

No matter who rules!

Local elections and fiscal spending in rural Senegal

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Abstract

More than 50 years after Senegal's independence from France and as the 2012 presidential elections have shown, its political system remains a hybrid regime and qualifies at most as semi-democracy. I analyze budgetary data for a sample of 171 communes around the 2002 local elections to study the interdependence of local electoral dynamics and fiscal spending. Employing the trimmed least absolute deviations (LAD) model, which allows me to account for censoring and commune fixed effects, I find evidence for a political budget cycle in local elections; yet its extent is moderate. New political leadership alongside existing infrastructure programs bolsters the expansion of the road network although being disinclined to cover investment expenses of their predecessors. Expenditure shares for culture, education and health care, in turn, remain independent of political dynamics. Furthermore, during election season, lower tax revenues are projected; these anticipated tax presents do not materialize, though. In fact, in the medium term, a change in the majority party is associated with real tax increases. From a positive perspective, the study shows that there are no great differences in budgetary allocations between councils run by incumbents and those run by challengers, which indicates a certain fiscal stability. Yet, taking a normative view, one might ask why there are no great differences in budget decisions. In light of the Senegalese political set-up, it is evident that incumbent and challenger councils have equally poor budgetary standards and, therefore, they could all benefit from local-level training in the administration of democratic processes and fiscal discipline.

Keywords: Democracy, Local elections, Fiscal spending, Senegal, Trimmed LAD

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1 Introduction

The latest presidential elections in Senegal brought anew to our attention how fragile sub-Saharan African democracy is. The incumbent Abdoulaye Wade ran for a third term although this involved a broad interpretation of the 2001 constitution. According to the 2001 constitution, presidential terms are limited to two rounds and a maximum of 10 years of ‘reign’. This constitution was revised in 2008 increasing the duration of a mandate to seven years and putting the regulations of the 1981 constitution back into practice. This wavering policy and the demonstrations and campaigns by the extra-parliamentary opposition movement questioned the democratic maturity of the African model student Senegal until on March 25, 2012, Wade accepted his defeat and made way for his challenger Macky Sall.

Repeated uproars and turmoils accompany national electoral cycles in most sub-Saharan African countries. Next to Senegal, another recent case is Côte d’Ivoire. The 2010 presidential elections in Cote d’Ivoire were followed by a civil conflict that claimed the lives of at least 462 people and likely many more (Cook, 2011). Some sources assert that the number of victims total even several thousands. Former president Laurent Gbagbo as well as his challenger Alassane Ouattara claimed electoral victory of the runoff elections. The conflict reached its climax in March 2011 but slackened after Gbagbo’s arrest on April 11, 2011 (United Nations Operation in Côte d’Ivoire, 2011). Yet, the conflict has left its traces behind: International donors stopped their projects, many people were displaced and the return of the African Development Bank to Abidjan was again postponed (The Africa Report, 2011; Hend Hassassi, 2011). The Senegalese situation is similar in that the incumbent Wade who has been in power since 2000 did not want to resign. Both cases feature men who are patrimonial democrats. They have established their powerful leadership through democratic processes and present themselves as democrats and role models for their countries and Africa as a whole. At the same time, their appreciation of democracy cannot be defined as fully developed and emancipated. It rather operates within the tight grasp of paternalism.

According to the 2011 Democracy Index of the Economist Intelligence Unit, only one of the 44 sub-Saharan African countries can be considered a full democracy (Figure 1). Flawed democratic systems are found in nine countries and another eleven countries have hybrid regimes. The remaining countries are characterized as authoritarian regimes; less than ten sub-Saharan African countries qualify as flawed democracies. The challenge for Africa lies both in the understanding and the implementation of democracy. At the current stage, it might be considered as being loosely based on the definition given by former U.S. president Abraham Lincoln (1809-1865) as “Government of the people, by the people, for the people”. African democratic patriarchs see themselves as part of the community with a focus on their constituencies; courts are established and legislative power

is (officially) given to the national assembly. However, taking a modern approach to the definition of democracy, the strict implementation of democratic processes is questionable for most countries. Most often, constitutions are not the means of guaranteeing basic personal and political rights, instead they are misemployed for the advantage of the ruling patriarchs. Despite an increase in the number of elections, they are hardly ever fair and free, and independent courts of law are basically non-existent (Economist Intelligence Unit, 2011).

Turning from the national to the local level, a sub-national analysis provides a dismal assessment of democratic processes in most sub-Saharan African countries. Sub-national decision making is often dominated by clans and traditional elites. Local level democratic formation gets hardly any attention despite many modern development projects being participatory in nature (Dongier *et al.*, 2002; Binswanger and Aiyar, 2003; Binswanger and Nguyen, 2004). At the same time, community-driven development has been subject to substantial critique for not targeting the poor more successfully than other programs and for relying too heavily on the elite (Platteau and Gaspart, 2003; Mansuri and Rao, 2004; Platteau, 2004). Therefore, the understanding of sub-national participatory, democratic and electoral dynamics needs to be improved. Development practitioners and policy makers need to know whether local democratic processes are different from national democratic processes and how these differences (if any) affect democratization and policy making in sub-Saharan Africa.

Hence, in this paper I take a micro approach to democratization and electoral dynamics. I focus on local elections in Senegal. Stepping away from the national level as the unit of comparison, I seek to address the implementation and efficiency of democratic processes *within* a developing country using the example of Senegal. My unit of analysis is, therefore, the *communauté rurale*, the rural commune. I have electoral outcome information for the 1996 and the 2002 Senegalese local elections and merge this with a small panel of detailed budget data covering the years 2001 to 2006. Setting up a Honoré type Tobit-panel model allows me to identify the effect of a change in the majority party on both projected and realized budgets. I can show that no matter which party rules, average expenditure and revenue levels are identical across communes. Yet, in the medium term, the share of costs of holding office increases in communes in which the challenging party takes over. Also, communes with new political leadership alongside ongoing infrastructure programs are reluctant to pay off existing debts yet, at the same time, investments in roadworks substantially increases. In line with existing theories about the political budget cycle, I find some indication that tax levels are affected by electoral dynamics. While in the short-run tax decreases are signaled, in the long-run, taxes increase due to political change.

The empirical findings are theoretically supported by a simple two-party-two-period model of election-induced budget changes. This model is inspired by previous work by

Drazen and Eslava (2005). The key feature of the model concerns the composition of revenues and expenditures and the fact that the incumbent party may use this composition in order to attract votes. If no party manages to gather an absolute majority based on ideological convictions, electoral outcomes are decided by swing voters whose main concern is investment in visible public goods.

The remainder of the paper is structured as follows: In Section 2, I provide a brief overview of Senegalese politics after independence. The existing literature about democratization, electoral dynamics and fiscal politics is discussed in Section 3. Section 4 presents theoretical considerations about the impact of electoral dynamics on the level and composition of fiscal spending, and Section 5 introduces the Senegalese dataset I analyze. This is followed by the exposition of the empirical model in Section 6. The results are presented in Section 7. Section 8 concludes.

2 Politics in Senegal

More than 50 years after Senegal's independence from France, its political system remains a special case in sub-Saharan Africa. Throughout the years, political stability has been maintained, even in periods of distress. Moreover, a nominally secular state has coexisted with strong Islamic institutions (Villalón, 1999). Despite a certain degree of democracy that evolved through a set of incremental political reforms, Senegal can at best be classified as a semi-democracy. According to the 2011 Democracy Index, Senegal has a hybrid regime, partly because Senegalese politics heavily rely on patriarchal structures and also due to the fact that, from independence to today, the country has only seen four different presidents (Economist Intelligence Unit, 2011). In what follows, I give a brief review of Senegalese politics by focusing on elections and selected constitutional reforms between 1960 and 2012.

At independence from France in 1960, the country was essentially a one-party state led by Leopold Senghor and his *Union Progressiste Sénégalais* (UPS). A confrontation between president Senghor and his prime minister Mamadou Dia in December 1962 marked an important transition towards a *de facto* authoritarian system with all power bundled unanimously in the hands of the president. As a consequence of the face-off, the UPS split which resulted in the 1963 change in constitution: the electoral code was turned into a plurality formula which reinforced President Senghor's position and established an actual one-party state. The strength of this 'Senghorian state' rested crucially on the support of local elites such as leaders of Muslim brotherhoods. *Marabouts*, the traditional religious leaders, had already been powerful during colonial times: alongside being religious authorities, the *marabouts* represented their peasant disciples and organized *inter alia* the peanut trade. Thus, clientelism with pronounced patron-client relationships has been intermingled with politics long before the Senghorian state. Fatton (1986) argues that

such patron-client relationships which are commonly referred to as *la Sénégalité* limit the authority of the elected state leaders but also hinder economic progress and bureaucratic changes. In the 1968 elections, only the UPS nominated candidates and Senghor won unopposed. However, social unrest and deteriorating socio-economic conditions entailed a referendum in 1970 which resulted in the reintroduction of the post of prime minister.

Democratization at the local level started in 1972 with the formation of rural communities (*communautés rurales*). The first local elections were held under the same winner-takes-all electoral formula as the national elections.

A break away from a *de facto* one-party state was experienced in 1976. A *de jure* three-party system was introduced allowing for three political party positions: (i) social democratic, (ii) liberal democratic and (iii) Marxist-Leninist. Beck (1997) presents evidence that the social tensions of the late 1960s led to more democracy for the Senegalese because the political leadership opted against oppression and for patrimonial democracy. The traditional patriarchal elites adopted new rules of sharing political power which appeased them all.

The 1978 elections allowed the biggest opposition party, the *Parti Démocratique Sénégalaise* (PDS), to enter the National Assembly with 18 of the 100 seats. Senghor's UPS, which was renamed *Parti socialiste* (PS) in the course of the 1976 political transition towards a three-party system, remained the largest party in the country, dominating the National Assembly and reinforcing Senghor's power. The changes in the constitution of the year 1976 not only introduced the three-party system but also authorized Senghor to appoint his successor. In 1981 Prime Minister Abdou Diouf became president when Senghor resigned in favor of his protégé. Diouf opened up the political arena for an unlimited number of parties. At the same time, he changed the electoral system into a mixed plurality system. In ultimate consequence, this reform was intended to weaken the opposition. Now, the opposition was allowed to split up into numerous parties which would not be able to form a unified counterbalance to the government. Moreover, half the seats of the National Assembly were assigned by plurality to the party that turned out strongest from the elections and only the remaining 50% of seats were distributed among all parties according to a proportional formula. The opposition was left scattered and discordant. Mozaffar and Vengroff (2002) analyze Diouf's constitutional reform of 1981 in detail and conclude that Diouf wanted to ensure the continuity of the PS as ruling party by weakening the opposition while concomitantly increasing democratic legitimacy.

In the elections that followed in 1983, the PS won 92.5% of the seats in the National Assembly. This electoral system which strongly favored the incumbency was maintained for the elections in 1988 but the support for the PS declined. It collected only 73.2% of votes and the strongest opposition party (PDS) was able to significantly increase its seats from 8 to 17. In the capital, the PDS garnered 43% of votes but, due to the mixed assignment system, the execution of its full political power was undermined. This

entailed a radicalization of PDS members and supporters and questioned the legitimacy of the 1988 election results. Moreover, the opposition refused to participate in the 1990 local elections as a consequence. President Diouf reacted by installing a government of national unity in 1991. Although this government was short-lived, it implemented a reform of the electoral rule. Diouf's political tightrope walking ensured his power by allowing for incremental democratic reforms. In the course of the ensuing elections for the National Assembly in 1993, Diouf's PS lost influence but kept with 84 of 120 seats the majority. In addition, President Diouf was reelected in the same year.

The pressure for change was passed on to the local level. Vengroff and Ndiaye (1998) analyze Senegal's 1996 local elections. Prior to these elections, the electoral code for local elections was changed from a pure plurality to a mixed plurality-proportional system. For the first time in 1996, only half the seats on rural councils were determined by plurality. The remaining seats were allotted by the proportionality code. This mixed electoral system mimicked the electoral formula at the national level and was supposed to grant stability due to the partial application of the plurality code. For a first time, opposition parties entered the local councils. Therefore, this change in the electoral code is considered a further step towards increasing the level of democracy in the country despite the remaining distortion between voter support and actual seats won. Despite the reform, the PS lost its majority in only 18 of the 316 rural communities. The opposition parties held now slightly less than 20% of the local council seats nationwide. Vengroff and Ndiaye conclude their study of the 1996 local elections arguing that studies of local electoral dynamics can help improve understanding of the party and electoral systems at the national level.

The PS not only dominated the local councils but also demonstrated its mastery in the 1998 National Assembly elections. An electoral reform in the same year increased the number of seats in the National Assembly from 120 to 140 by effectively adding 20 additional plurality seats. Only the governing PS profited from the new rules. Despite a drop in the vote share, the party gained nine additional seats whereas its main opponent the PDS lost four seats. The *Observatoire National des Elections* (ONEL) that was established in the year prior to the 1998 elections as an independent office of election supervision mediated between the different parties and legitimized the 1998 election outcome. The presidential elections of 2000 marked a historic transition in Senegal. The incumbent, President Diouf, was denied a first-round victory and the opposition unanimously supported Abdoulaye Wade (PDS) resulting in a transfer of the presidential power from PS to PDS without a *coup d'état*. Once in office, Wade reformed the electoral system again reducing the effective number of seats to the initial 120 and the number of seats allocated by plurality. The ensuing 2001 National Assembly elections were won by the political alliance called *Sopi Coalition* which was composed of the PDS and some smaller parties that had unified behind President Wade.

In the 2002 local elections, the PS and its *Sopi Coalition* took control in many local councils. The main successes could be celebrated by the PS in the big urban communes such as Dakar, Kaolack, Fatick, Diourbel, and Saint-Louis. These election results indicate that the composition in the local councils parallels the distribution of power at the national level.

Like his predecessors, President Wade also changed the electoral code to favor his own coalition. In the National Assembly elections of 2007, the electorate could again vote for 150 seats of which 131 were gained by Wade's *Sopi Coalition*. Of the 131 seats, 90 were won by plurality. The election was boycotted by a coalition of opposition parties around the PS known as the *Siggil Sénégal Front*. History seemed to be repeating itself under a different ruling party. Wade got reelected for a second term during the 2007 presidential elections. While he initially signaled that he would be a 'true' democrat, he behaved like his predecessors in office and presented himself instead as a 'patrimonial' democrat. Neglecting his own 2001 constitutional change by resetting it in July 2008, Wade could run in the 2012 elections again despite his pledge not to opt for a third term. Wade argued that his first term fell under the old constitution of 1981, which did not provide for term limits. He explained his decision to run for office again in a speech on July 14, 2011 using the now famous phrase "Ma waxoon waxeet" which translates into English as "I said it, I (can) take it back." (Koroma, 2011; Seneweb, 2011). While Wade's third run for office was approved by the constitutional court, the internationally known Senegalese singer and composer Youssou N'Dour was denied participation in the race for presidency in the 2012 elections (Seneweb, 2012; Scheen, 2012). Demonstrations and protest marches accompanied the campaigning leading to a number of deaths (Aljazeera, 2012; Heute, 2012). Also, the 'Y'en a marre' ('Fed Up') movement was founded as an extraparliamentary opposition (Diarra, 2011; Nossiter, 2011). On February 26, 2012, the first round of presidential elections took place without identifying a clear winner. A run-off poll between the incumbent Wade and Macky Sall of the party *Alliance for the Republic* (APR) followed on March 25, 2012 (Loomis, 2012). The APR was formed by former Prime Minister Sall after he left Wade's PDS in December 2008. After a credible and transparent second round with a landslide victory for the opposition, the challenger Sall was proclaimed the new Senegalese president on the evening of election day (Larson, 2012; The Guardian, 2012). Governments all over the World immediately sent their congratulations and the international community welcomed and admitted Sall (Clinton, 2012; Hague, 2012).

The latest local elections were held in 2009. While the incumbent PS could reinforce its presence and power in the rural councils, the opposition movement *Siggil Sénégal Front* regained power in the urban communes. Nevertheless, the PS and its *Sopi Coalition* received the most votes and rule in 237 of the 370 *communautés rurales*. Overall, however, the coalition experienced a net decline in support which became most pronounced during

the presidential elections in February/March 2012.

Detailed analyses and systematic political science reviews of the Senegalese electoral code, the incremental reforms towards freer and fairer elections, the role of the National Assembly and the patron-client relationships that characterize politics in Senegal can be found in Fattou (1986), Beck (1997), Mozaffar and Vengroff (2002) and Thomas and Sissokho (2005).

3 Local Elections and the Political Budget Cycle— What do we know?

As early as the 1970s, the literature on electoral rules and electoral control began addressing optimal voting rules, voter preferences and public goods provision. Barro (1973) modeled the optimal voting rule by analyzing different channels for electoral control under perfect information. The distinction between aggregate voting patterns and individual level voting was then introduced by McKelvey (1975). However, his model is static and relies on the assumption that politicians in office do not change their preferences. In Kramer's model (1977), the challenger can easily overturn the incumbent in an infinite election game by proposing a 'better' alternative policy. Therefore, the incumbent has no incentive to pursue the public interest and voter preferences and public policy outcomes are disconnected. The notion that voters pay attention to incumbent behavior and reward them on the basis of their performance was introduced by Ferejohn (1986), allowing for informational asymmetry.

The political cycle cannot be analyzed independently of the performance of the overall economy. Particularly, fiscal discipline has an impact on re-election prospects of incumbents. Rogoff and Sibert (1988) and Rogoff (1990) model the political budget cycle in macroeconomic variables as a signaling process. The models rely upon temporary information asymmetries to explain the electoral cycle in taxes, government spending and money growth. Rogoff and Sibert argue that public investment is replaced prior to elections by more 'visible' public expenditure if the incumbent is motivated to stay in office. Previous work about the nexus between election and fiscal policy was carried out by Nordhaus (1975) and MacRae (1977). Contrasting developed and developing countries, Brender and Drazen (2005) and Shi and Svensson (2006) show that the political budget cycle is driven by newly established democracies. The accumulation of a fiscal deficit prior to elections cannot be substantiated once new democracies are removed from the sample under study. Despite the fact that Brender and Drazen (2005) find that developing countries experience fiscal expansion in election years, Brender and Drazen (2008) do not find any evidence for these very same countries that expansionary fiscal policy prior to the elections increases the incumbent's probability of reelection. Brender and

Drazen (2007) explain this puzzling result as a consolidation effort. They argue that new democracies might not be unanimously approved by the entire population which makes them especially weak in election years. Therefore, expenditures increase prior to elections in order to maintain the support by large parts of the population.

In turn, Mourão and Gonçalves Veiga (2010) analyze opportunistic electoral distortions of fiscal variables for a panel of 68 OECD countries between 1960 and 2006 and demonstrate that incumbent governments of developing countries are not alone in using fiscal instruments to increase their reelection probabilities. Using a sample of 19 high-income OECD countries, Katsimi and Sarantides (2012) empirically revisit the impact of elections on fiscal policy instruments. They find no evidence of a political budget cycle for government deficits and expenditures. However, they identify a revenue cycle to the extent that prior to elections direct taxation is reduced in high-income countries. A comprehensive review of the link between constitutions, electoral systems and economic policy is presented by Persson and Tabellini (2003). It is based on Alesina (1987), Alesina (1988), Persson and Svensson (1989) and Alesina and Tabellini (1990). Another review is provided by Drazen (2000).

Most of the empirical studies consist of cross-country comparisons. A notable exception is Kramer (1971) who takes an historical dataset of votes for the US House of Representatives between 1896 and 1964 and analyses fluctuations in the composition of the national vote. Further, Besley and Case (1995) show that U.S. governors' fiscal performance is influenced by binding term limits which results in fiscal cycles. Other country studies present further evidence in favor of a *local* political budget cycle; the cases at hand are Sweden (Pettersson Lidbom, 2003), Germany (Galli and Rossi, 2002), Israel (Brender, 2003), Russia (Akhmedov and Zhuravskaya, 2004), Portugal (Gonçalves Veiga *et al.*, 2009), and Argentina (Jones *et al.*, 2012). Brender (2003) identifies the channels through which well-informed voters punish local governments for poor fiscal behavior. The necessary conditions are the following: (i) prompt financial reporting, (ii) publicly available audit results, and (iii) the imposition and enforcement of hard budget constraints. However, Ebel and Yilmaz (2002) voice some words of caution when it comes to the measurement of the impact of fiscal decentralization. Their study shows that variable selection is crucial in the assessment of fiscal decentralization as empirical specifications are not robust across different fiscal indicators.

Decentralization goes along with local elections as well as a shift from national to local responsibility. Community-driven development programs build on these local (democratic) structures and present a novel area of study. Foster and Rosenzweig (2004) present a study of local India where they analyze the effect of democratization on the allocation of local public goods. They show that democracy balances the interests of the traditional elites and the economically weak. Concomitantly, the findings cast some doubt on the efficient allocation of resources under democracy. In the same spirit, Labonne

(2011) analyses electoral accountability in the context of a conditional cash transfer program in the Philippines. Incumbents in municipalities which received the program have a significantly higher probability to be reelected. Labonne further presents evidence that the political support does not solely stem from households and individuals who received the conditional cash transfer. Non-recipients also support the incumbent on account of compensation mechanisms. De Janvry *et al.* (2010) analyze the Brazilian national program Bolsa Escola which was implemented by local governments. Their empirical evidence suggests that local program implementation can only be successful if the elected representatives face an incentive system that aims at high program performance.

The study that is most similar to my work is an analysis of the impact of changes in central government on spending compositions by Brender and Drazen (2009). They look at central government expenditures of 71 democracies over a 32-year period and find that a change in government does not have a significant effect on expenditure composition in the short-run, whereas in the medium term replacement of leaders entails a new expenditure mix. In contrast to Brender and Drazen, I do not construct an index of expenditure (revenue) composition but look individually at proportions of important budgetary items relative to overall expenditures (revenues). Secondly, I look at changes in local Senegalese communes instead of national governments.

4 A Theory of Local Political Budget Cycles

To better motivate my empirical analysis of the impact of elections on the composition of fiscal spending, I begin by presenting a simple model of election-induced budget changes. The model is inspired by previous work by Drazen and Eslava (2005). I aim at mapping my Senegalese dataset as closely as possible and set up a two-party-two-period model. Elections take place between an incumbent party and a challenging party at the end of period one. I assume that there is no spatial correlation in the public goods provision and the distribution of party types which allows me to describe the local electoral dynamics with one representative commune.

The key feature of the model concerns the composition of revenues and expenditures and the fact that the incumbent party may use the expenditure/revenue mix to attract votes. Contrary to the existing model by Drazen and Eslava (2005), revenues are derived from variable taxes τ and central government allocations G . The party in power can divide revenues between the public good g that is valued by the electorate and a second good k which is only valued by the party in power. Drazen and Eslava refer to this good k as *desk* good. Translating the idea of the *desk* good to the real world, its lack of valuation by the voters does not necessarily mean that the production of this good is a waste; it might represent a public service of low visibility.

4.1 The preferences of the voters

Voters have identical preferences over the public budget composition, which may differ from those of the incumbent party. Voter heterogeneity is introduced by allowing for different ideologies ι not related to fiscal policy. Then, voters trade off utility from consumption and ideology. The single-period utility function of voter j in period t depends on the party P that is holding the majority in the council with $P \in \{I, C\}$ and I denoting the incumbent, C the challenging party. Then, utility looks as follows:

$$U_t^j(P) = u(c_t^P, g_t^P) - (\iota^j - \iota^P)^2, \quad (1)$$

where $u(\cdot)$ is increasing and concave in both private and public consumption (c_t^P, g_t^P) and $(\iota^j - \iota^P)$ represents the time-invariant ideology gap between voter j and the party in power. The narrower the distance in ideologies, the less the reduction in utility the voter experiences from party P being in office. The optimal levels of private and public consumption (c_t^{P*}, g_t^{P*}) are independent of ideology and $\iota^I < \iota^C$ (compare Drazen and Eslava, 2005). Furthermore, voters face a single period budget constraint depending on the lump-sum tax τ_t^P :

$$c_t^P = y - \tau_t^P, \quad (2)$$

where y is the time-invariant income individuals receive at the beginning of each period $t = 1, 2$. Income can be privately consumed or used as input to the provision of the public good. Thus, the voter will make her election decision depending on which party $P \in \{I, C\}$ promises her higher second period expected utility as shown in following equation:

$$W_1^j = U_1^j(I) + \beta E_1[U_2^j(P)], \quad (3)$$

where β is the discount factor.

4.2 The party's objective function

Each period, the party P in power provides the public good g_t and the *desk* good k_t subject to the following budget constraint:

$$G_t + \tau_t = g_t + k_t, \quad (4)$$

where G_t is the amount of transfers received from the central government and τ_t is the tax level. Then, a party's objective function in the post-election period ($t = 2$) is to jointly maximize a weighted sum of voter utilities and the utility derived from the desk good k

that is treated as the value of managing a nicely set-up and well-equipped administration:

$$\Omega_2^P = \omega_{P_2} \left[u(c_2^P, g_2^P) + \sum_{j=1}^N \frac{(t^j - t^P)^2}{N} \right] + v(k_2) + \psi, \quad (5)$$

where ω_{P_2} is the weight party P puts on voters' utility in period two relative to the utility derived from the *desk* good. The size of the electorate is captured by N . Voter preferences of fiscal policy are identical and, therefore, $u(c_t^P, g_t^P)$ enters directly into this per-capita specification of the party's objective function. As, however, voters differ in their ideology, the mean squared deviation of the party's ideology across the electorate enters the objective function. It is further assumed that $v'(\cdot) > 0$, $v''(\cdot) < 0$ and ψ is a fixed utility gain of being in office. The weight ω_{P_t} is known only to the respective party. Second period taxes and the public good's provision are a function of ω_{P_2} and voters' beliefs about the weight differentials of the two competing parties. It is assumed that the weight ω_{P_t} is time-fixed and can only take on two values for each party: $\omega^{P_1} = \omega^{P_2} = \omega^P$ for $P \in \{I, C\}$ and $\omega_P = \{\bar{\omega}, \underline{\omega}\}$ with $\bar{\omega} > \underline{\omega}$ and prior probabilities on the distribution of weights $Pr(\omega = \bar{\omega}) = \bar{p}$ and $Pr(\omega = \underline{\omega}) = (1 - \bar{p})$. Parties with $\bar{\omega}$ put more weight on the objective function of their voters.

In period one, the incumbent party chooses g_1 and τ_1 to maximize expected utility given the discount factor β and the probability of reelection ρ :

$$\Omega_1^I = \omega^I U(c_1^I, g_1^I) + v(k_1) + \beta [\rho(c_1^I, g_1^I)\Omega_2^I + (1 - \rho(c_1^I, g_1^I))\Omega_2^C] \quad (6)$$

It can be shown by backwardly solving the problem that an incumbent party with $\bar{\omega}$ always provides exclusively the public good g in both periods $t = 1, 2$. However, an incumbent party that puts some weight on the *desk* good ($\underline{\omega}$) has two choices for the election optimum in period one: (i) Opting for the non-election period choice of giving a low weight to the public good's provision $g_1^I(\underline{\omega}^I) = \underline{g}^I$ or (ii) mimicking the party that always places a high weight on the public good $g_1^I(\underline{\omega}) = G_1^I + \tau_1^I > \underline{g}^I$. As the type of the party ω is time-fixed, a low level of public goods provision \underline{g}^I in period one reveals to the voter that the incumbent party's preferred policy deviates from the voters' preferences. A high level of public goods provision in the first period can indicate either a party that highly values the provision of the public good or a party that only pretends to put a maximum weight on the provision of this good (Details can be found in the appendix).

4.3 Optimal voting, public goods provision and corresponding election outcomes

At the end of period one, voters have to decide which party to vote for. They opt for the incumbent party if the expected utility they derive from its policies is higher than under

the political system of the challenging party:

$$E[u(c_2, g_2)|I, g_1^I] - (\iota^j - \iota^I)^2 > E[u(c_2, g_2)|C] - (\iota^j - \iota^C)^2, \quad (7)$$

where $E[\cdot]$ is a voter's second period expected utility and the ideologies of the two parties are known and represented by (ι^I, ι^C) . However, a voter has no information about the challenging party's fiscal type ω . She has to rely on the distribution: $Pr(\omega^C = \bar{\omega}) = \bar{p}$. For the incumbent party's fiscal type, the voter can rely on Bayesian updating knowing that an incumbent party that chooses a high level of public goods provision in the first period is not necessarily a $\bar{\omega}$ -type. It can then be shown that a voter prefers the incumbent party if her utility gain from public goods consumption outperforms the utility loss from ideological discrepancies:

$$(\bar{p}_1(g_1^I) - \bar{p}) [u(y - \tau_1, G_1 + \tau_1) - u(y - \tau_1, \underline{g}^I)] > (\iota^j - \iota^I)^2 - (\iota^j - \iota^C)^2 \quad (8)$$

Drazen and Eslava (2005) present a simple example of the implications of equation (8). If the population is split into three types of voters, namely (i) core voters of the incumbent party, (ii) core voters of the challenging party, and (iii) swing voters, the core voters always vote for the party whose ideology they support no matter what fiscal policy is run by that party. Therefore, only the swing voters, who are ideologically indifferent between the two parties, favor the party which they expect to implement higher levels of public goods spending in the post-election period. If the election is decided by majority rule, the outcome depends critically on the relative proportions of the three types of voters. If any group of core voters constitutes an absolute majority, the election is decided based upon ideological considerations and the party with the biggest fraction of supporters wins. If neither group of core voters can decide the election outcome based on ideological preferences, the swing voters, who are influenced by fiscal policy, become critical for the election result.

1. An incumbent party of type $\underline{\omega}$ provides \bar{g} in the first period with probability $q = 1$ ($q = 0$) and the swing voters will (not) vote for that party;
2. An incumbent party of type $\underline{\omega}$ provides \bar{g} in the first period with probability $q \in (0, 1)$ and the swing voters vote for that party if $g_1 = G_1 + \tau_1$,

where q is the probability that a $\underline{\omega}$ -type incumbent party chooses $g_1^I = G_1 + \tau_1$ in the first period. The emergence of a political economy equilibrium then depends on the relative proportions of the three types of voters. For detailed proofs, see Drazen and Eslava (2005). Clearly, political budget cycles emerge if reelection is valuable and the budget composition can be used to attract votes.

4.4 Revenue extraction from the central government

So far, the model takes the amount of revenues extracted from the central government G_t as exogenously given. In the Senegalese context, it is hard to believe that this is the case. If such transfers depend on the relationship between the regional and the central government and/or the proximity in ideology of these two, the above results need further refinement. I assume that a party's ability to extract revenues from the central government is a time-fixed parameter ε that can take on two values $\{\underline{\varepsilon}, \bar{\varepsilon}\}$ with probabilities $Pr(\varepsilon = \bar{\varepsilon}) = \bar{d}$ and $Pr(\varepsilon = \underline{\varepsilon}) = (1 - \bar{d})$. As for the provision of the public good, the electorate can infer the type of the incumbent party from the first period observations of (g_1, τ_1) . An incumbent party with a good (bad) relationship to the central government $\bar{\varepsilon}$ ($\underline{\varepsilon}$) will always extract high (low) transfers \bar{G} (\underline{G}). Obviously, mimicking is not possible in this case. The voters do not have prior information about the relationship of the challenging party with the central government except for the distribution of ε . Thus, if the incumbent party provides a low level of the public good \underline{g} in the first period and the overall budget is also low meaning that $G_1 = \underline{G}$, the incumbent party will be voted out of office. If, in turn, the incumbent party provides a high level of the public good \bar{g} in the first period and the overall budget is also high meaning that $G_1 = \bar{G}$, the incumbent party will remain in office no matter whether it favors public goods provision or only pretends to do so. However, for the incumbent type $(\omega, \bar{\varepsilon})$ that does not mimic the $\bar{\omega}$ -type in the first period and for the incumbent type $(\bar{\omega}, \underline{\varepsilon})$ electoral dynamics depend on the relative effect these parameters have on the utility of the voters and on the distribution of challenger types $(\omega^C, \varepsilon^C)$.

4.5 Testable predictions

The model predicts that around elections incumbent parties invest in visible public goods such as roadworks, health care and education. In the absence of elections, the party in power is more inclined to engage in spendings for holding office. Implicitly, the model also allows one to deduce that budgetary discipline is likely to be higher around elections as incumbent parties use their investments to attract votes. Moreover, *ceteris paribus* the higher a party's ability to retrieve funds from the central government, the more likely its (re)-election. In addition, taxes partly finance public goods investment. Consequently, if the investment in public goods increases, it can either be financed by central government funds or taxes.

5 Data

Senegal has 14 regions¹ and 370 rural communes (*communautés rurales*) as of March 2009. In 1996, it had only 263 rural communes, of which I have budget and electoral outcome information for 171 (193 if the large sample is considered).

In the period 2001-2006, the average (inflation-adjusted) expenditure level per commune increased from 8 million FCFA to 55 million FCFA (Figure 2). Revenues are slightly higher but range in the same dimension. While in earlier periods the projected budget is close to the actual budget, this gap increased over the years until, in 2006, projected expenditures (revenues) reached more than twice the level of realized expenditures (revenues). This points to lax budgetary standards and low efforts to project convertible budgets. Between 2002 and 2003, the average budget tripled which has to be attributed to the worldwide rise in commodity prices (Figure 3, left-hand panel). The increase in commodity prices also (partly) explains why the average communal budget increased at rates around 50% throughout the entire period 2001-2006. The increase in budget is most pronounced in the sub-period 2002-2005 where the average annual growth rate reaches almost 90%. The Senegalese communes could emulate the increase in commodity prices in their budgets because the country's total export value increased in the same fashion throughout the period (Figure 3, right-hand panel). As agricultural products such as fish, groundnuts (peanuts), and cotton are important Senegalese exports, the rural communes benefitted directly from the dynamics of the world market.

Turning to the composition of expenditures, the average communal budget comprises six major categories (Figure 4). These categories subsume the items of multiple subcategories. While the budgetary template allows for far more categories, most of these lines are not used and have zero entries (compare Table 1). Across items their relative budget shares are rather volatile, indicating that budgetary discipline and predictability is low. In what follows, I discuss the average proportion of these six different categories relative to the overall yearly budget. In 2001, the two main elements of the budget were the mayor's costs of holding office and expenditures for culture, education and health care which comprise cultural and community events, scholarships, school and health service expenditures. In 2001, the average commune spent 29.48% of its budget on the mayor and his/her work and 32.15% on culture, education and health care. Once the repayment of investments is included, roughly 70% of the budget is allotted. Other important categories of the average budget are expenses for roads, transport and lighting and the costs of maintenance and service of which the latter includes items such as expenses for newspapers. Diverse expenditures and contingencies account for 4% of the average communal budget in 2001. Taken together, these six categories account for 83.47% of the average

¹Dakar, Diourbel, Fatick, Kaffrine, Kaolack, Kédougou, Kolda, Louga, Matam, Saint-Louis, Sédhiou, Tambacounda, Thiès and Ziguinchor

communal budget in 2001. The use of the remaining almost 20% differs substantially across communes.

In the course of the ensuing five years, the budget composition changes considerably. The proportion of the budget accruing to the mayor and his costs of holding office drops by almost 50% on average; expenses for culture, education and health care go down to 12.77%. The proportion of apportionments, service expenses and items classified as diverse expenditures and contingencies also drops. The latter might indicate that accounting standards improved and budgets were more precise. The only category that experienced a substantial influx of money in later periods is roadworks. In 2006, the six categories make up only 62.37% of the average communal budget, indicating diversification of activities within communes.

Figure 5 compares the expenditure composition between communes in which a change in the majority party took place in 2002 and those where the incumbent party managed to retain power. In the short-run, no changes in budget composition are apparent that seem to result from a change in office. Communes in which the incumbent party continues holding office and communes with a new ruling party show the same trend in the distribution of their budget. However, treated communes invest almost double the proportion of their budgets into culture, education and health care; communes in which an incumbent party rules tend to favor issuances for holding office. Despite moderate differences in budget composition between communes with a new majority party and those with the incumbent majority party, the impression one gains from a first glance at the summary statistics is that it does not matter who rules in terms of spending composition.

Theory also suggests that elections affect the revenue composition. Therefore, I look at the composition of revenues/investments as well. Figure 6 shows that revenues stem from four major sources, namely i) investments due to attributed funds, (ii) endowments for operations, (iii) local tax revenues and (vi) a fourth category collecting unanticipated proceeds and corrections. Over time, these four categories are stable predictors of the average communal budget. In 2001, they describe 93.06% of overall revenues and in 2006 represent as much as 98.10%. The proportion of investments due to attributed funds in overall revenues has substantially increased over time and makes up 63.39% of overall proceeds in 2006. At the same time, the proportion of local tax revenues decreased considerably as did the miscellaneous category of unanticipated proceeds and corrections. On the one hand, this points towards the dependence of the rural communes on the national government and the continued need for investment. On the other hand, it may indicate that the quality of budgetary reporting improved.

Comparing again communes that experienced a change in party leadership to those that reinstated the incumbent party, both types of communes seem to have similar revenue/investment compositions in the first three years but some kink shows up in 2004 (Figure 7). While the proportion of investments due to attributed funds in 2004 is sim-

ilar for both types of communes, the proportion of tax revenues is lower in communes with new leadership which is offset by higher endowments for operations. In 2005, rural communes with new leadership have a considerably higher proportion of investments due to attributed funds in their overall revenues as compared to those communes with incumbent parties. However, this is reversed in 2006. Also, both types of communes converge towards similar tax shares in 2006. Again, differences between communes with a new majority party and those retaining the incumbent majority party seem to be minor and level out within one period.

Descriptive statistics are presented in Table 1 and reinforce the picture one gains from the graphical analysis. Cross-commune and time variation is considerable as indicated by the high standard deviations and the big maximum values relative to the mean. Moreover, almost all variables are bounded by zero. On average, projected expenditures (revenues) are greater than realized expenditures (revenues). When comparing projected and realized proportions of the different categories, it becomes apparent that the projected budget is a weak predictor of the realized budget.

Next, I turn to the electoral variables. They are presented in Table 2. In 86 of the 171 communes, leadership changes as a consequence of the 2002 elections which results in 25.14% of the observations coding for change. Of the communes that changed leadership, 5% are beneficiaries of a national infrastructure program. On average, the elections are decided among two major coalitions, the PS coalition and the PDS coalition of which the former is the coalition supporting the national government that was in power up to 2000 and the later represents the supporters of Ex-President Wade. As a result of the 1996 local elections, the PS coalition held on average 82.79% of the seats of all commune councils and the opposition was scattered. In the 2002 elections, the PDS coalition took over in many councils. The dynamics of the political system are mainly driven by these two parties as shown in Table 3; those commune councils that experienced a change in leadership in 2002 were mainly taken over by supporters of the PDS coalition. The PS coalition, in turn, kept holding 81.53% of the seats in councils that did not experience a change in leadership due to the 2002 elections. In communes whose electorate opted for change, the AJ party also increased its influence. While the electoral gains of the AJ party are statistically significant, they only translate into a small increase in the number of seats won. Given that the rural elections were mainly decided among two big coalitions, a unique opportunity is presented to study whether council budget decisions in a decentralized, semi-democratic system differ across the two major opponent parties.

The predominance of the PS and the PDS is echoed in the large average the party Herfindahl index takes across communes; the Herfindahl portrays the electoral code which allots 50% of the seats on a winner-takes-all basis and only the remaining seats are subject to a proportionality rule. Employing an index of the effective number of parties, the high concentration of the Senegalese party system is displayed even more pronouncedly.

Following Golosov (2010), I calculate the index as:

$$N_{eff} = \sum_{i=1}^{n_p} \frac{1}{1 + (s_1^2/s_i) - s_i}, \quad (9)$$

where the number of parties in the council is n_p and their respective shares are denoted by s_i , the share of the biggest party is s_1 . The index is chosen because it outperforms the traditionally implemented Laakso-Taagepera index (Laakso and Taagepera, 1979) for very concentrated party systems. Unsurprisingly, the effective number of parties is only slightly above one on average indicating that (i) the seat allocation rule works and that (ii) power is almost completely centralized in the hands of the winning party. The question that remains to be answered is whether a strong concentration of power also leads to budgetary stability that is not disturbed by electoral dynamics or whether a political budget cycle can be detected.

6 Econometric specification

In the analysis of the political budget cycle I must confront two econometric problems. First, commune-level unobservables are likely to be important determinants of budgetary discipline and electoral outcomes. Second, due to lax reporting standards, the budgets of the different communes are cursory and even aggregate categories have a considerable amount of zero entries. I address these issues by estimating the trimmed least absolute deviations (LAD) model as proposed by Honoré (1992). This semi-parametric estimator rests on a tobit model that accounts for fixed effects. Consequently, the trimmed LAD estimator allows me to factor out time-invariant unobservables at the commune level and address the issue of unobserved heterogeneity among communes. Moreover, the tobit model accommodates the excess number of zeros in the data which result from reporting flaws (Table 1). The basic intuition for the estimator is intuitive: Due to the censoring at zero, the distribution of the dependent variable is skewed and symmetry needs to be reestablished. In the case at hand, the panel data model for the observed dependent variable looks as follows:

$$y_{it} = \begin{cases} 0 & \text{if } X_{it}\gamma + D_{it}\delta + \alpha_i + \varepsilon_{it} \leq 0 \\ X_{it}\gamma + D_{it}\delta + \alpha_i + \varepsilon_{it} & \text{otherwise} \end{cases} \quad (10)$$

where y_{it} is the observed value of the budgetary item of interest censored from the left at zero. The observed dependent variable y_{it} results from a linear model of the latent variable y_{it}^* . The matrix X_{it} collects the time-varying covariates such as an index of party composition, a population proxy and year dummies. The treatment dummy representing a change in the majority party after the 2002 elections by its win proportion and an

interaction term with a binary variable indicating the existence of a local infrastructure program in the commune are denoted by the matrix D_{it} . The set-up and timing of Senegalese rural elections do not allow me to detect an election year effect as election time is harmonized across communes. However, I can address the link between changes in leadership and the composition of the budget for projected and realized items and for the short and medium term. The vectors γ and δ denote the coefficient estimates, the time-invariant commune fixed effect is labeled α_i , and ε_{it} is the error term. The latent variable y_{it}^* can be described with a linear model because it varies with the regressors X_{it} and D_{it} . However, the observed variable y_{it} does not vary with X_{it} and D_{it} for the censored observations. Therefore, OLS underestimates the magnitude of the coefficient estimates (Chay and Powell, 2001).

Honoré (1992) showed that if $(\varepsilon_{it}, \varepsilon_{is})$ is distributed like $(\varepsilon_{is}, \varepsilon_{it})$ for t and s denoting different time periods, the distribution of any pair of observations of the latent variable (y_{it}, y_{is}) conditional on $(X_{it}, X_{is}, D_{it}, D_{is}, \alpha_i)$ is symmetric around the 45°line through $(X_{it}\gamma, X_{is}\gamma, D_{it}\delta, D_{is}\delta)$. This implies the assumption of ε_{is} and ε_{it} being independent and identically distributed. While the i.i.d. assumption seems to limit the applicability of the estimator, Honoré *et al.* (2000) show that under the assumption of strict stationarity of the error term $\{\varepsilon_{it}\}_{t=1}^T$ conditional on (X_i, D_i, α_i) which is weaker than the original exchangeability assumption, the estimator can also be derived.

I can then derive the vector of coefficient estimates $\beta = (\gamma, \delta)$ as a function of b as the unique minimizer of the following expression:

$$E \left[\left(\max\{y_{it}, \Delta Z_i b\} - \max\{y_{is}, -\Delta Z_i b\} - \Delta X_i b \right)^2 + 2 \cdot \mathbf{1}\{y_{it} < \Delta Z_i b\} (\Delta Z_i b - y_{it}) y_{is} + 2 \cdot \mathbf{1}\{y_{is} < -\Delta Z_i b\} (-\Delta Z_i b - y_{is}) y_{it} \right], \quad (11)$$

where $\Delta Z_i = (Z_{it} - Z_{is})$ and Z_{ik} is the conjoined matrix of covariates (X_{ik}, D_{ik}) for $k = t, s$. Equation (11) translates into the following sample analog which allows estimating β by:

$$\hat{\beta} = \arg \min_b \sum_{i=1}^n \left(\left(\max\{y_{it}, \Delta Z_i b\} - \max\{y_{is}, -\Delta Z_i b\} - \Delta X_i b \right)^2 + 2 \cdot \mathbf{1}\{y_{it} < \Delta Z_i b\} (\Delta Z_i b - y_{it}) y_{is} + 2 \cdot \mathbf{1}\{y_{is} < -\Delta Z_i b\} (-\Delta Z_i b - y_{is}) y_{it} \right) \quad (12)$$

More comprehensive information on the estimation technique can be found in Honoré *et al.* (2000) and Honoré (2002). Standard errors are obtained by cluster bootstrapping at

the commune level, applying 500 replications. I report the coefficient estimates directly instead of the average marginal effect. While it is possible to compute marginal effects, they are not comparable to those of the standard tobit model as they depend on the unobserved fixed effect which the Honoré estimator factors out (Honoré, 2008).

7 Results

The results are divided into four groups. For each budgetary category, I analyze its occurrence in projected and realized terms. Moreover, I first consider the short-term relationship between the fiscal variables and changes in the majority party by comparing the pre- to the post-election period (2001-2002). Second, I increase the time horizon and include five post-election periods (2001-2006). I start the interpretation of the trimmed LAD based regression results by examining the overall level of expenditures and revenues.

The overall level of expenditures is not linked to a change in the majority party (Table 4). Neither the argument that the incumbent party is more experienced and thus has larger budgets at its disposal nor the rationale that PS-governed rural councils, which account for most of the switchers, are more likely to engage in excessive spending as they can be backed up by the central PS government, can be corroborated. There is some indication that in the short-run predicted expenditures increase (p -value 13.7%) in communes that experienced a change in leadership. However, this increase is not translated into real terms. Similarly, the overall level of revenues is independent of electoral dynamics (Table 5). While the coefficient associated with a change in power is negative, it is not significant throughout models. Consequently, I find, in line with Drazen and Eslava (2005), that no matter which party is in power the overall level of expenditures (revenues) is the same on average and it is not linked to a change in party power either; fiscal stability, as measured by similar budget sizes across communes, is not affected by electoral dynamics despite different degrees of integration of the local councils within the central government. I now turn to the composition of expenditures and revenues in order to see how relative shares of several budgetary categories are differentially connected to changes in council leadership.

Table 6 presents results for the proportion of expenditures that accrue to the costs associated with holding office; the variable is labeled mayor's office for the sake of simplicity. Only medium term realized costs of holding office are positively and significantly associated with a change in leadership. According to theory, the costs of holding office are a good that is valued by the leading party but not by the electorate. Therefore, it is not surprising that in the medium-run these costs gain importance as they can be associated with the theoretically introduced *desk* good. Culture, education and health care expenditures form another considerable expenditure category. These expenditures represent the visible good that is theoretically modeled as public good which is valued by

the electorate. Table 7 presents evidence of continued expenditures for culture, education and health care; not even in terms of projected expenditures do I find any election-related variation for this category. Given the relatively low level of rural development in Senegal, these results indicate that no matter which party is in power, all politicians have similar preferences when it comes to culture, education and health care.

In Table 8, I turn to the apportionment of investment costs. While a change in leadership is related negatively to a commune's contribution to investment costs, this effect is not significant. However, in the medium-run councils with new leadership and completed infrastructure projects have significantly lower shares of their expenditures that accrue to apportionment. This indicates that new governments are not in favor of paying-off old debts. While councils with new leadership and existing infrastructure programs are reluctant to pay for them, at the same time they try to extensively invest in roadworks (Table 9). Investments in maintenance and expansion of the rural road network have a high visibility and are important for the local economy. They constitute another visible good that is appreciated by the voters. In turn, the composition of municipal services within the overall costs is not connected to electorally induced changes (Table 10). The budgetary category municipal services seems to be a small, must-have category, which is not manipulated for political reasons.

Finally, I look at diverse expenditures and contingencies (Table 11). In the short-run, there is some indication that both in projected and in realized terms this category is positively linked to changes in the majority party. This suggests a lack of budgetary discipline. Plausibly, low budgetary reporting standards are punished by the voters. At the same time, there is a negative association between the share of diverse expenditures and the the occurrence of political change in communes that have a local infrastructure program. Again, this is a phenomenon that can be observed only in the short-run. Infrastructure investment alongside political change induces improvements in budgetary reporting probably due to conditionalities of the program. Across specifications and time periods, the party Herfindahl index is positively associated with the share of diverse expenditures. Apparently, the more power is concentrated in the local council, the more loose is the budgetary classification. This finding portrays the implications of the theoretical model in situations in which elections are decided by core voters. It can be seen that, indeed, core voters are motivated by ideology and leave fiscal decisions completely in the hands of their party representatives.

In general, it does not appear to be the case that changes in political leadership severely alter the expenditure composition. The theoretical model suggested that shifts in expenditures and expenditure compositions might be aimed for in order to attract votes. However, the moment the different players use counteracting mechanisms and assert different levels of engagement with the central government, the results of their actions might become blurred in the expenditure data.

In order to complement the expenditure analysis, I now turn to the revenue composition. In Table 12, I present results for the proportion of investments due to attributed funds. Again, there is no evidence for a relationship between a change in the majority party and the proportion of investments that are due to attributed funds. However, when change in leadership occurs, in communes that have ongoing infrastructure programs, the challenging party seems to boost these existing programs in the medium-run in both projected and realized terms. Moreover, the more concentrated power is in the hands of one party, the more likely the commune is to receive money from central government funds in the short and the medium-run. Thus, a positive tie between a high level of power monopolization in the local council and the attraction of fund is corroborated. This finding supports the notion that in developing democracies high party concentration and investment in infrastructure are positively connected.

A second important revenue category are operational endowments. The share of operational endowments in overall revenues is independent from electoral dynamics (Table 13). Yet again, a relationship working through infrastructure programs can be seen. In the short run, realized operational endowments are positively linked to political change for communes that have an infrastructure program. Local tax revenues, in turn, interact with political events. In Table 14, I present evidence that around elections lower tax revenues are projected. This is in line with the political budget cycle theory which argues that the incumbent party tries to attract votes by making tax allowances. However, in the Senegalese context, these anticipated tax benefits do not materialize. Turning to the dynamics of the medium run, a change in the majority party is associated with real tax increases. Apparently, once a party has gained power, considerable efforts are made to increase commune revenues by enforcing the tax laws. In terms of the theoretical model, this means that an increase in the public budget allows a higher provision of public goods and higher utility for politicians and the population. Concomitantly, it is interesting to see that only those communes in which the challenging party has a small win margin are affected. Communes with a high party concentration have substantially lower taxes throughout periods. If party power in the rural council is (close to) monopolistic, the ruling party is supported for ideological reasons and there is no pressure for utility enhancing fiscal reorganization. These findings also hold when only considering the rural per capita tax known as the *taxe rurale*.

Finally, I turn to the collective rest category including unanticipated proceeds and investments (Table 15). While one could expect *a priori* that council members that adhere to the same party as the central government receive unanticipated presents upon taking over a rural council, this is not the case. What can be observed is that this category loses importance over the course of the years in projected as well as in realized terms. Thus, rural councils in general appear to improve their budgetary standards. In planning, councils with high party concentration seem to be a bit more lax than councils

with a serious opposition. However, this insecurity in planning does not translate into realization.

Consequently, while electoral dynamics are only moderately linked to the overall budget and its composition, some of the features established by the political budget cycle literature are adopted by Senegalese communes. Taking into consideration the context, it is not surprising that the interaction between elections and fiscal spending is limited. The 2002 rural elections were the second local elections under democratic rules in the sense that they allowed for an opposition to enter the council. Both incumbent and challenging parties have a very short experience in the design and scope of democracy. Moreover, the presidential elections of the year 2000 had brought about a change in power at the national level which strongly affected the ensuing rural elections. The electorate was facing a trade-off between voting for experienced local politicians who had been in the council for at least one period and voting for ‘new’ politicians who were members of the same party as the president and, therefore, better connected to the national government. In light of the fact that most of the communal revenues come from the national level, this trade-off is not to be underestimated. While theoretical models about the political budget cycle yield powerful results in abstracting from interdependencies between elections and budgetary discipline, these have to be evaluated against the context especially in developing countries.

7.1 Caveats

The analysis at hand is a very particular country case study. Almost all changes in the majority party are in favor of the ruling coalition at the national level during the time; no change in majority party is in favor of the largest opponent. For the case of Senegal, it can be observed that the results of local elections follow national elections contrary to what is observed for developed countries.

There are some clear limitations of the study. First of all, I only have one pre-election period of observations together with one round of elections. Moreover, all these rural elections take place during the very same period. For this reason, my analysis focuses on changes in the ruling party instead of considering the effect of the (exogenous) timing of elections. In addition, the budgetary information is sketchy and a trimmed LAD model needs to be employed due to the excess amount of zeros in the different budgetary categories. Even then, credible information on both electoral outcomes and fiscal spending is only available for 171 of the 263 Senegalese communes at the time.

Last but not least, a causal interpretation of the results should be taken with caution. It is hard to make the difference-in-difference assumption that in the absence of the political change the concerned communes would have continued to enjoy the same budgetary dynamics as those communes that did not experience a change in political leadership.

While the theoretical model can propose possible strong channels through which political change works, expectations are clearly multilayered and jointly affect political and fiscal outcomes.

8 Discussion

While I find evidence for a political budget cycle in Senegalese local elections, its impact is moderate. The overall level of expenditures and revenues is independent of electoral dynamics. Considering spending decisions, however, it can be seen that new governments are disinclined to cover investment expenses of their predecessors. Simultaneously, new political leadership alongside existing infrastructure programs bolsters the expansion of the road network. However, culture, education and health care expenditures remain independent of political dynamics. Similarly, the share of municipal service costs is unrelated to electoral dynamics. In turn, around elections lower tax revenues are projected. Yet, these anticipated tax benefits do not materialize. In fact, in the medium run, a change in the majority party is associated with real tax increases. While electoral dynamics are unrelated to the share of revenues that are declared as unanticipated proceeds and investments, this category loses importance over the course of the years indicating that budgetary standards improve. However, lack of planning reliability with respect to the share of unanticipated proceeds and investments in overall revenues is an issue for councils with high party concentration.

These results can be interpreted from a positive and a normative standpoint. From a positive perspective, the study shows that there are no considerable differences in budgetary allocations between incumbent and challenger councils, which indicates a certain degree of fiscal stability. Elections do not seem to create major fiscal distortions; votes and acceptance of the system do not seem to be bought. Against all skeptics, apparently, the semi-democratic structures do not increase Senegal's fragility. At the local level, continuance across electoral cycles is given at least in fiscal terms. Taking a normative perspective, one might ask why there are no significant differences in budgetary decisions. In light of the Senegalese political set-up, it is evident that incumbent and challenger councils have equally poor budgetary standards. Across councils, the gap between projected and realized budgets is considerable and reporting quality is low which is displayed in the many zero entries and the extensive use of the residual categories. Therefore, I suggest caution when interpreting the results as showing fiscal maturity. They rather suggest that extensive local-level training in the administration of democratic processes and fiscal discipline is needed. Local party representatives need to be coached in practical, applicable matters such as budgeting, accounting, and transparency. Local-level capacity building across parties has the potential to translate into a functioning democracy that is endorsed by the population at large.

Moreover, while results in terms of actual election-induced changes seem to be moderate, planning reliability is affected by elections. Perceived fiscal instability is likely to be considerably higher than actual budgetary changes indicate. This is a major challenge for a young democracy and therefore future research should also treat the perceptions of the electorate before, around and after elections.

Last but not least, Senegalese politicians best qualify as patrimonial democrats (Beck, 1997). Applying Quimpo's definition (2007) of a patrimonial ruler as one who "does not distinguish between personal and public patrimony and treats matters and resources of state as his personal affair" to the Senegalese context, I come to the conclusion that it indeed does not matter who rules. Parties represent patrimonial elites and are interchangeable. Historically, these parties have shown a commitment to incremental political change towards democratisation. Such processes can be built upon to promote the democratic commitment and introduce best practices to enhance democratic and economic development at all levels and throughout the (political) budget cycle.

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A The party’s maximization problem

The problem is solved backwardly under the assumption of a forward looking voter. In the second period, the party in power $P \in \{I, C\}$ maximizes the second period objective function (5) by choosing (g_2^P, τ_2^P) subject to the budget constraints (2) and (4) and $c_2^P, g_2^P, k_2^P \geq 0$. Substituting equations (2) and (4) in the second period objective function, the maximization problem can be rewritten as:

$$\max_{g_2^P, k_2^P} \Omega_2^P(g_2^P, k_2^P) = \omega^P \left[u(G_2^P + y - g_2^P - k_2^P, g_2^P) + \sum_{j=1}^N \frac{(\iota^j - \iota^P)^2}{N} \right] + v(k_2) + \psi \quad (13)$$

This results in the following pair of FOCs:

$$u_1(G_2^P + y - g_2^P - k_2^P, g_2^P) = u_2(G_2^P + y - g_2^P - k_2^P, g_2^P) \quad (14)$$

$$\omega_P u_1(G_2^P + y - g_2^P - k_2^P, g_2^P) = v_1(k_2) \quad (15)$$

Thus, in the optimum the marginal utility from private and public goods consumption must be equal for the voter. Taxes are set such that the equality of the marginal utilities of consumption is ensured given y and G_2 . Secondly, the ruling party sets the marginal utility from spending on the public good and on the *desk* good as equal. Thus, post-election public good expenditures increase in ω_P . It then follows from the above assumptions that $g_2^P(\bar{\omega}^P) > g_2^P(\underline{\omega}^P)$. For simplicity, it is assumed that $\bar{\omega}^P = \bar{\omega} = \infty$ for $P \in \{I, C\}$ which results in the maximum level of public good expenditure: $g_2^P(\bar{\omega}) = G_2^P + \tau_2^P > g_2^P(\underline{\omega}^P) = \underline{g}_2^P$.

In the election period, the incumbent party maximizes lifetime utility (6) subject to (2) and (4) by choosing (g_1^I, τ_1^I) . Then, the first period utility gain of an $\underline{\omega}^I$ -type incumbent party of choosing its own policy can be determined as:

$$\Delta\Omega = \underline{\omega} [u(y - \tau_1, \underline{g}^I) - u(y - \tau_1, G_1 + \tau_1)] + [v(G_1 + \tau_1 - \underline{g}^I) - v(0)] > 0 \quad (16)$$

Put differently, equation (16) is the utility gain of an incumbent party of type $\underline{\omega}^I$ of not mimicking the $\bar{\omega}^I$ -type in period one. If, however, the first period utility gain from choosing the preferred policy \underline{g}^I is less than the gain stemming from increased reelection chances, the $\underline{\omega}^I$ type incumbent party will choose $g_1 = G_1 + \tau_1$ and $k_1 = 0$:

$$\Delta\Omega < \beta (\rho(G_1 + \tau_1) - \rho(\underline{g}^I)) (\Delta\Omega\bar{p} + \psi) \quad (17)$$

The right hand side of equation (17) depends on the increase in the reelection probability due to the mimicking and the value of being in office for another term under the preferred policy. The utility gain $\Delta\Omega$ is multiplied by the probability \bar{p} because the value of implementing the own preferred policy in the second period is only strictly positive if the challenger is of the high public goods provision type $\bar{\omega}$. Thus, the high public good provision type party always provides $g^I(\bar{\omega}) = G^I + \tau^I$. The low public goods provision type party $\underline{\omega}$ can either pool with the high type $\bar{\omega}$ and provide a high level of the public good g in period one or separate and provide a low level \underline{g}^I .

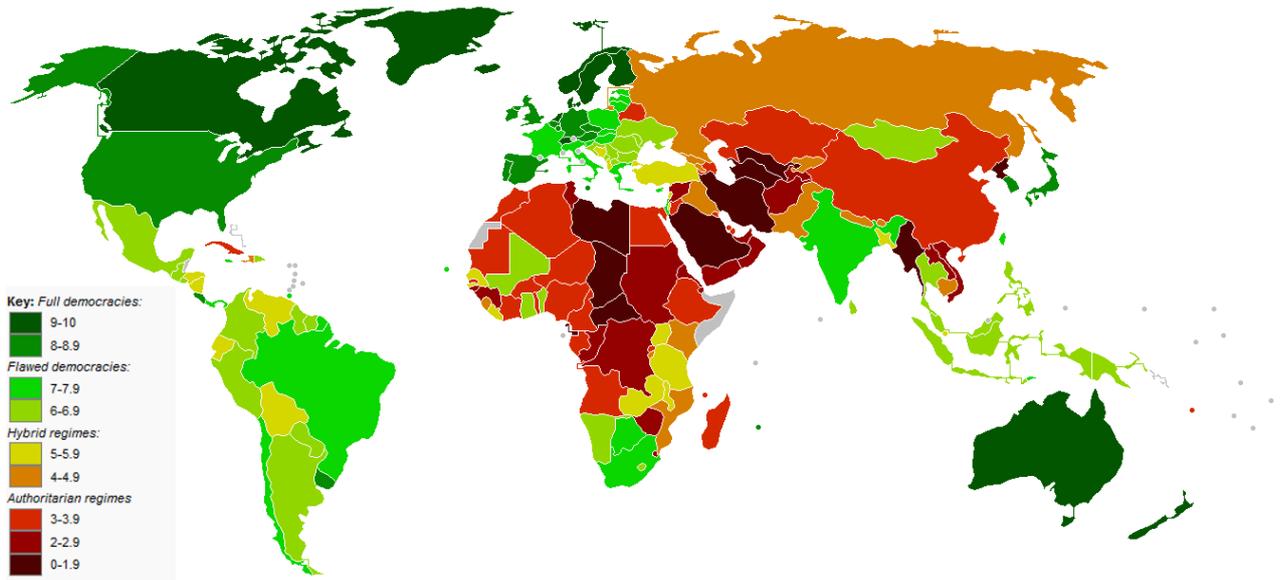


Figure 1: The state of democracy in the world according to the 2011 Democracy Index

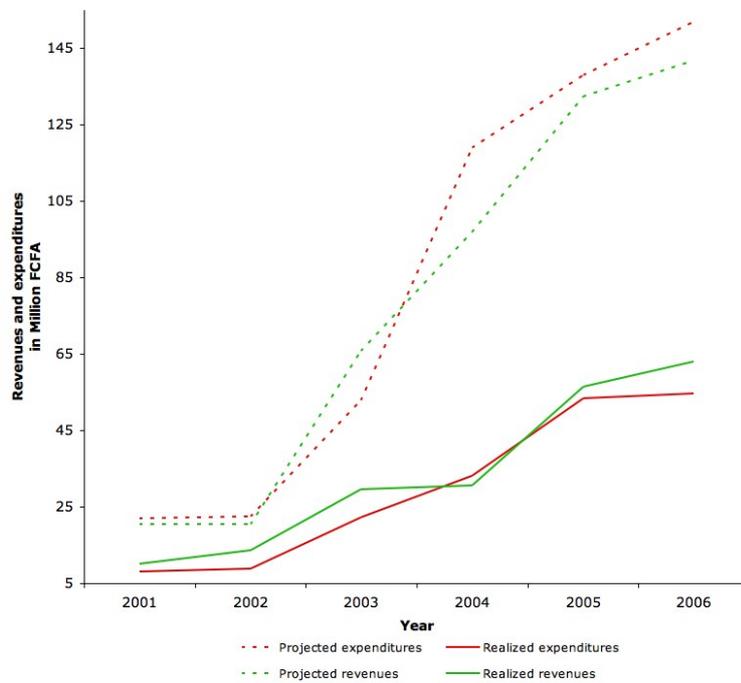


Figure 2: Average expenditures and revenues in projected and realized terms for the sample of 171 rural communities over the period 2001-2006; inflation adjusted.

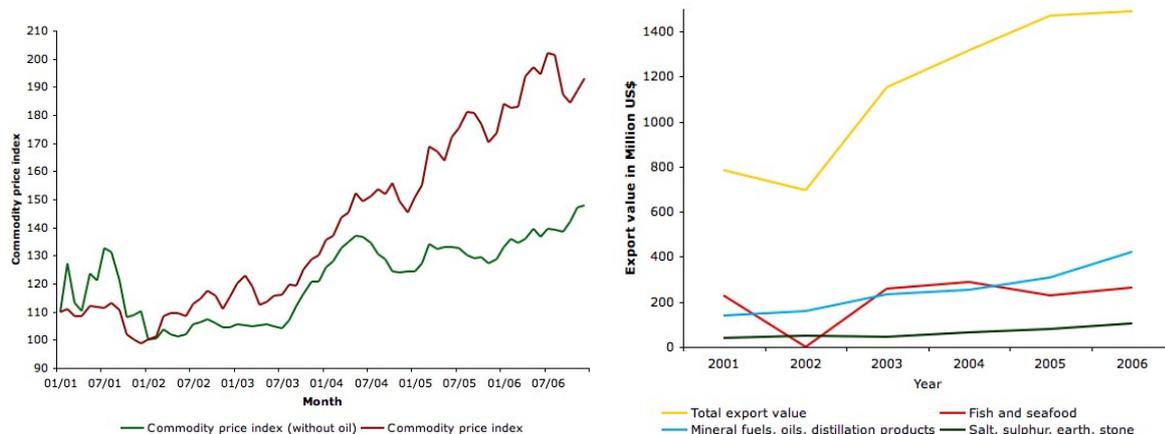


Figure 3: The left-hand panel shows the commodity price development over the period 2001-2006. Source: Instituto de Pesquisa Econmica Aplicada, Brazil. The right-hand panel presents the export value over the period 2001-2006. Source: ITC calculations based on UN COMTRADE statistics.

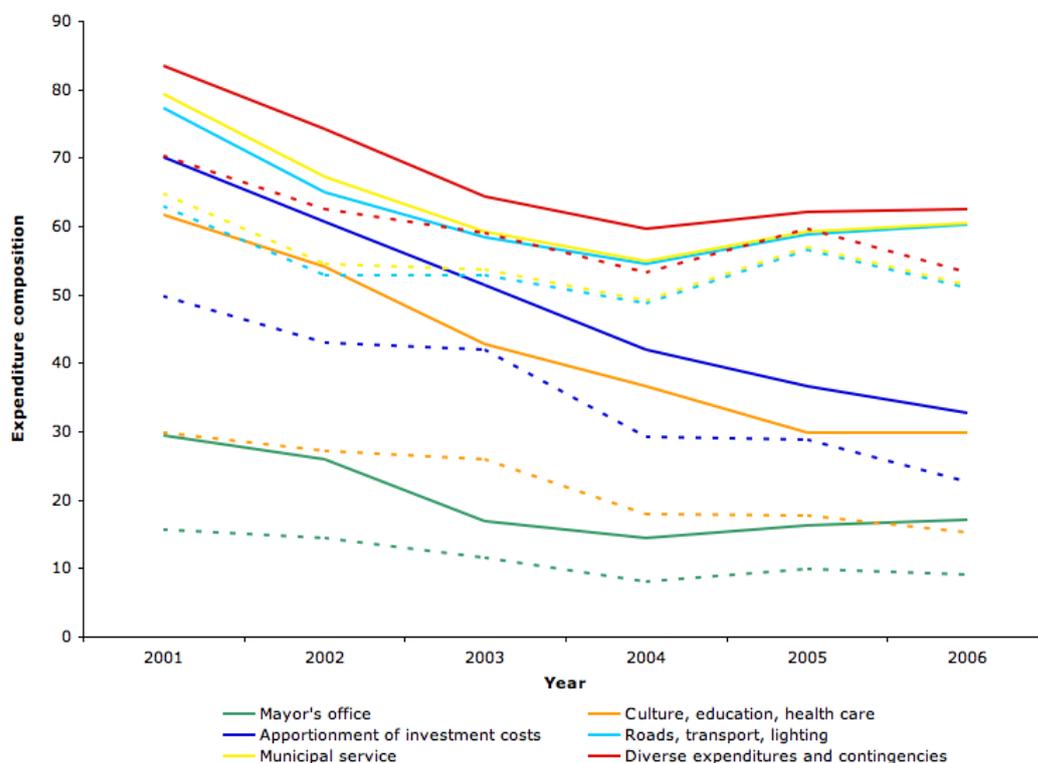


Figure 4: Expenditure shares for six major classes of expenditures, namely the (i) expenses of holding office, (ii) apportionment of investment costs, (iii) costs for roads, transport and lighting, (vi) costs of cultural events, education and health care, (v) municipal service costs and (iv) diverse expenditures and contingencies.

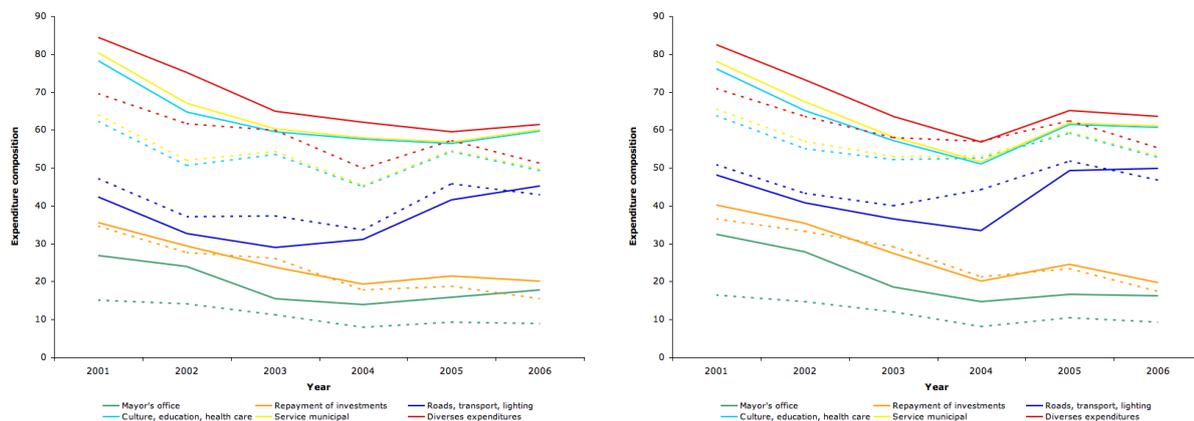


Figure 5: The left-hand panel depicts the expenditure composition for rural communities that changed majority party following the 2002 elections. The right-hand panel shows the expenditure composition for rural communities that kept the same majority party.

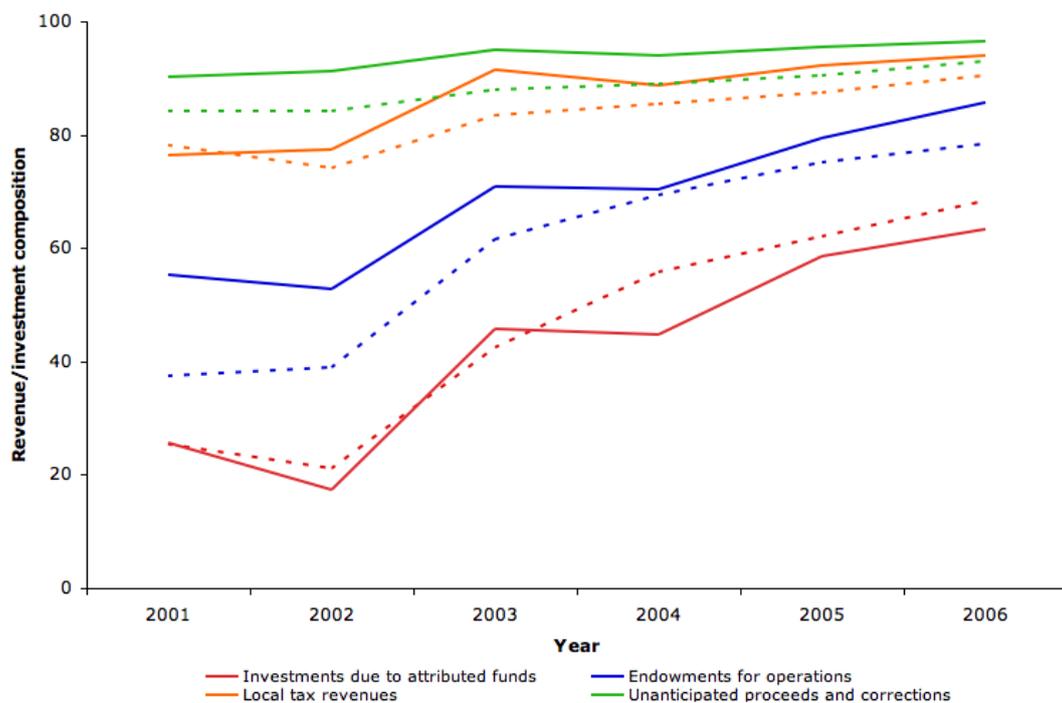


Figure 6: Revenue shares for four classes of revenues, namely (i) investments due to attributed funds, (ii) endowments for operations, (iii) local tax revenues and (vi) unanticipated proceeds and corrections.

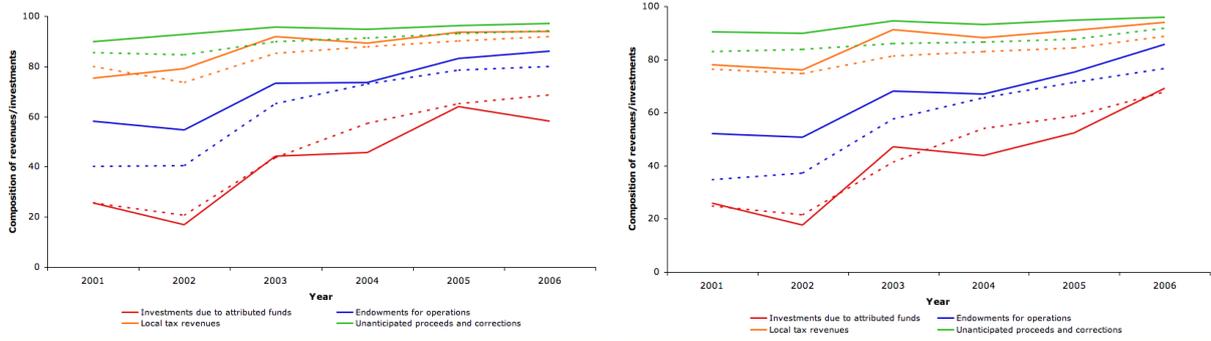


Figure 7: The left-hand panel depicts the revenue composition for rural communities that changed majority party following the 2002 elections. The right-hand panel shows the revenue composition for rural communities that kept the same majority party.

	Mean	Std. Dev.	Min	Max
Projected				
Expenditures (log)	16.349	1.745	0	19.937
<u>Proportion of overall expenditures (%)</u>				
Mayor's office	14.985	8.415	0	64.844
Culture, education, health care	13.246	8.946	0	71.521
Apportionment of investment costs	18.056	16.532	0	87.847
Roads, transport, lighting	11.516	11.244	0	76.810
Municipal services	1.667	2.673	0	38.521
Diverse expenditures	6.806	6.893	0	54.198
Revenues (log)	16.381	0.853	13.738	19.957
<u>Proportion of overall revenues (%)</u>				
Investments due to attributed funds	23.363	18.693	0	92.228
Endowments for operations	14.557	11.214	0	62.280
Local tax revenues	38.098	18.885	0	88.910
Unanticipated proceeds and corrections	8.099	9.580	0	52.700
Realized				
Expenditures (log)	15.025	1.771	0.000	19.684
<u>Proportion of overall expenditures (%)</u>				
Mayor's office	27.384	17.405	0	100.000
Culture, education, health care	30.247	23.550	0	100
Apportionment of investment costs	7.647	14.782	0	75.145
Roads, transport, lighting	5.918	12.165	0	82.146
Municipal services	2.222	3.955	0	24.995
Diverse expenditures	5.627	7.112	0	51.426
Revenues (log)	15.325	1.776	0.000	20.094
<u>Proportion of overall revenues (%)</u>				
Investments due to attributed funds	21.754	23.453	0	93.641
Endowments for operations	32.052	24.459	0	100.000
Local tax revenues	22.340	22.116	0	94.618
Unanticipated proceeds and corrections	13.692	15.233	0	100.000

Table 1: Descriptive statistics for budgetary items, based on the small sample of 342 observations and 171 communes.

	Mean	Std. Dev.	Min	Max
Change in majority party (intensity)	.249	.431	0	1
Change*Infrastructure Program	.050	.218	0	1
<u>Proportion of seats (%)</u>				
PS coalition	65.180	31.455	0	100
PDS coalition	28.751	30.219	0	100
AJ party	3.426	13.636	0	79.170
LD coalition	1.794	6.687	0	83.330
Party Herfindahl index	0.722	0.113	0.443	1
Population proxy	28.518	3.910	20	36

Table 2: Descriptive statistics of party and electoral dynamics, based on the small sample of 342 observations and 171 communes.

	<u>Change in leadership</u>		<u>No change in leadership</u>		Differences in means <i>p</i> -value
	Mean	Std. Dev.	Mean	Std. Dev.	
PS coalition	49.013	35.395	81.537	13.914	0.000
PDS coalition	42.342	36.078	15.001	12.142	0.000
AJ party	5.563	17.170	1.264	8.216	0.003
LD coalition	2.179	8.919	1.406	3.074	0.286
Party Herfindahl index	0.715	0.114	0.730	0.112	0.232
Population proxy	28.360	3.939	28.676	3.885	0.456
Observations	172		170		

Table 3: Differences of means test for the electoral and party variables, based on the small sample of 342 observations and 171 communes.

	Projected		Realized	
	small	large	small	large
Change in majority party	0.461 (0.310)	0.068 (0.138)	0.318 (0.323)	0.007 (0.142)
Change*Infrastructure program	-1.14 (0.965)	0.306 (0.336)	-1.031 (0.924)	0.192 (0.399)
Party Herfindahl index	0.942 (1.072)	-0.166 (0.597)	-0.631 (1.170)	-0.878 (0.601)
Population proxy	0.177 (0.137)	0.069 (0.056)	0.235 (0.133)	0.127 (0.057)
		(0.135)		(0.139)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	99	100	99	100

Table 4: Electoral dynamics and communal expenditures (log): Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	-0.003 (0.112)	-0.083 (0.100)	0.071 (0.369)	-0.135 (0.154)
Change*Infrastructure program	-0.28 (0.245)	0.721 (0.187)	-0.984 (1.039)	0.452 (0.356)
Party Herfindahl index	0.857 (0.626)	-0.33 (0.469)	1.443 (1.433)	0.264 (0.692)
Population proxy	0.045 (0.036)	0.04 (0.030)	0.223 (0.136)	0.112 (0.062)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	100	100	99	100

Table 5: Electoral dynamics and communal revenues (log): Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	0.932 (1.621)	0.863 (1.431)	3.177 (3.837)	5.683 (2.475)
Change*Infrastructure program	1.873 (2.200)	-1.528 (2.487)	-0.135 (5.203)	-4.852 (4.049)
Party Herfindahl index	-0.192 (7.035)	8.471 (6.057)	10.945 (16.125)	12.374 (10.356)
Population proxy	-0.141 (0.328)	0.061 (0.278)	0.168 (1.224)	-0.335 (1.145)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	99	99	96	98

Table 6: Electoral dynamics and the cost share of the mayor's office: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	-1.523 (1.718)	-0.914 (1.372)	-3.35 (4.037)	-4.598 (3.644)
Change*Infrastructure program	2.53 (2.258)	-0.369 (2.543)	12.366 (9.102)	3.21 (6.475)
Party Herfindahl index	2.233 (7.739)	-2.103 (4.770)	27.698 (17.455)	6.632 (15.698)
Population proxy	-0.084 (0.453)	0.119 (0.443)	-0.488 (1.443)	0.353 (1.525)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	99	99	96	98

Table 7: Electoral dynamics and the expenditure share of culture, education, health care: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	-3.702 (3.924)	0.516 (2.696)	-8.535 (7.419)	-3.046 (5.982)
Change*Infrastructure program	1.525 (4.727)	-10.517 (3.736)	-2.268 (11.307)	-12.47 (8.108)
Party Herfindahl index	-11.635 (18.007)	2.421 (13.020)	-44.733 (33.282)	-31.481 (24.645)
Population proxy	0.617 (1.161)	-0.068 (0.903)	3.527 (2.824)	1.3 (2.457)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	65	74	37	41

Table 8: Electoral dynamics and the share of apportionment of investment costs: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	0.301 (2.952)	-1.368 (3.814)	-9.645 (11.568)	-5.121 (7.909)
Change*Infrastructure program	0.722 (2.631)	16.789 (6.221)	5.642 (11.567)	16.94 (10.449)
Party Herfindahl index	7.907 (15.506)	-8.485 (15.805)	-32.695 (55.836)	-20.901 (35.832)
Population proxy	-0.345 (0.734)	-0.578 (0.988)	-2.022 (2.244)	-2.423 (2.339)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	88	92	41	58

Table 9: Electoral dynamics and the expenditure share of roads, transport and lighting: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	-0.598 (1.372)	-0.072 (0.546)	-0.644 (2.010)	-1.950 (2.072)
Change*Infrastructure program	0.085 (1.085)	-0.661 (0.755)	0.626 (3.896)	17.793 (7.777)
Party Herfindahl index	-3.944 (10.421)	-0.582 (2.760)	7.613 (6.957)	-3.015 (3.815)
Population proxy	-0.137 (0.242)	0.002 (0.146)	-0.047 (0.298)	0.072 (0.308)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	89	93	48	50

Table 10: Electoral dynamics and the cost share of municipal service: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	3.273 (2.080)	0.948 (1.461)	4.427 (2.909)	1.986 (1.674)
Change*Infrastructure program	-8.844 (4.142)	-4.913 (3.957)	-8.185 (4.676)	-6.167 (4.137)
Party Herfindahl index	39.038 (13.861)	18.996 (7.963)	28.806 (12.609)	29.113 (9.760)
Population proxy	0.05 (0.528)	0.058 (0.342)	-0.533 (0.688)	-0.776 (0.420)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	86	92	60	70

Table 11: Electoral dynamics and the cost share of diverse expenditures and contingencies: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	3.019 (4.127)	2.117 (3.957)	1.846 (7.351)	-4.939 (4.009)
Change*Infrastructure program	-6.459 (5.322)	14.015 (6.114)	-8.498 (14.883)	19.536 (7.328)
Party Herfindahl index	2.644 (25.422)	-18.595 (17.129)	58.083 (34.977)	34.606 (16.462)
Population proxy	1.831 (1.526)	1.257 (1.253)	2.051 (2.056)	1.578 (1.342)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	79	91	77	90

Table 12: Electoral dynamics and the revenue share of investments due to attributed funds: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	0.566 (2.253)	-1.142 (1.890)	-3.521 (4.492)	-3.417 (3.337)
Change*Infrastructure program	4.53 (4.741)	-12.296 (10.935)	9.905 (5.830)	-8.405 (5.997)
Party Herfindahl index	-13.834 (9.734)	0.828 (8.433)	3.637 (19.758)	1.515 (13.608)
Population proxy	0.2 (0.810)	-0.303 (0.648)	-0.721 (1.162)	-0.458 (0.999)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	95	96	96	96

Table 13: Electoral dynamics and the revenue share of endowments for operations: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	-7.005 (3.511)	-0.612 (2.885)	8.053 (6.279)	9.214 (3.473)
Change*Infrastructure program	7.243 (5.250)	0.5 (5.061)	-4.507 (13.870)	-11.418 (8.450)
Party Herfindahl index	-16.096 (15.457)	-6.92 (11.956)	-55.703 (27.979)	-46.71 (15.584)
Population proxy	-1.073	-0.539	1.11	0.706
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	99	99	84	91

Table 14: Electoral dynamics and the revenue share of local taxes: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.

	Projected		Realized	
	small	large	small	large
Change in majority party	3.717 (4.493)	1.669 (1.574)	-1.699 (3.148)	0.165 (3.567)
Change*Infrastructure program	-4.928 (5.451)	-2.507 (2.321)	-0.294 (11.125)	-4.326 (7.179)
Party Herfindahl index	31.926 (14.704)	11.976 (5.652)	-0.538 (13.179)	-3.858 (11.902)
Population proxy	-0.954 (0.659)	-1.112 (0.405)	-0.288 (0.608)	-0.629 (0.983)
Observations	342	947	342	947
Number of CRs	171	193	171	193
Proportion of uncensored data (%)	98	99	92	92

Table 15: Electoral dynamics and the revenue share of unanticipated proceeds and investments: Trimmed LAD estimates adjusted for rural commune fixed effects. Cluster bootstrapped standard errors are given in parentheses. Year dummies are included but not presented for the sake of brevity.