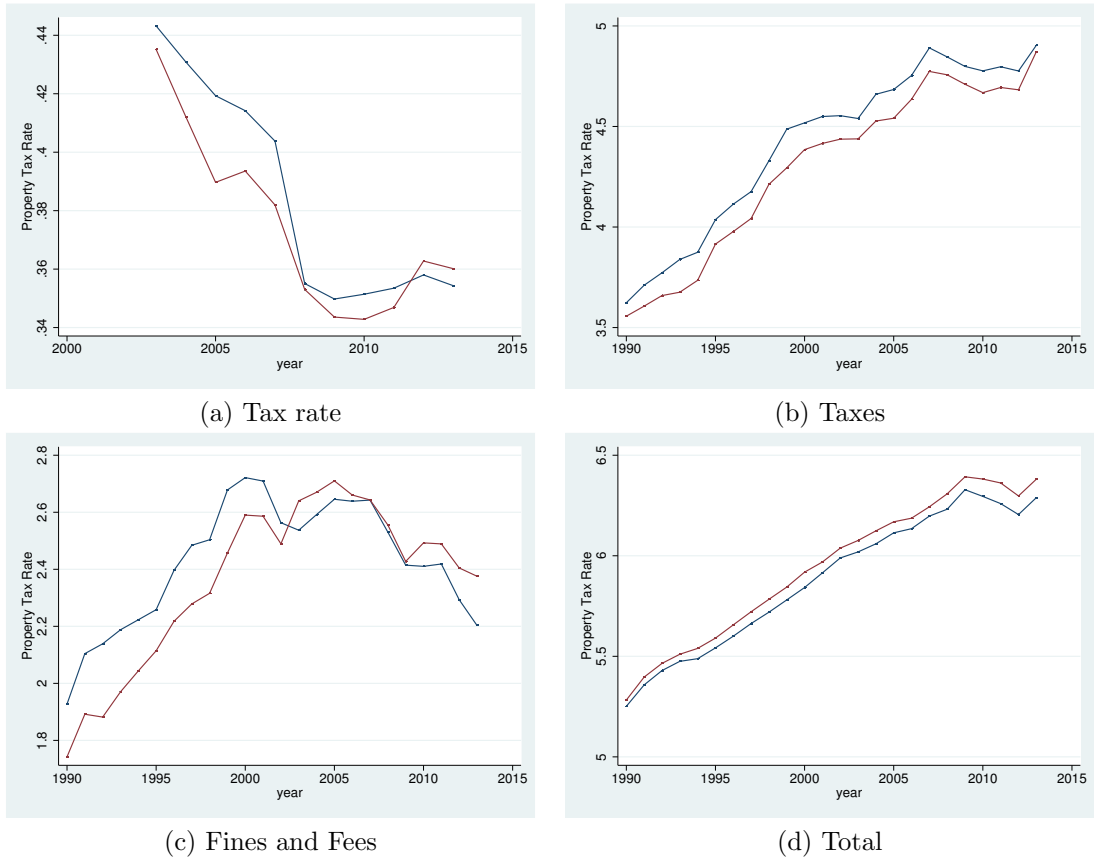


Figure 1: Fiscal variables across the time-span of the analysis. This figure shows how the logarithm of the mean of the fiscal variables under study evolved in treated and not-treated municipalities along the period from 1990-2013. Data on the local property tax rate is only available from 2003 onwards due to a fiscal reform. Treated municipalities are represented by the blue line and control municipalities by the red line.

Table 1: Means test pre- and post-reform periods.

	1993	1997	2001	2005	2009	Diff
Incumbent success	0.593	0.673	0.691	0.763	0.734	0.096***
Re-running rate	0.603	0.793	0.835	0.842	0.856	0.105***
Resignation rate	0.000	0.040	0.055	0.047	0.018	0.001
Political turnover	0.265	0.204	0.252	0.158	0.173	-0.075***
Contesting parties	4.156	4.153	4.112	4.230	4.284	0.117**
Represented parties	2.480	2.320	2.288	2.291	2.291	-0.071**
Seat majorities	0.753	0.898	0.878	0.903	0.906	0.062***
Seat margin	0.232	0.273	0.269	0.274	0.298	0.028**
Observations	275	275	278	278	278	1384

This table provides a means test between the pre-reform period (1993, 1997, 2001) and the stand-by years (2005, 2009) for the local political variables under study. The political variables are listed on the left column. Each of the following columns provides the average value of the respective variables for each of the electoral years included in the analysis; 1993, 1997, 2001, 2005 and 2009. The last column provides the resulting difference between the two time periods. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).



Table 2: Local Policy Choices.

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Electoral term 2010-2013</b>						
Tax rate	-0.014** (0.006)	-0.012** (0.006)	-0.012** (0.006)	-0.014** (0.006)	-0.012** (0.006)	-0.013** (0.006)
Tax revenues	-0.040 (0.033)	-0.024 (0.029)	-0.022 (0.027)	-0.036 (0.028)	-0.023 (0.025)	-0.021 (0.023)
Fines & fees	-0.189*** (0.073)	-0.176*** (0.068)	-0.166** (0.069)	-0.168** (0.069)	-0.164** (0.065)	-0.154** (0.066)
Expenditure	-0.043** (0.021)	-0.039** (0.016)	-0.039** (0.016)	-0.044** (0.018)	-0.042*** (0.015)	-0.042*** (0.015)
Observations	5811	5811	5811	5748	5748	5748
<b>Panel B. Electoral year 2013</b>						
Tax rate	-0.024*** (0.008)	-0.021*** (0.008)	-0.023*** (0.008)	-0.027*** (0.009)	-0.024*** (0.008)	-0.026*** (0.008)
Tax revenues	-0.097** (0.044)	-0.074** (0.037)	-0.072** (0.035)	-0.100** (0.040)	-0.078** (0.035)	-0.073** (0.032)
Fines & fees	-0.265*** (0.087)	-0.248*** (0.080)	-0.235*** (0.083)	-0.248*** (0.087)	-0.242*** (0.080)	-0.231*** (0.082)
Expenditure	-0.044* (0.026)	-0.040* (0.022)	-0.042* (0.022)	-0.039 (0.025)	-0.037* (0.022)	-0.038* (0.021)
Observations	1662	1662	1662	1644	1644	1644
District trends	No	Yes	Yes	No	Yes	Yes
District x year	No	No	Yes	No	No	Yes
Controls	No	No	No	Yes	Yes	Yes

This table presents the baseline results on the average treatment effect of a binding term limit on local public finances. The left column lists the dependent variables. Panel A. provides coefficient estimates for the average treatment effect for the whole electoral terms. Panel B. provides coefficient estimates for the average treatment effect for the election years only. Results are obtained from the estimation of equation 1. All estimates include municipality and year fixed effects. Model (2) adds district-specific time trends and model (3) district-year fixed effects. Models (4), (5) and (6) replicate (1), (2) and (3), respectively, adding the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).

Table 3: Local Policy Choices: Restricted Sample.

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Electoral term 2010-2013</b>						
Tax rate	-0.012** (0.005)	-0.010* (0.005)	-0.011** (0.005)	-0.011** (0.005)	-0.009* (0.005)	-0.010** (0.005)
Tax revenues	-0.018 (0.026)	-0.013 (0.050)	-0.015 (0.020)	-0.020 (0.052)	-0.012 (0.050)	-0.014 (0.051)
Fines & fees	-0.0925* (0.007)	-0.076 (0.007)	-0.1076 (0.007)	-0.101* (0.007)	-0.091* (0.007)	-0.091* (0.051)
Expenditure	-0.0343** (0.015)	-0.033*** (0.013)	-0.033** (0.013)	-0.035*** (0.013)	-0.334*** (0.012)	-0.033*** (0.012)
Observations	2221	2221	2221	2200	2200	2200
<b>Panel B. Electoral year 2013</b>						
Tax rate	-0.012 (0.008)	-0.013* (0.007)	-0.013* (0.007)	-0.012 (0.008)	-0.013* (0.008)	-0.013* (0.008)
Tax revenues	-0.057* (0.033)	-0.047* (0.028)	-0.472* (0.028)	-0.051 (0.033)	-0.043 (0.029)	-0.043 (0.029)
Fines & fees	-0.159** (0.068)	-0.141** (0.068)	-0.141** (0.068)	-0.176** (0.072)	-0.160** (0.072)	-0.160** (0.072)
Expenditure	-0.028 (0.021)	-0.027 (0.020)	-0.027 (0.020)	-0.010 (0.020)	-0.007 (0.018)	-0.007 (0.018)
Observations	556	556	556	550	550	550
District trends	No	Yes	Yes	No	Yes	Yes
District x year	No	No	Yes	No	No	Yes
Controls	No	No	No	Yes	Yes	Yes

This table presents a robustness test that restricts the sample to the two last electoral terms, 2006-2009 and 2010-2013. The left column lists the dependent variables. Panel A. provides coefficient estimates for the average treatment effect for the whole electoral terms. Panel B. provides coefficient estimates for the average treatment effect for the election years only. Results are obtained from the estimation of equation 1. All estimates include municipality and year fixed effects. Model (2) adds district-specific time trends and model (3) district-year fixed effects. Models (4), (5) and (6) replicate (1), (2) and (3), respectively, adding the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).

Table 4: Local Politics.

	(1)	(2)	(3)	(4)	(5)	(6)
Resignation rate	0.127*** (0.032)	0.131*** (0.0321)	0.129*** (0.0328)	0.124*** (0.0329)	0.128*** (0.0326)	0.123*** (0.0332)
Political turnover	0.240*** (0.054)	0.250*** (0.0536)	0.266*** (0.0540)	0.204*** (0.0523)	0.214*** (0.0518)	0.229*** (0.0525)
Contesting parties	0.332*** (0.108)	0.293*** (0.106)	0.281*** (0.106)	0.293*** (0.106)	0.258** (0.104)	0.246** (0.104)
Represented parties	0.200*** (0.062)	0.196*** (0.0583)	0.192*** (0.0568)	0.137** (0.0588)	0.138** (0.0559)	0.128** (0.0548)
Seat majorities	-0.179*** (0.045)	-0.193*** (0.0438)	-0.194*** (0.0438)	-0.109*** (0.0389)	-0.123*** (0.0387)	-0.119*** (0.0392)
Seat margin	-0.091*** (0.021)	-0.100*** (0.0208)	-0.101*** (0.0202)	-0.0564*** (0.0194)	-0.0656*** (0.0193)	-0.0637*** (0.0187)
District trends	No	Yes	Yes	No	Yes	Yes
District x Year	No	No	Yes	No	No	Yes
Controls	No	No	No	Yes	Yes	Yes
Observations	1662	1662	1662	1644	1644	1644

This table presents the myopic results on the average treatment effect of a binding term limit on local politics. The left column lists the dependent variables. Results are obtained from the estimation of equation 1. All estimates include municipality and year fixed effects. Model (2) adds district-specific time trends and model (3) district-year fixed effects. Models (4), (5) and (6) replicate (1), (2) and (3), respectively, adding the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).

Table 5: Local Politics: quasi-myopic model

	Resignation rate	Political turnover	Contesting parties	Represented parties	Seat majorities	Seat margin
Term limit	0.097*** (0.035)	0.120** (0.054)	0.250** (0.111)	0.154*** (0.058)	-0.126*** (0.041)	-0.044** (0.021)
Ex ante effect ( $t - 1$ )	-0.054*** (0.020)	-0.329*** (0.049)	0.002 (0.107)	0.096* (0.054)	-0.048 (0.038)	0.030 (0.022)
Ex ante effect ( $t - 2$ )	-0.082*** (0.029)	-0.255*** (0.051)	0.047 (0.086)	0.045 (0.056)	0.006 (0.035)	0.073*** (0.019)
District trends	Yes	Yes	Yes	Yes	Yes	Yes
District x year	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1657	1660	1660	1660	1660	1660

This table presents the quasi-myopic results on the average treatment effect of a binding term limit on local politics. The first row lists the dependent variables. Results are obtained from the estimation of equation 2. All estimates include municipality and year fixed effects, district-specific time trends, district-year fixed effects and the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).

Table 6: Local Policy Choices. Mayoral Resignation.

	Tax rate	Tax rev	Fines & fees	Expenditure
<b>Panel A. Electoral term 2010-2013</b>				
Term limit	-0.013** (0.006)	-0.007 (0.024)	-0.162** (0.068)	-0.042*** (0.016)
Resign	0.001 (0.012)	0.033 (0.024)	0.021 (0.069)	0.038*** (0.011)
Term Limit x resign	0.003 (0.015)	-0.130*** (0.050)	0.037 (0.150)	-0.038 (0.032)
Observations	1641	1641	1641	1641
<b>Panel B. Electoral year 2013</b>				
Term limit	-0.028*** (0.008)	-0.055* (0.033)	-0.232*** (0.085)	-0.044** (0.022)
Resign	-0.016 (0.017)	0.012 (0.027)	-0.045 (0.080)	0.042** (0.020)
Term Limit x resign	0.013 (0.049)	-0.132** (0.063)	0.054 (0.180)	0.033 (0.023)
Observations	1641	1641	1641	1641
District trends	Yes	Yes	Yes	Yes
District x year	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

This table presents the results on the average treatment effect of a binding term limit on local public finances when the incumbent mayor resigns. The left column lists the dependent variables. Panel A. provides coefficient estimates for the average treatment effect for the whole electoral terms. Panel B. provides coefficient estimates for the average treatment effect for the election years only. Results are obtained from the estimation of equation 1 with an additional dummy indicating resigning mayors and the interaction of this dummy with the term limits dummy. All estimates include municipality and year fixed effects. Model (2) adds district-specific time trends and model (3) district-year fixed effects. Models (4), (5) and (6) replicate (1), (2) and (3), respectively, adding the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*).

Table 7: Local Politics: Quasi-myopic model. Mayoral Resignation.

	Political turnover	Contesting parties	Represented parties	Seat majorities	Seat margin
Term limit	0.119** (0.058)	0.237** (0.117)	0.146** (0.061)	-0.108** (0.042)	-0.046** (0.022)
Resign	0.158** (0.072)	0.121 (0.109)	-0.020 (0.064)	0.055 (0.048)	-0.008 (0.025)
Term limit x resign	-0.189 (0.116)	-0.162 (0.250)	0.056 (0.128)	-0.153 (0.110)	0.017 (0.039)
Ex ante effect ( $t - 1$ )	-0.333*** (0.049)	-0.017 (0.106)	0.093* (0.054)	-0.043 (0.038)	0.029 (0.022)
Ex ante effect ( $t - 2$ )	-0.255*** (0.051)	0.032 (0.087)	0.041 (0.057)	0.013 (0.036)	0.071*** (0.020)
District trends	Yes	Yes	Yes	Yes	Yes
District x year	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Observations	1639	1639	1639	1639	1639

This table presents the quasi-myopic results on the average treatment effect of a binding term limit on local politics when the incumbent mayor resigns. The first row lists the dependent variables. Results are obtained from the estimation of equation 2 with an additional dummy indicating resigning mayors and the interaction of this dummy with the term limits dummy. All estimates include municipality and year fixed effects, district-specific time trends, district-year fixed effects and the following control variables: municipal population size, municipal economic activity, majority in the municipal assembly, partisan control of council and assembly and left-leaning mayor. Standard errors are robust to heteroscedasticity. Stars indicate significance levels of 10%(\*), 5%(\*\*) and 1%(\*\*\*)

Table 8: SUMMARY STATISTICS

Variable		Mean	SD	Min.	Max.	N
Property Tax	overall	.38	.09	.2	.5	3058
	between		.06	.22	.46	278
	within		.06	.14	.61	11
Tax revenues	overall	109.98	109.46	2.70	1312.73	6636
	between		93.90	26.51	675.60	278
	within		56.21	-174.45	775.27	23.87
Fines and Fees	overall	14.66	14.99	.74	589.08	6636
	between		9.25	2.76	72.67	278
	within		11.79	-40.19	538.11	23.87
Current Expenditures	overall	430.17	254.08	79.255	2007.68	6636
	between		189.45	167.18	1295.79	278
	within		169.46	-483.21	1477.78	23.87
Resignation rate	overall	.04	.20	0	1	6636
	between		.08	0	.33	278
	within		.18	-.29	1.00	23.87
Turnover	overall	.22	.41	0	1	1662
	between		.17	0	.75	278
	within		.38	-.53	1.05	5.98
Contesting parties	overall	4.17	.97	2	10	6639
	between		.74	3	7	278
	within		.63	1.33	7.58	23.88
Represented parties	overall	2.37	.53	1	5	6639
	between		.37	1.83	3.50	278
	within		.39	1.29	4.62	23.88
Seat Majority	overall	.85	.36	0	1	6639
	between		.20	.08	1	278
	within		.30	-.11	1.77	23.88
Seat Margin	overall	.26	.18	0	1	6639
	between		.11	.024	.63	278
	within		.15	-.24	.90	23.88
Inhabitants	overall	35247	57385.63	1634	680891	6639
	between		57133.77	1855.21	568014.9	278
	within		6705.05	-64379.21	159785.8	23.88