

Political colleagues matter: The impact of multiple office-holding on intergovernmental grants

Brice Fabre*

(Paris School of Economics, Institut des politiques publiques)

April 2020

Abstract

This paper brings new evidence on the politics of intergovernmental grants, by focusing on multiple office-holding (*cumul des mandat*). I look at whether a local incumbent who has concurrently a seat at an upper layer of government gets more funds from this layer. I focus on grants counties (*départements*) allocate to municipalities. I find that mayors who also have a seat in the majority group of the county council get on average 28% more grants for their municipality than other municipal incumbents. Additional evidence suggest this targeting being driven by reelection concerns of county councillors.

Keywords: Intergovernmental transfers, Multiple Office-Holding, Regression Discontinuity Design.

JEL Codes: D72, D73, H27, H77

*E-mail: brice.fabre@psemail.eu. Address: PSE-Ecole d'Économie de Paris, 48 boulevard Jourdan, 75014 Paris. Phone: +33 (0) 1 80 52 18 73. I am very grateful to François Bourguignon for his precious supervision. I would like to thank Olivier Bargain, Antoine Bozio, Sonia Paty, Marc Sangnier, Albert Solé-Ollé and Ekaterina Zhuravskaya for all their helpful comments and suggestions. Part of this work was made when I was visiting Warwick University. I wish to thank Michela Redoano who supervised my work during this visit. This paper also benefited from insightful discussions with participants of the Applied Economics Lunch Seminar (PSE), the CAGE AMES Seminar (Warwick), the CREST Internal Seminar (LMI-LEPP), the AFSE, the LAGV and the IAAE Congress. I gratefully acknowledge the *Direction Générale des Finances Publiques* (DGFIP, French Ministry of Economy and Finance), the French Home Office and Marc Sangnier for having provided me their data. This work was supported by the Institute of Public Policies (IPP) and by the French National Research Agency, through the program *Investissements d'Avenir*, ANR-10-LABX_93-01. All remaining errors are my own.

1 Introduction

Local governments play an important role in providing public goods, and rely on intergovernmental grants for their funding. The share of decentralized spending in public expenditures is on average 30% across OECD countries in 2016, while intergovernmental grants represent 44% of local revenues on average.¹ The importance of intergovernmental grants in the provision of public goods coexists with strong ties between governments of different tiers. In particular, it is common among developed countries that local incumbents concurrently have a seat in an upper tier of government. As documented by Bach (2012), 83% of French Members of Parliament have concurrently a local office in 2011, while this proportion is 35% in Sweden, 24% in Germany, 20% in Spain, 7% in Italy and 3% in the United-Kingdom. This kind of intergovernmental ties implies a direct access of local incumbents to upper councils which offer local grants.

This paper aims at investigating the impact of this multiple office-holding practice (*cumul des mandats*) on the allocation of intergovernmental grants, by focusing on intergovernmental ties between French urban municipalities (*communes*) and counties (*départements*) over the period 2002-2011. French local governments offer a very appropriate setting for this purpose. First, having concurrently a municipal and a county political mandate is a common practice in France, as 25% of mayors in municipalities with more than 3,500 inhabitants also have a seat in a county council. Second, relying on ties between two local layers of government (instead of ties between the Central State and local governments) allows to investigate the heterogeneity in the effect of multiple office-holding.

The focus being on political ties between municipalities and counties, the dependent variable is the amount of *discretionary* investment grants per head French municipal jurisdictions receive from their county. Focusing on discretionary transfers is key, as these funds can be by definition easily manipulated by elected officials and are therefore appropriated to identify political determinants of the allocation of intergovernmental grants. This paper looks at “urban” municipalities, with more than 3,500 inhabitants. For identification, Regression Discontinuity techniques on close electoral races are implemented. The impact of multiple office-holding is identified by comparing mayors who barely won last county elections to mayors who barely lost. Still, identifying the average effect of multiple office-holding may be not sufficient, as the multiple offices effect may be strongly linked to political alignment. In a given tier of government, the legislative body is often made of incumbents from different political affiliations, with a leading party or coalition. Then, multiple office-holders can be aligned or non-aligned (i.e. can be of the same political affiliations than the upper leaders or not). Alignment may be a key feature, and has to be considered jointly with multiple office-holding. For this purpose, the impact of multiple office-holding and political alignment are jointly estimated through a Heterogeneous Local Average Treatment Effect (HLATE) specification, following Becker et al. (2013). This method consists in incorporating the interaction between multiple office-holding and political alignment in the regression discontinuity setting.

¹See the OECD Fiscal Decentralisation Database:
<https://www.oecd.org/tax/fiscal-decentralisation-database.htm>

Results show strong and robust evidence of a targeting in favour of *aligned* multiple office-holders. On average, mayors who have concurrently a seat in the majority coalition of the county council get on average 28% more grants than other mayors. However, non-aligned multiple office-holders (i.e. mayors who have a seat in the county council, but are not part of the county council leading coalition) do not receive significantly more grants according to the findings. This result is robust to a battery of robustness checks. In particular, it is checked that findings are not specific to the regression discontinuity setting, and that it holds for alternative specifications and alternative samples.

Additional evidence are provided to investigate the mechanisms underlying this effect. The first piece of evidence is related to the alignment definition. In the main setting, a municipality is considered as aligned if the mayor is of the same coalition of the head of the county council. To complete this finding, I look at alignment in terms of political party. I find that being of the same coalition or of the same party as the head of the county council does not make any difference in the targeting in favour of multiple office-holders. Second, the targeting in favour of aligned multiple office-holders is higher when the share of seats of the county leading coalition is lower, but does not depend on the share of seats of the leading party. This result is consistent with alignment in terms of coalition being the most relevant measure. It also suggests that more grants towards aligned multiple office-holders can be explained by reelection concerns of county councillors. In other words, counties' leaders help municipalities of their colleagues in the county leading coalition in order to increase the probability to keep their leading position. Two additional pieces of evidence also go in this sense. First, I observe more targeting towards aligned multiple office-holders when the share of the municipal population in the county constituency is higher. Second, this targeting is higher when the margin of victory of the mayor in last municipal elections is lower.

To sum up, when county councils' leaders face relatively high challenges to be reelected, they target municipalities where (i) the mayor is also a county councillor of the majority group, (ii) the set of voters for her municipal reelection is close to the set of voters for her county reelection, so that the reward of a municipal investment in next municipal elections may also play in county elections, (iii) this reelection faces relatively high uncertainty.

Such a mechanism has never been pointed out in the existing research on intergovernmental transfers. This literature has focused on pork-barrel of grantors through political party considerations, by investigating the impact of political alignment per se. Grantors may favour aligned local incumbents in order to bring political capital to their party, and then to increase their probability of reelection. Such a mechanism may hold once the political credit of intergovernmental transfers is divided between aligned politicians of different tiers. Main contributions on this issue are [Solé-Ollé & Sorribas-Navarro \(2008\)](#) and [Curto-Grau et al. \(2018\)](#) for Spain, [Arulampalam et al. \(2009\)](#) for India, [Brollo & Nannicini \(2012\)](#) for Brazil, [Migueis \(2013\)](#) for Portugal, [Bracco et al. \(2015\)](#) for Italy, [Kantorowicz & Köppl-Turyna \(2019\)](#) for Poland and [Lara & Toro \(2019\)](#) for Chile. They all find a positive and significant alignment effect. However, political alignment may not capture the whole complexity of intergovernmental links. In a context of multi-tiers of government, incumbents

in a given layer may have more direct links with other layers of government than through their political affiliation. This paper aims at going further in this direction, and shows that focusing on direct links between politicians of different governmental tiers reveals other mechanisms underlying the politics of intergovernmental grants.

This paper follows a large literature on the politics of intergovernmental transfers. An important strand of research investigates the targeting of vote-seeking grantors according to local political support. [Lindbeck & Weibull \(1987\)](#) and [Dixit & Londregan \(1998\)](#) provide theoretical models where such grantors target jurisdictions with a high proportion of “swing-voters”, while [Cox & McCubbins \(1986\)](#) predict that risk-averse grantors tend to favour core supporters. These two mechanisms claimed for empirical investigations, which provide a mixed picture.² In this strand of research, [Dubois et al. \(2005\)](#) bring interesting insights, since they focus on the same institutional context as this paper. They highlight that French county councillors get closer from their preferred policy when political competition is lower. This paper brings new knowledge in this literature by showing that, in addition to local political support, direct links between politicians of different tiers of government matter.

This paper also contributes to the literature on multiple office-holding. The main concern related to this practice is that multiple office-holders may not have enough time to take on all their responsibilities. In addition, multiple office-holding may be a way for politicians to decrease their probability to have no term in the future. In coherence with this debate, scholars have mainly focused on the impact of multiple office-holding on incumbents’ attendance and their probability of being reelected. [Bach \(2011\)](#) shows for France that Members of Parliament who have a seat in a municipal council reduce by one third their attendance in parliamentary committees. In contrast, [François & Weill \(2014\)](#) find no evidence of a substitutability between parliamentary and local mandates tasks. [François & Weill \(2016\)](#) go deeper in this analysis, showing different effects depending on the kind of parliamentary task. As for impacts on the dynamics of electoral outcomes, [Bach \(2011\)](#) finds no higher probability for municipal incumbents of running for or winning legislative elections. Consistently with this last finding, [Foucault \(2006\)](#) finds for France that Members of Parliament who also have a seat in a municipal council are not more likely to win next legislative elections. However, no research in this previous literature investigates the impact of multiple office-holding on intergovernmental grants. This paper aims at filling this gap. From this perspective, the closest contribution to this paper is [François \(2006\)](#), who shows that multiple office-holders raise more money for their electoral campaign.

Finally, this paper brings new insight on the politics of intergovernmental transfers among developed countries, by adding a country in the scope of this literature. France has not been the object of any paper on this research topic. [Cadot et al. \(2006\)](#) highlight the key role of political factors underlying the allocation of French national investment across different regions. [François](#)

²Evidence in favour of the swing voter hypothesis was highlighted by [Dahlberg & Johansson \(2002\)](#) and [Johansson \(2003\)](#) for Sweden, [Solé-Ollé \(2013\)](#) for Spain, [Banful \(2011\)](#) for Ghana, [Helland & Sørensen \(2009\)](#) for Norway and [Litschig \(2012\)](#) for Brazil. On the other hand, findings in line with the core supporter hypothesis are emphasized in [Larcinese et al. \(2006\)](#) and [Levitt & Snyder Jr \(1995\)](#) for the United States, [Kauder et al. \(2016\)](#) for Germany and [Joanis \(2011\)](#) for Québec.

(2010) provides a different picture. He highlights the fact that the central State mimics the allocation of local spending in its decisions on national investment, suggesting a lack of information rather than electoral motives. This paper aims at making a complementary investigation of the French context, by focusing on intergovernmental grants rather than the spatial allocation of national investment.

This paper proceeds as follows. Section 2 describes the French institutional background. Section 3 presents the identification strategy. Data and the sample are presented in Section 4. Section 5 presents the main results and robustness checks. Section 6 investigates mechanisms through an heterogeneity analysis. Section 7 concludes.

2 Institutional background

The French decentralization architecture is made of three tiers of local government: in 2011, the territory was divided into 36,688 municipalities (*les communes*), 100 counties (*les départements*) and 26 provinces (*les régions*). Municipalities are in charge of primary schools, land use policy, and local facilities (municipal roads, cultural and sport infrastructures, nursing homes). Counties have the responsibility of main social services, disabled and elderly people policies, intermediate roads and secondary schooling. Finally, provinces are in charge of economic development, labour training programs, and financial support to firms. In most of the territory, there are inter-municipal communities (*intercommunalités*), which constitute an intermediate tier between municipalities and counties. These communities are groups of municipalities which decided to cooperate and merge for the provision of some public goods, in order to reach economies of scale.

While municipal expenditures account for 4.6% of French GDP in 2011, the analogous shares for counties and provinces are respectively 3.4% and 1.3%. As for inter-municipal communities, their expenditures account for 1.8% of GDP. Then, by investigating the impact of political links between municipalities and counties, this paper focuses on the two most important tiers of local government in terms of total spending.

2.1 Municipal investment revenues

French local governments have to decompose their budget into two sections: the operating section and the investment one. As this paper investigates the allocation of discretionary investment grants received by municipalities, Table 1 shows macro data on revenues of the investment section of municipal accounts for all French municipal jurisdictions in 2011. A picture of both sections is provided in Appendix (Table A2).

This table makes a distinction between discretionary and formula-based investment grants. Formula-based grants are transfers whose allocation between municipalities depends on a precise rule defined by national law. In France, the main formula-based investment grant is the *Fonds de compensation de la taxe sur la valeur ajoutée* (FCTVA). This is a transfer from the central State to compensate local spending related to the value added tax induced by local public investment. This category also includes the *Dotation d'équipement des territoires ruraux* (DETR), a transfer devoted

to investment which depends mainly on municipal population and local tax bases. Discretionary investment grants are transfers grantors allocate to municipalities through their own rules. They are usually allocated through calls for projects. Municipalities have to send to grantors an application with their financial accounts of previous years and a description of a specific project. Nowadays, these grants are subject to some regulation. First, each tier of government has its own set of competencies and its grants have to be related to one of them. Second, the recipient, when it manages the project (*maître d'ouvrage*) has to fund at least 20% of the investment. These two regulations were introduced by a national law in December 2010³, and the 20% has been applied since 2012⁴. Therefore, the period covered by my accounting data (2002-2011) is all the more interesting than it corresponds to a period without any of these regulations and when counties' discretion is not subject of these constraints.

The *M14* nomenclature, which is the official nomenclature for French municipal accounts, allows to distinguish between formula-based and discretionary grants. It contains the exhaustive list of all investment grants a municipality can receive.⁵ Investment grants is the sum of all accounts of class 1022 and 13. In this aggregate, discretionary investment grants are related to accounts of class 131 and 132. Formula-based grants correspond to all other accounts. Data on the detailed decomposition of this nomenclature for each municipality (see Section 4) allow to investigate the allocation of discretionary grants.

Discretionary investment grants represent 57 euros per head at the national level in 2011, which is equivalent to 11.8% of municipal investment revenues. Counties are the main providers of these funds. Grants from this tier account for 18 euros per head and 3.8% of total municipal investment revenues. 42.4% of municipal investment expenditures are funded by surplus from the operating budget.⁶ The remaining share of municipal investment expenditures is funded by loans and assets transfers.

³*Loi 2010-1563 du 16 décembre 2010.*

⁴*Article L1111-10 du Code général des collectivités locales.*

⁵The whole documentation of this nomenclature can be found here : <https://www.collectivites-locales.gouv.fr/m14>

⁶French local governments are not allowed to fund operating expenditures through loans. The operating section has to be either in equilibrium, or in surplus. In case of a surplus, it can be used to fund investment spending.

Table 1: Investment revenues of French municipalities in 2011

Category of revenue	Amounts (in € per head)	Share in investment revenues
Operating section surplus ^a	203	42.4%
Loans	100	20.9%
Formula-based investment grants	65	13.6%
Discretionary investment grants	57	11.8%
<i>from counties</i>	18	3.8%
<i>from provinces</i>	9	1.8%
<i>from the Central State</i>	11	2.2%
<i>from others</i> ^b	19	4.0%
Assets transfers ^c	54	11.3%
TOTAL	479	100.0%

Source: DGFIP (French Ministry of Economy and Finance).

The first column of this table represents the sum of each category of investment revenue over all French municipalities in 2011, divided by the total French population of this same year. The second column represents for each category of revenue the ratio between the amount of the first column and the sum of investment revenues at the national level.

Investment grants correspond to the sum of all accounts of class 1022 and 13 in the *M14* nomenclature. In this aggregate, discretionary investment grants are related to accounts of class 131 and 132. Formula-based investment grants correspond to all other accounts in this aggregate.

^a The budget of each municipality is made of an operating section and an investment one. The national law requires the operating section to be either in equilibrium, or in surplus. In case of a surplus, it can be used to fund investment spending. The item *operating section surplus* refers to this category of investment revenue.

^b Grants from inter-municipal communities and the European Union.

^c Transfers of capital assets due to transfers of competencies.

2.2 Elections of local incumbents

This subsection presents briefly electoral rules in application over the period of analysis for municipal and county elections. The municipal ballot is a two-rounds list system. It consists in electing members of the municipal council (*le conseil municipal*). Then, the mayor is elected by and among municipal councillors. Each list has an official leader called “the head of the list” (*la tête de liste*). In towns with more than 3,500 inhabitants, the winning list is attributed half of the seats in the municipal council. The remaining half is attributed in a proportional way among all lists (including the winning one).⁷ Therefore, there is always a list which is assigned the absolute majority of seats, and the elected mayor is most of the time the head of the winning list. Municipal elections take place every 6 years (with no term-limit). They are postponed by one year if a presidential

⁷Smaller municipalities have different municipal electoral rules and are excluded from the analysis. They represent 33,866 jurisdictions over 36,688 in 2011, but only 35% of total French population and 14% of the population living in a municipality where the mayor is a county councillor.

election has to take place the same year. In the sample period, municipal incumbents come from two elections : one in 2001 and another in 2008.

In county elections, citizens vote for members of their county council (*conseil départemental*). Then, county councillors vote for their executive chief (*le président du conseil départemental*). Each county is divided into different constituencies (*cantons*). There is a first-past-the-post vote in each constituency, with two rounds. In 2011, there were 4,046 county councillors for 100 counties over the national territory. County incumbents have a 6-years term (with no term-limit). County elections take place every three years. Each of these ballots consists in renewing half of county councillors in each county. A county ballot is postponed by one year if a presidential election has to take place the same year. In the sample period, county incumbents come from four elections: 1998, 2001, 2004 and 2008. This voting system is such that all county incumbents in a given county do not have the same political affiliation. That is why county councillors who have concurrently a municipal office can be aligned or non-aligned with the county.

It is possible that no political party or coalition benefits from the absolute majority of seats in the county council. In the analysis of this paper, a county council is attributed the political affiliation of its executive chief. This assumption is not too strong for two reasons. First, the executive chief of the council may have an additional power on the council's policy. Secondly, she can be considered as being representative of the majority of county incumbents, as she is elected by councillors.

2.3 Multiple office-holding

Multiple office-holding (*le cumul des mandats*) is a common practice in France. This paper focuses on the impact of being concurrently a mayor and a county councillor. This is the most frequent case of multiple office-holding for mayors: 25% of mayors of municipalities with more than 3,500 inhabitants are county councillors over the period of analysis (2002-2011), while the analogous share for province councillors and Members of National Parliament is respectively 7% and 11.3%. The French Law imposes some restrictions on multiple office-holding. Applicable restrictions during the period covered in this paper can be summed up as follows: (i) a politician cannot be councillor at the three local tiers of government; (ii) a politician cannot be the executive chief at two or more tiers of government; (iii) a Member of National Parliament cannot hold more than one local office at the same time; (iv) a Member of National Parliament cannot be a deputy at the European Parliament. Regarding these rules, mayors who have concurrently an office in a county council cannot have any other political responsibility. Moreover, they cannot be the executive chief of both councils. In 2014, some additional restrictions came into force: members of the national and the european parliament are not allowed anymore to have an executive role in any local council. However, they can still sit as local councillors. This reform does not affect the kind of multiple office-holding this paper focuses on.

Multiple office-holding is subject of a recurrent debate in France, which highlights pros and cons of this practice. Supporters' main argument is related to political skills. In county councils, as well

as in province councils and the National Parliament, each incumbent has to represent a specific subdivision of the territory managed by the assembly, through electoral constituencies. Then, a politician who has concurrently a seat at a lower tier of government is likely to have better insight on the constituency she has to represent. However, having different responsibilities at the same time may prevent multiple office-holders to devote enough time to each of them (see [Bach 2011](#), [François & Weill 2014](#) and [François & Weill 2016](#) for recent empirical investigations on this issue).

3 Identification

The identification of the multiple offices effect is subject to endogeneity issues. Mayors who also have an office in a county council may have more experience in the management of a local jurisdiction, as having responsibilities at the county level is usually a more advanced stage in political career processes than having only a municipal office. This endogeneity issue related to experience can bias estimates in both directions. On the one hand, mayors with more experience may have better skills to manage their municipal budget, without any need for external fundings. On the other hand, more experienced politicians may have better information on grant's application and the ways to get successful in these processes. Moreover, politicians who managed to get a seat of county councillor in addition to their municipal office may have got such a position through more skills to win elections (e.g. the ability to convince people). These skills can also be used to get more grants.

To deal with this issue, I apply a RDD which consists in comparing municipalities whose mayor barely won last county elections with those whose mayor barely lost. For this, the sample has to be restricted to municipalities whose mayor was candidate in the last county elections. The assignment variable is the margin of victory of mayors in this last county ballot. This margin is defined as the difference between the mayor's share of votes in the last round and the share of votes got by her first challenger (the second candidate if the mayor won, or the winner if she lost). This empirical strategy implicitly assumes that this margin of victory is a good proxy for unobservable factors responsible for endogeneity issues. This assumption seems reasonable. As county ballots are first-past-the-post votes, the assignment variable is the *individual* margin of victory of the mayor, and not the margin related to a list of candidates. Then, this variable is a good way to capture mayors' characteristics: mayors who barely won and mayors who barely lost last county elections are assumed to be comparable. This setting consists in exploiting quasi-experimental variations in the multiple office-holding status under the assumption that county elections are subject to some randomness ([Lee & Lemieux, 2010](#)).

Still, the multiple office-holding effect may have not the same effect according to political alignment, since a mayor who has concurrently a seat at the county level may not have the same influence depending on whether she is part or not of the majority group in the county council. A solution is to add heterogeneity in the RDD setting, by estimating the Heterogeneous Local Average Treatment Effect (HLATE) of multiple office-holding according to alignment, following the methodology proposed by [Becker et al. \(2013\)](#). The equation associated to this HLATE specification can be written

as follows:

$$\ln(G_{it}) = [\alpha_1 g(MV_{it}) + \beta_1 AL_{it}] + MO_{it} * [\alpha_2 g(MV_{it}) + \beta_2 AL_{it}] + \delta X_{ie-1} + \mu_c + \rho_t + \epsilon_{it} \quad (1)$$

G_{it} is the amount of discretionary investment grants per capita received by municipality i from its county during year t . MO_{it} is the multiple office-holding dummy. AL_{it} is the alignment dummy of municipality i in year t . MV_{it} is the margin of victory of the mayor in last county elections. This margin is positive when MO_{it} is equal to one, and negative when MO_{it} is equal to zero. μ_c denotes county council fixed effects (a county council being represented by a given county between two years of county elections). This term captures all unobservable factors related to the grants policy of each county council and which have the same effect on each municipality of a same county. ρ_t represents year fixed effects. This term captures all factors affecting the amount of grants of every municipality in the same way during a given year (e.g. macroeconomic shocks which have a national impact on public finance and then on intergovernmental grants).⁸ $g(\cdot)$ denotes a polynomial function of the margin MV_{it} . α_1 and α_2 denote vectors of coefficients on this polynomial on both sides of the cut-off.

X_{ie-1} is a vector of control variables. The subscript $e - 1$ means that for a given year, the covariate is assigned the value of the year before last elections (municipal or county ones).⁹ These lagged terms prevent to have covariates affected by the multiple office-holding dummy.¹⁰ The set of covariates included in regressions is described in Section B in Appendix. Since intergovernmental transfers allocated to the different municipalities in a given county may not be independent, standard errors are clustered at the county council level (one cluster per county per period between two county elections).

Focusing on mayors who were candidate in last county elections, and especially on those who barely won or lost this ballot aims at having treated and control municipalities as comparable as possible. Two different methods are implemented. First, Equation (1) is estimated through global cubic polynomial functions, taking the whole support of MV_{it} .¹¹ Second, Equation (1) is estimated through local linear regressions: $g(\cdot)$ is defined as a linear function and a restricted support of MV_{it}

⁸I do not include municipal fixed effects, since 80% of municipalities have a constant status regarding multiple office-holding over the whole period of the panel

⁹For example, for the year 2005, covariates are assigned their value of 2003. See Figure 1 for a picture of the timing between municipal and county elections.

¹⁰Even if the RDD gives consistent estimates without any additional controls (as it consists in exploiting quasi-experimental variations), including covariates allows to increase the precision of the estimation. This is especially relevant in this case, where covariates are defined before the random assignment, and may be correlated with G_{it} after this assignment (Lee & Lemieux, 2010).

¹¹Following Lee & Lemieux (2010), I choose the best polynomial order between the first and the third by applying a goodness-of-fit test. Higher polynomial orders are not considered, since results with such parametric functions may be highly sensitive to outliers. This test consists in adding on the right-hand-side of Equation (1) (with no covariate) dummies for each bin in the assignment variable. Then, the joint significance of these dummies is tested. The idea is to add a higher polynomial order until bin dummies are no longer jointly significant. The bin width I use is 1.25. Because these bins are always jointly statistically significant for every polynomial order between the first and the third, cubic polynomial functions are considered as the best choice.

(centered to zero) is considered. This estimation is made for different restricted supports.

One caveat of the HLATE specification is external validity. Therefore, the different Regression Discontinuity (RD) estimates are compared with simple OLS estimations (Equation (1) without the terms in MV_{it}) on two different samples : the full baseline sample, and a sample of treated and control municipalities coming from a propensity score matching procedure. These estimations aim at checking that RD results are not specific to the sample of mayors who were candidate in last county elections.

4 Data and sample

4.1 Data and variable definitions

Information on discretionary investment grants municipalities receive from counties comes from a dataset never used before on detailed financial accounts of all French municipalities over the period 2002-2011. This dataset is provided by the General Broad of Public Finance (DGFIP, French Ministry of Economy and Finance). It contains for each year and each municipality the detailed decomposition of the *M14* nomenclature, which is the official nomenclature of French municipal accounts. In other words, this database provides for each year and municipal jurisdiction a detailed decomposition of their revenues and expenditures, as well as all municipal decisions and characteristics regarding local taxation.

Information on multiple office-holding and political alignment comes from electoral data provided by the French Home Office. Data on municipal elections cover the 2001 and 2008 ballots, for municipalities over 3,500 inhabitants. Municipalities below this threshold have specific electoral rules and are not included in the sample. Municipalities with more than 3,500 inhabitants correspond to 65% of the total French population in 2011 and 86% of the population living in municipalities where the mayor is a county councillor. In other words, the scope of the analysis is “urban” municipalities, not the whole structure of the French territory. A similar restriction is also made in [Lévêque \(2019\)](#) and [Cassette & Farvaque \(2014\)](#), and a more important restriction is made in [Foucault et al. \(2008\)](#). Smaller municipalities must be very different from a political point of view, especially in terms of party membership and the implication of a political affiliation, which is crucial when one considers political alignment. As an illustration, 78% of municipalities with less than 3,500 inhabitants have a mayor without any party or coalition of party (i.e. labelled *Divers droite*, *Divers gauche*, *Divers* or *Autres* in electoral files), while this proportion is 35% for municipalities of the sample¹². These small jurisdictions would have need a special investigation and are out of the scope of the paper.

Electoral data provide for each municipal ballot the score of each list, its political affiliation, as well as names (first name and surname) of the head of each list and the mayor. Data on county elections cover all ballots between 1998 and 2008. They give for each electoral constituency the score of each candidate, her political affiliation and her names. These data also provide the political

¹²Statistics produced using a historical census of mayors provided by the French Home Office.

affiliation of the executive chief of the county council. From these databases, I define a multiple office-holding dummy equal to one if the mayor of the municipality, or the head of the winning list in last municipal elections is concurrently a county councillor. Since data on elections do not directly contain information on multiple office-holding, I do a matching between names of municipal incumbents and names of county councillors. To be considered as a multiple office-holder, the mayor or the head of the winning list must have the same identity as the county incumbent who was elected in the constituency in which the municipality is located.¹³ For brevity, mayors and heads of the winning list are referred to the unique denomination of “mayors” from now on.

For political alignment, two definitions are considered. First, I define a dummy equal to one if the political affiliation of the winning list in last municipal elections is the same as the political affiliation of the county council’s executive chief, where five political affiliations are defined: left-wing, right-wing, far-left, far-right, and “others”. Section A in Appendix gives a detailed description of these affiliations. Considering such “broad political affiliations” seems relevant regarding the institutional scheme of county councils (see Sub-section 2.2), where going beyond parties’ frontiers may be necessary to have a leading group.

Second, I define a political alignment dummy where alignment is considered in terms of political party. This dummy is equal to one if the mayor is of the same political party than the county council’s executive chief. Considering this second measure of alignment is key, as intergovernmental grants allocation can be driven by strategic behaviours of political parties (Curto-Grau et al., 2018). Information on mayor’s political party through municipal electoral data is often unknown, because a high share of lists do not report any specific party (see Section A in Appendix). However, party of affiliation is an information of good quality in county elections data. Therefore, it is possible to know the political party of affiliation of all mayors who were candidate in last county elections. I define political alignment in terms of political party only for this sub-sample.

In the whole paper, the default definition of alignment is the first one (in terms of broad affiliation). The second one is always specifically denominated when it is used.

Other datasources are used in order to have a complete set of control variables. The French census, provided by the French National Institute of Statistics and Economic Studies (INSEE), gives for each municipality information on total population, its age structure, and its characteristics regarding employment over the period 2000-2011. The *RFL* dataset (*dispositif Revenus Fiscaux Localisés des ménages*) gives information on the residents’ income distribution of each municipal jurisdiction for each year between 2000 and 2011. The *REI* database gives for each municipality and each year from 2002 a complete information on local taxation (local tax bases, local tax rates, etc.). Each variable in euros are deflated using the consumption price index with base 2010 provided by INSEE.

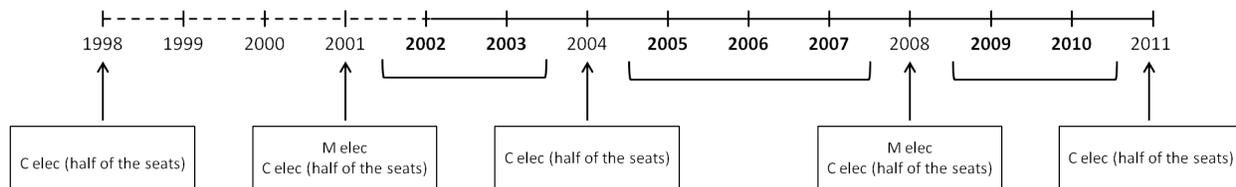
¹³While data on 2008 municipal elections provide the names of mayors and heads of winning lists with no missing value, information related to the 2001 municipal ballot only contains names of mayors, with some missing cases. Municipalities with no information on names for any municipal incumbent are excluded from the analysis. These municipal jurisdictions represent 2.7% of the initial sample.

4.2 The sample

The analysis focuses on municipalities with more than 3,500 inhabitants, due to data on electoral outcomes (see sub-section 4.1).¹⁴ Municipalities or counties labelled as “others” in terms of broad political affiliation (see Section A in Appendix and Table A1 for a description) are dropped from the sample, as their alignment status cannot be defined properly. Only 5% of observations are excluded through this restriction. Years of municipal and county elections are also dropped from the sample, since it is not possible to know for these years whether a given grant is related to the former or the new local council.¹⁵

Figure 1 describes the timing between the two kinds of elections of interest. The continuous line represents the period covered by data on intergovernmental grants and the dashed line represents the period out of these data but during which there were elections in which some incumbents of the sample period were elected. Years in bold and brackets are those included in the sample. Each bracket represents a “political cycle”, defined as a period between two elections (municipal *or* county ones). The value of MO_{it} , AL_{it} and MV_{it} are by definition constant over a political cycle. Since years of elections are excluded from the sample, the value of MO_{it} , AL_{it} and MV_{it} are always determined previously to the value of the dependent variable G_{it} .

Figure 1: The timing between municipal and county elections



This figure shows the timing of municipal elections (denoted “M elec”) and county elections (denoted “C elec”). Each county election consists in renewing half of the seats. The dashed line represents years out of the sample period but during which there were elections in which some incumbents of the sample were elected. Years in bold and brackets are those included in the baseline sample.

This figure illustrates the fact that a politician can get in a situation of multiple office-holding through three different timings. County elections in which a mayor was elected can be before last municipal elections, after, or at the same time. Multiple office-holding is defined without disentangling between these different kinds of timing. The timing through which a politician gets a multiple office-holder position may capture some information on her characteristics. For instance, the simultaneity of two elections can influence the choice of a given politician to run or not for elections. Moreover, the simultaneity of elections can induce higher turnout (Garmann, 2016).

¹⁴Paris, Lyon and Marseille are not included. Paris is at the same time a municipality and a county. Lyon and Marseille are divided in *arrondissements* (i.e. geographic sectors). Each *arrondissement* has its own mayor. As accounting data do not give the information at the *arrondissement* level, these two specific municipalities are not included in the analysis.

¹⁵Municipal and county elections occur in March. During years of elections, the budget of local governments is usually voted before the ballot (although the deadline imposed by the law for voting the budget is always after it). However, the new council can make modifications on the voted budget during the whole year. Since the database on grants only gives the aggregate amount of transfers received by a municipality during a given year, it is not possible to decompose grants allocated during years of elections between those received under the former council, and those received under the new one.

Therefore, the distribution of MV_{it} may be different for different county elections. It is therefore key to implement the HLATE specification for different intervals of MV_{it} , in order not to overweight some ballots.

After sample restrictions mentioned above, the baseline sample is made of 15,106 observations, which correspond to 2,158 municipalities per year on average. This sample is described in Column (1) of Table 2. Municipalities receive on average 21 euros per head of discretionary investment grants from the county, while they spend on average 519 euros per head each year for their investment. Standard deviations suggest high variability in the amount of discretionary investment grants from the county. 25% of mayors of the baseline sample are multiple office-holders, 60% are aligned and 17% are aligned multiple office-holders. This illustrates the high heterogeneity in the joint status of multiple office-holding and alignment. This feature is key if one wants to identify the heterogeneous effect of multiple office-holding according to political alignment.

Column (2) of Table 2 provides descriptive statistics on the “HLATE sample” (i.e. the sample restricted to municipalities whose mayor was candidate in last county elections). This is the sample used for global cubic polynomial estimations. Column (3) presents descriptive statistics when one focuses on observations where MV_{it} is lower than h^* . h^* denotes the optimal bandwidth computed following [Imbens & Kalyanaraman \(2012\)](#). This bandwidth, recommended for local linear regressions, is the result of a trade-off between bias minimization (which tends to decrease h^*), and precision maximization (which tends to increase it). This bandwidth is equal to 10.9 percentage points. It is lower than other recent studies implementing RDDs on close electoral races ([Curto-Grau et al., 2018](#); [Lara & Toro, 2019](#); [Bracco et al., 2015](#)). This is a good signal on the feasibility of this estimation procedure with these data. Finally, Column (4) present the sample coming from a propensity score procedure, using the “nearest neighbour matching” method. This procedure is applied to the sample of Column (1). I collapse this database in one observation per municipality. The probit of the propensity score matching explains a dummy equal to one if the municipality has a multiple office-holder as mayor at least once over the period of analysis. The covariates of this probit model are the variables described in Section B in Appendix (considering the value of these variables at the beginning of the period). Through this probit, I apply a propensity score matching procedure without replacement, with a caliper of 0.05. All summary statistics of this procedure are in Table A3 in Appendix, and illustrate the similarity in terms of covariates between the treatment and the control group after this matching.

Focusing on municipalities whose mayor was candidate in last county elections gives a sample of 4,918 observations. This sample restriction leads mechanically to an increase in the share of multiple office-holders, compared to the baseline sample. 73% of mayors who are candidates in county elections are successful in this ballot. However, when one moves close to the cut-off, this proportion gets close to 50 percentage points. This comforts the validity of the HLATE specification.

Finally, Table 2 reveals differences in terms of covariates between the different samples. This is not an issue for identification. What is needed for regression discontinuity settings is the similarity of municipalities close to the cut-off (see sub-section 5.1 for validity tests).

Table 2: Descriptive statistics

	<i>Baseline sample</i>	<i>HLATE Sample</i>		<i>Propensity score</i>
	(1)	Whole sample (2)	$ MV_{it} \leq h^*$ (3)	<i>matching</i> (4)
Discretionary investment grants per head from counties (in euros)	20.72 (32.14)	21.54 (32.02)	19.48 (29.85)	20.14 (29.59)
Total municipal investment spending per head (in euros)	518.92 (381.98)	528.41 (357.55)	518.02 (337.58)	530.17 (381.72)
Multiple office-holding	0.25 (0.43)	0.73 (0.44)	0.58 (0.49)	0.37 (0.48)
Alignment	0.60 (0.49)	0.60 (0.49)	0.53 (0.50)	0.61 (0.49)
(Alignment)*(Multiple office-holding)	0.17 (0.37)	0.48 (0.50)	0.33 (0.47)	0.25 (0.43)
Municipal area (in km ²)	22.04 (27.73)	23.76 (36.66)	23.78 (22.66)	23.60 (30.96)
Total population (in thousands of inhab.)	13.62 (21.72)	12.97 (18.00)	11.89 (12.66)	15.28 (24.28)
% pop ≤ 20 (in percentage point)	25.21 (3.47)	24.82 (3.35)	25.08 (3.26)	24.86 (3.41)
% pop ≥ 60 (in percentage point)	22.30 (6.31)	23.07 (6.30)	22.53 (6.08)	22.94 (6.28)
Households' median income per UC ^a (in thousands of euros)	18.64 (4.01)	18.33 (3.67)	18.35 (3.42)	18.12 (3.79)
Unemployment rate (in percentage point)	10.45 (4.18)	10.63 (4.04)	10.26 (3.93)	11.02 (4.12)
Left-wing municipality	0.48 (0.50)	0.49 (0.50)	0.40 (0.49)	0.50 (0.50)
Nb. observations	15106	4918	1708	10209

Each column of this table is related to a specific sample. For each of these samples, the table provides means of different variables, with standard deviations in parentheses. For the HLATE sample (sample restricted to municipalities whose mayor was candidate in last county elections), these descriptive statistics are presented for different restrictions on MV_{it} . h^* denotes the optimal bandwidth defined by [Imbens & Kalyanaraman \(2012\)](#). h^* is equal to 10.9 percentage points. The last column describes the sample coming from the propensity score matching procedure described in the text. See Table A3 in Appendix for more outcomes related to this procedure. Alignment is defined in terms of the five broad political affiliations described in Section A in Appendix.

^a UC : unit of consumption. It is a measure of household size: one unit for the first adult, 0.5 unit per other individual who is 14 or more and 0.3 unit per child below 14.

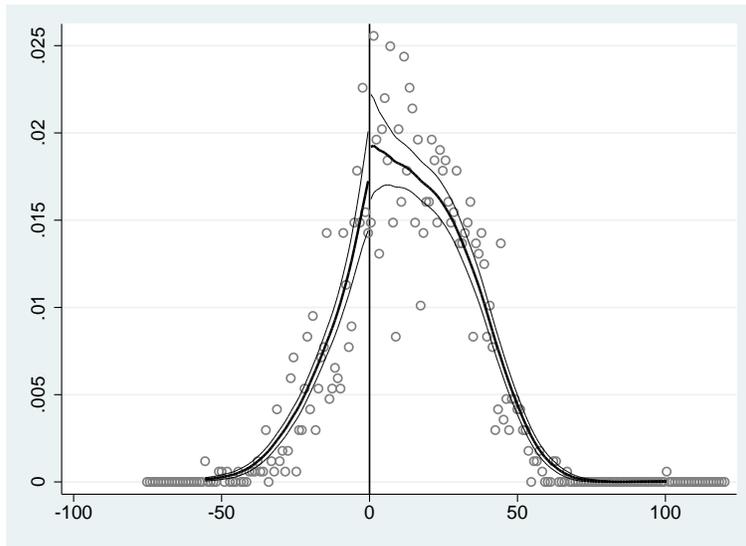
5 Results

Before presenting the results on the effect of multiple office-holding, validity tests on the HLATE specification are implemented (sub-section 5.1). Then, sub-section 5.2 presents the main results, going from simple OLS specifications to the HLATE estimation, and show different robustness checks.

5.1 Validity tests

Conventional validity tests for regression discontinuity settings and HLATE specifications are implemented. For regression discontinuity settings, two validity conditions have to be filled. First, the density of the assignment variable has to be continuous at the cut-off. A discontinuity would mean that the assignment variable can be manipulated. This condition is tested by using the procedure defined by McCrary (2008). Figure 2 shows the density of the margin of victory of mayors in last county elections. The null hypothesis of zero discontinuity at the cut-off cannot be rejected according to this test.

Figure 2: McCrary test for no discontinuity at the cut-off



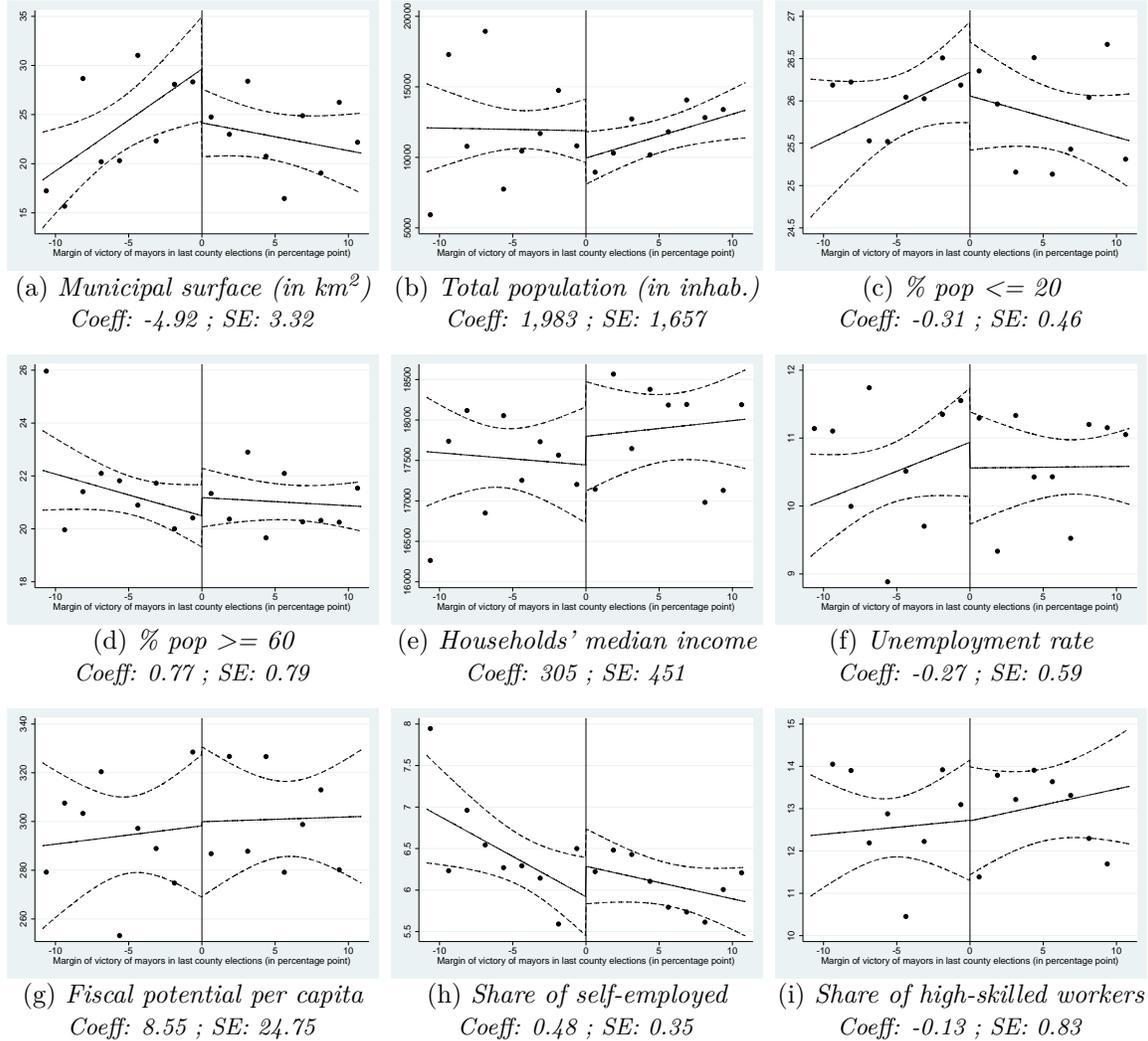
This figure shows the density of the assignment variable MV_{it} , and 95% confidence intervals from the test of no discontinuity at the cut-off, following McCrary (2008). MV_{it} is constant over a political cycle for a given municipality. Therefore, only one observation per municipality per political cycle is used for this test. The log difference in height at the cut-off is 0.08, with a standard error of 0.12.

Second, municipalities just below and above the cut-off have to be similar. One way to test for this is to check for no discontinuity in observables at the cut-off. Figure 3 shows for a battery of covariates the fitted linear curve on both sides of the cut-off, on the interval defined through the optimal bandwidth. Covariates used for these tests are described in Section B in Appendix. The null hypothesis of no discontinuity at the cut-off cannot be rejected for any covariate.

Introducing heterogeneity in a RDD setting through a HLATE specification needs an additional validity test. The political alignment dummy, which defines the heterogeneous dimension of the

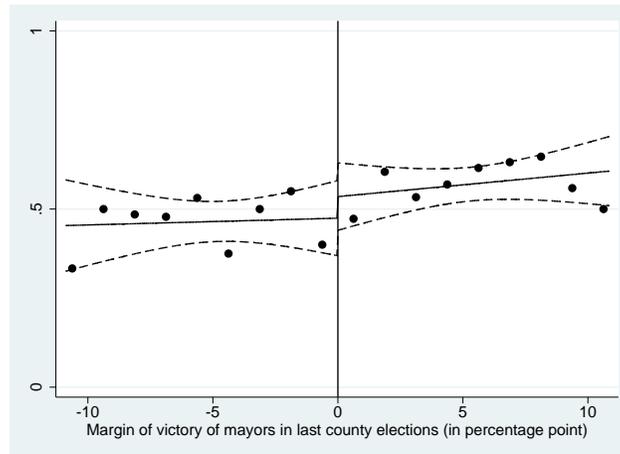
treatment effect, has to be continuous at the cut-off. Figure 4 provides a test of this condition. It shows the fitted local linear estimations of Equation (1), where AL_{it} and $MO_{it} * AL_{it}$ are dropped from the right-hand side and where AL_{it} is defined as the dependent variable. This figure highlights no evidence of a discontinuity in the alignment status at the cut-off.

Figure 3: Balance in covariates around the cut-off



These figures show the fitted local linear estimations of Equation (1) (with no covariate, no fixed effect and no alignment dummy) by tacking different covariates as a dependent variable. The optimal bandwidth h^* is equal to 10.9 percentage points. As covariates and the margin of victory in last county elections are constant for a given municipality over a political cycle, this estimation is run by keeping only one observation per municipality per political cycle. Dashed lines represent 95% confidence intervals. Each dot represents the average of the covariate in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25. Covariates used as dependant variables are described in Section B in Appendix. *Coeff* denotes the estimated coefficient of the discontinuity at the cut-off and *SE* the standard error of this coefficient.

Figure 4: Political alignment according to the margin of victory of mayors in last county elections



This figure shows the fitted local linear estimations of Equation (1) (with no covariate, no fixed effect and no alignment dummy on the right-hand side) where the dependent variable is the alignment dummy. The optimal bandwidth h^* is equal to 10.9 percentage points. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix. As the alignment dummy and the margin of victory in last county elections are constant for a given municipality over a political cycle, this estimation is run by keeping only one observation per municipality per political cycle. The point estimate on the multiple office-holding dummy from the represented regression (i.e. the effect at the cut-off) is 0.069, with a robust standard error of 0.072. Dashed lines represent 95% confidence intervals. Each dot represents the average of the alignment dummy in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25.

5.2 Main results

Table 3 presents the main results of this paper. Columns (1) and (2) come from the estimation of a simple OLS specification on the full baseline sample, without any regression discontinuity design (i.e. estimation of Equation (1) without the terms in MV_{it} , on the sample described in Column (1) of Table 2). Column (1) shows point estimates without any control, while Column (2) shows results after the inclusion of the whole set of control variables, year fixed effects and county council fixed effects. Both columns point out a positive and significant impact of being aligned and a multiple office-holder. However, multiple office-holding without alignment does not seem to matter in the allocation of intergovernmental grants. As complementary evidence, Table A4 in Appendix shows point estimates on all covariates.

These point estimates may be contaminated from the endogeneity issues raised in Section 3. Columns (3) to (6) present results from the HLATE estimations, which aim at tackling these issues. Columns (3) and (4) present global cubic polynomial specifications, while Columns (5) and (6) present local linear regressions with the optimal bandwidth h^* . Consistently with OLS estimates, these results suggest robust evidence of a targeting in favour of aligned multiple office-holders. In other words, mayors who have concurrently a seat in the county council and are part of the leading coalition of this upper political assembly get on average more grants than other mayors. However, multiple office-holding per se does not seem to have any significant impact on intergovernmental transfers.

Figures 5a to 5c present a graphical picture of this main result. They represent the fitted local linear curves of Equation (1) with no covariate, no fixed effects and no alignment dummy in the specification. Figure 5a shows the local average treatment effect of multiple office-holding,

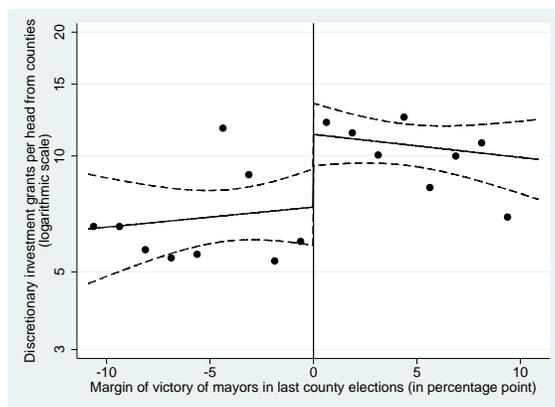
while Figures 5b and 5c show evidence when the sample is restricted to aligned and non-aligned municipalities respectively. Figure 5a shows a positive jump of grants once one moves from the left to the right-hand side of the cut-off. While a positive jump is still observed for aligned municipalities in Figure 5b, there is no such evidence when the sample is restricted to non-aligned jurisdictions. These figures suggest a positive and significant effect of multiple office-holding which is concentrated on aligned municipalities. Figures A1a to A1c in Appendix provide analogous graphical evidence from global cubic polynomial estimations.

Table 4 presents robustness checks related to the HLATE specification. Columns (1) to (4) present global polynomial estimations with alternative orders. Columns (5) to (8) present local linear regressions taking half and double the optimal bandwidth. These additional tests aim at looking at whether the main results are sensitive to the sample considered (the interval of MV_{it}) and to the specification (the shape of the function $g(\cdot)$). The key point of this table is the robustness of the main finding, which is a targeting in favour of aligned multiple office-holders but no effect on non-aligned ones.

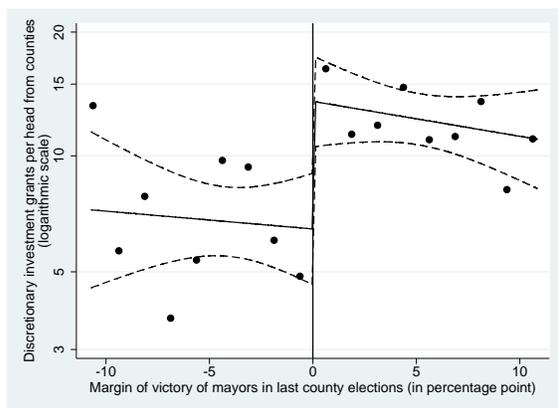
Considering HLATE estimates of Table 3, the estimated elasticity of grants according to the interaction between multiple office-holding and alignment varies from 0.28 to 0.44 across the different specifications. There is no clear answer on which specification is the best. On the one hand, global polynomial estimations rely on the whole available information, while local linear regressions may be statistically more demanding. On the other hand, global polynomials use observations far from the cut-off, and high orders used to take it into account can lead to sensitive results. Regarding Tables 3 and 4, it seems that in our case, local linear regressions are relatively sensitive to the bandwidth and the set of control variables, while results from global polynomial estimations are relatively stable. Therefore, 0.28 is considered as the key elasticity, which is moreover a conservative value among HLATE specifications.

As a last robustness check, Table 5 shows estimates from a simple OLS specification on the sample coming from the propensity score matching procedure described in Section 4. Whatever the set of controls, the findings remain the same qualitatively, and the size of the coefficients on the interaction between alignment and multiple office-holding are comparable to those in Table 3. These results, combined with the first OLS results (Columns (1) and (2) of Table 3), illustrate the fact that the main findings are robust to alternative samples, and not specific to the HLATE sample made of mayors who were candidate in last county elections.

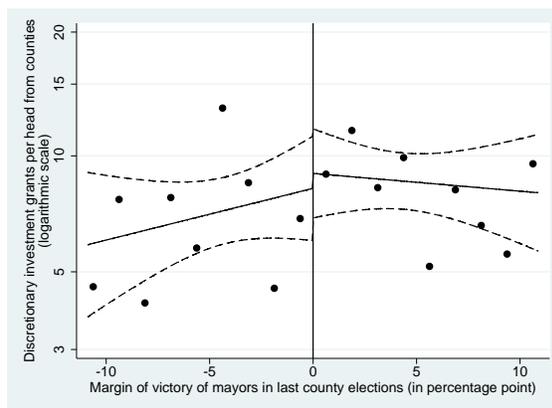
Figure 5: Fitted curves - Regression discontinuity on multiple office-holding



(a) *Whole Sample*



(b) *Aligned municipalities*



(c) *Non-aligned municipalities*

These figures show the fitted local linear estimations of Equation (1) (with no covariate, no fixed effect and no alignment dummy). The bandwidth used in local linear regressions is the optimal one as defined by Imbens & Kalyanaraman (2012). Figure 5a comes from the “HLATE sample” restricted on the optimal bandwidth (i.e. the sample described in Column (3) of Table 2). This optimal bandwidth h^* is equal to 10.9 percentage points. Figure 5b comes from the estimation on the same sample restricted to aligned municipalities, while Figure 5c focuses on non-aligned municipalities. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix. The vertical axis represents the logarithm scale of the amount of discretionary investment grants received from the county. Labels on this axis are in euros. Dashed lines represent 95% confidence intervals. Each dot represents the average amount of grants in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25.

6 Mechanisms

Results point out the fact that aligned multiple office-holders receive significantly more grants than other municipalities, while non-aligned ones do not seem to benefit from such a targeting. Alignment may play a role for two reasons. First, it may be correlated with the municipality and the county sharing the same political platform and promoting the same kind of local public investment. Therefore, alignment could be a necessary condition for multiple office-holders to benefit from more transfers. Second, The concentration of the multiple offices effect on aligned municipalities may be explained by opportunistic behaviours of the county leading coalition, related to reelection concerns.

Regarding these two potential mechanisms, looking only at alignment in terms of broad political affiliation may be not sufficient to have a good insight of what plays a role in this grant targeting. If political platform is relevant, then aligned municipalities in terms of party may be even more targeted, since the similarity in terms of preferences may be higher between two incumbents of the same party than two incumbents of the same coalition. If results are driven by reelection concerns, then distinguishing between alignment in terms of coalition or party is key. On the one hand, the county’s executive chief could prefer to target more incumbents of her party in order to increase her party’s capital or to favour the core of her coalition (Curto-Grau et al., 2018). On the other hand, it could be strategic to favour other parties of the coalition, because they are less loyal and more “swing”.

Table 6 shows point estimates where alignment in terms of political party, as well as its interaction with multiple offices, are included in the regression. This table shows results from the global polynomial estimation of the HLATE, since it is the main specification, related to the 0.28 elasticity. By construction, aligned municipalities in terms of party are aligned in terms of coalition. Then, coefficients on alignment in terms of party show additional effects on these specific aligned municipalities, relatively to all aligned jurisdictions in terms of coalition. This table shows no additional effect of alignment in terms of party, whatever the set of control variables and fixed effects. In other words, being in the same coalition or in the same political party does not seem to make a difference for multiple office-holders in the amount of discretionary grants they receive.

However, the role of these two concepts of alignment may be different according to the structure of the county council and the degree of political competition. Panels A and B of Table 7 show two tests in this sense. Panel A investigates the heterogeneity of the main finding according to the share of seats in the county council held by the leading coalition (see the table for descriptive statistics on this variable). This panel shows regressions where all terms related to alignment and multiple office-holding are interacted with this share. Panel B shows results of similar estimations, where the heterogeneity dimension is the share of seats in the county council held by the leading party. Alignment in this regression is alignment in terms of party. Tables A5 and A6 in Appendix show the detail of all coefficients of these two sets of regression.

Panel A shows that the targeting in favour of aligned multiple office-holders is higher when the share of seats held by the leading coalition is lower. This result suggests that this targeting is a strategic behaviour of county leaders to keep their leading position after next elections. A

decrease of one standard deviation of this share increases the coefficient on aligned multiple office-holding by 0.22, which is almost the value of the baseline effect of 0.28. This illustrates the key importance of this interaction term. However, no interaction effect is observed according to the share of the leading party in the county council, as shown in Panel B. In addition to provide a first suggestion of counties' opportunistic behaviour, these additional results reinforce the fact that the relevant alignment dimension is in terms of coalition, not in terms of party. This points out the key importance for elected incumbents to go beyond political parties to make a coalition in county councils.

Panel C makes a similar heterogeneity exercise, taking as the heterogeneous dimension the share of the municipal population in the total population of the constituency (*canton*) in which the mayor was candidate for county elections. The higher this share is, the closer are the set of voters for municipal elections and the set of voters for county elections. If the mayor is also the county councillor, then political stakes behind municipal and county elections must be similar where this share is high. If in addition, the mayor is aligned, then her municipality may be highly relevant to target for the county leading coalition. Panel C shows indeed that the effect on aligned multiple office-holders is higher when this share increases (see Table A7 in Appendix for the detail of all coefficients). An increase of one standard deviation of this share increases the coefficient on aligned multiple office-holders by 0.12, which is almost half of the baseline effect.

Finally, Panel D takes as a heterogeneity dimension the margin of victory of the mayor in last municipal elections, defined by the difference between her share of votes and the one of her first challenger. This Panel highlights a positive relationship between the targeting in favour of aligned multiple office-holders and political competition for the municipal ballot (see Table A8 in Appendix for the detail of all coefficients). A decrease by one standard deviation of this margin of victory leads to an increase of the coefficient on alignment and multiple office-holding by 0.12. If an aligned multiple office-holder faces higher uncertainty to be reelected, it could be more relevant to support her local investment.

To sum up, the observed targeting in favour of mayors having a seat in the leading coalition of the county council can be explained (at least partially) by reelection concerns of counties' leaders. Counties' leaders tend to favour mayors who are their colleague in the county's majority group in order to help them being reelected and to keep the leading group of the county council unchanged after next elections. Indeed, the targeting towards aligned multiple office-holders is observed especially in counties whose leading coalition has higher uncertainty in its reelection. Consistently with this motive, grants seem to be targeted especially in municipalities in which municipal and county elections look similar, so that the political reward of a municipal investment may also play for county elections. Transfers seem also to be targeted in municipalities where the aligned multiple office-holder faces more political competition. Overall, this behaviour is a good strategy for counties' leaders under two conditions, which both receive some support in the existing literature: (i) intergovernmental grants and investment spending help for reelection (Bracco et al., 2015; Cassette et al., 2013); (ii) winning a local election helps for winning upper elections (Cutts, 2014).

Table 3: The heterogeneous effect of multiple office-holding according to alignment

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>					
	<i>OLS</i> (1)	<i>OLS</i> (2)	<i>HLATE</i> <i>GPR</i> (3)	<i>HLATE</i> <i>GPR</i> (4)	<i>HLATE</i> <i>LLR</i> (5)	<i>HLATE</i> <i>LLR</i> (6)
Multiple office-holding	-0.00 (0.06)	0.07 (0.05)	0.31* (0.16)	0.30** (0.15)	0.18 (0.16)	0.09 (0.17)
Alignment	0.06 (0.04)	0.08** (0.03)	0.13 (0.13)	0.03 (0.10)	-0.04 (0.14)	-0.18 (0.13)
(Alignment)*(Multiple office-holding)	0.32*** (0.07)	0.20*** (0.06)	0.28** (0.14)	0.28*** (0.11)	0.37* (0.19)	0.44** (0.18)
Bandwidth					10.92	10.92
Fixed effects and covariates ^a	No	Yes	No	Yes	No	Yes
Adjusted R-squared	0.01	0.27	0.02	0.29	0.03	0.29
Nb. Obs	15106	15106	4918	4918	1708	1708

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions” and *LLR* stands for “local linear regressions”. Columns (1) and (2) show results from a simple OLS specification, without any regression discontinuity setting (Equation (1) without the terms in MV_{it} , on the sample described in Column (1) of Table 2). Columns (3) and (4) show results from global cubic polynomial estimations of the HLATE (Equation (1) where $g(\cdot)$ is of degree three, on the sample described in Column (2) of Table 2). Columns (5) and (6) show results from local linear estimations of the HLATE (Equation (1) where $g(\cdot)$ is linear, on the sample described in Column (3) of Table 2). *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{te-1} .

Table 4: Robustness check : HLATE estimations

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>							
	GPR 1 st order (1)	GPR 1 st order (2)	GPR 2 nd order (3)	GPR 2 nd order (4)	LLR 2h* (5)	LLR 2h* (6)	LLR 0.5h* (7)	LLR 0.5h* (8)
Multiple office-holding	0.15 (0.12)	0.08 (0.11)	0.20 (0.13)	0.15 (0.13)	0.16 (0.13)	0.08 (0.12)	0.46** (0.22)	0.40 (0.31)
Alignment	0.14 (0.13)	0.03 (0.10)	0.13 (0.13)	0.04 (0.10)	0.10 (0.12)	-0.01 (0.11)	-0.11 (0.16)	-0.17 (0.19)
(Alignment)*(Multiple office-holding)	0.27* (0.14)	0.28*** (0.11)	0.28* (0.14)	0.28** (0.11)	0.30** (0.15)	0.34*** (0.12)	0.42** (0.21)	0.19 (0.26)
Fixed effects and covariates ^a	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R-squared	0.02	0.29	0.02	0.29	0.03	0.28	0.03	0.27
Nb. Obs	4918	4918	4918	4918	3035	3035	980	980

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions” and *LLR* stands for “local linear regressions”. Columns (1) to (4) show results from global polynomial estimations of the HLATE with alternative polynomial degrees. Columns (5) to (8) show results from local linear estimations of the HLATE, with alternative bandwidths. *h** denotes the optimal bandwidth defined by [Imbens & Kalyanaram \(2012\)](#), which is equal to 10.92 percentage points in our setting. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector $X_{i,e-1}$.

Table 5: Robustness check : Propensity score matching

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	(1)	(2)	(3)
Multiple office-holding	-0.031 (0.057)	0.003 (0.056)	0.060 (0.050)
Alignment	0.006 (0.049)	0.031 (0.048)	0.063 (0.043)
(Alignment)*(Multiple office-holding)	0.377*** (0.072)	0.325*** (0.070)	0.215*** (0.061)
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.01	0.08	0.27
Nb. Obs	10209	10209	10209

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections).

This table shows results from a simple OLS specification on the sample coming from the propensity score matching procedure (Equation (1) without the terms in MV_{it} , on the sample described in Column (4) of Table 2). See Table A3 in Appendix for more outcomes on this matching procedure. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

7 Conclusion

This paper brings new evidence on the politics of intergovernmental grants, by estimating the impact of multiple office-holding. Politicians having concurrently different seats in different tiers of government represent a common practice among developed countries. Using a new database on French local public accounts, I study this issue in the context of French urban municipalities and counties over the period 2002-2011. The aim is to estimate whether mayors who have concurrently a seat in a county council receive more grants from counties than other mayors. For identification, regression discontinuity techniques on close electoral races are implemented.

There is strong and robust evidence of a targeting in favour of aligned multiple office-holders. Mayors who have a seat at the county level and are in the county council leading group get on average 28% more grants than other mayors. However, there is no evidence that non-aligned multiple office-holders get on average more grants than other municipal incumbents. This result is robust to a battery of robustness checks. In particular, I ensure that this finding holds also for alternative identification strategies, and that it is not specific to sample restrictions needed for the regression discontinuity analysis.

Additional evidence suggest that this targeting in favour of aligned multiple office-holders is driven by opportunistic behaviours from counties' leaders. Indeed, this targeting is stronger where political competition is high in the county council. Moreover, this targeting is especially concentrated on municipalities in which municipal and county elections involve a similar set of voters. It

Table 6: Heterogeneity - Different kinds of alignment

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	<i>HLATE</i> <i>GPR</i> (1)	<i>HLATE</i> <i>GPR</i> (2)	<i>HLATE</i> <i>GPR</i> (3)
Multiple office-holding	0.313* (0.163)	0.290* (0.148)	0.300** (0.149)
Alignment	0.015 (0.164)	-0.073 (0.133)	-0.126 (0.128)
(Alignment)*(Multiple office-holding)	0.336* (0.171)	0.326** (0.154)	0.365** (0.150)
Alignment party	0.201 (0.160)	0.238 (0.145)	0.272* (0.143)
(Alignment party)*(Multiple office-holding)	-0.118 (0.176)	-0.068 (0.163)	-0.162 (0.159)
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.02	0.09	0.29
Nb. Obs	4918	4918	4918

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table shows results from global cubic polynomial estimations of the HLATE, where two alignment definitions are included in the estimation. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix. *Alignment party* is a dummy equal to one if the mayor and the county council executive chief are from the same political party.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

is also concentrated on aligned multiple office-holders who face more uncertainty in their reelection.

These results point out the important role multiple office-holding may have in the allocation of public transfers. This must have an impact on the geographical distribution of public infrastructures. Still, this impact on local facilities may be of different natures. Do additional grants of aligned multiple office-holders allow to improve investments which would have been made in any case? Or do they allow to create some infrastructures, which could not have been created without this funding? Moreover, which kind of infrastructures are related to these grants? Answering these questions would allow to have detailed data on grants applications, and on municipal projects. This data availability is key for transparency on public funding, and for future research in local public finance.

Table 7: Heterogeneity - Other political variables

<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>			
	<i>HLATE GPR (1)</i>	<i>HLATE GPR (2)</i>	<i>HLATE GPR (3)</i>
<i>Panel A: The share of seats in the county council held by the leading coalition</i>			
<i>Mean: 65.0 SD: 10.5</i>			
(Alignment)*(Multiple office-holding)*(interaction)	-0.022* (0.013)	-0.021* (0.012)	-0.022** (0.010)
<i>Panel B: The share of seats in the county council held by the leading party</i>			
<i>Mean: 37.3 SD: 17.8</i>			
(Alignment party)*(Multiple office-holding)*(interaction)	-0.004 (0.008)	-0.000 (0.007)	0.003 (0.007)
<i>Panel C: The share of the municipality in the county constituency population</i>			
<i>Mean: 45.9 SD: 24.4</i>			
(Alignment)*(Multiple office-holding)*(interaction)	0.013** (0.006)	0.013** (0.006)	0.005 (0.004)
<i>Panel D: The margin of victory of the mayor in municipal elections</i>			
<i>Mean: 23.7 SD: 16.5</i>			
(Alignment)*(Multiple office-holding)*(interaction)	-0.016* (0.009)	-0.016* (0.009)	-0.007 (0.006)
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table shows results from global cubic polynomial estimations of the HLATE. Each panel is related to a separate estimation. Each one corresponds to the estimation of Equation (1) where I add each term related to alignment or multiple office-holding interacted with a variable denoted *interaction*. These variables of interaction are described in the title of each panel. Their mean and their standard deviation are below the panel title. See the text for more explanations on these interaction variables. For better interpretation of coefficients, I take in regressions the deviation from the mean of the interaction variable rather than the interaction variable itself. In each estimation, only one definition of alignment is included: *Alignment for Panel A, Panel C and Panel D*, and *Alignment party for Panel B*. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix. *Alignment party* is a dummy equal to one if the mayor and the county council executive chief are from the same political party.

This table reports for each panel the coefficient on *(Alignment)*(Multiple office-holding)*(interaction)*, or on *(Alignment party)*(Multiple office-holding)*(interaction)*. Tables A5, A6, A7 and A8 in Appendix show all the coefficients of each panel.

^a Fixed effects and covariates include year fixed effects (μ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

References

- Alesina, A. & Ferrara, E. L. (2005), ‘Preferences for redistribution in the land of opportunities’, *Journal of Public Economics* **89**(5-6), 897 – 931.
- Alesina, A. & Giuliano, P. (2011), Preferences for redistribution, in A. B. Jess Benhabib & M. O. Jackson, eds, ‘Handbook of Social Economics’, North-Holland, chapter 4, pp. 93 – 131.
- Arulampalam, W., Dasgupta, S., Dhillon, A. & Dutta, B. (2009), ‘Electoral goals and center-state transfers: A theoretical model and empirical evidence from India’, *Journal of Development Economics* **88**(1), 103 – 119.
- Bach, L. (2011), ‘Politicians with many principals: Theory and evidence from France’. Manuscript available at <https://sites.google.com/site/laurentbach/>.
- Bach, L. (2012), *Faut-il abolir le cumul des mandats ?*, Rue d’Ulm.
- Banful, A. B. (2011), ‘Do formula-based intergovernmental transfer mechanisms eliminate politically motivated targeting? Evidence from Ghana’, *Journal of Development Economics* **96**(2), 380 – 390.
- Becker, S. O., Egger, P. H. & von Ehrlich, M. (2013), ‘Absorptive capacity and the growth and investment effects of regional transfers: A regression discontinuity design with heterogeneous treatment effects’, *American Economic Journal: Economic Policy* **5**(4), 29–77.
- Bracco, E., Lockwood, B., Porcelli, F. & Redoano, M. (2015), ‘Intergovernmental grants as signals and the alignment effect: Theory and evidence’, *Journal of Public Economics* **123**, 78 – 91.
- Brollo, F. & Nannicini, T. (2012), ‘Tying your enemy’s hands in close races: The politics of federal transfers in Brazil’, *American Political Science Review* **106**, 742–761.
- Cadot, O., Röller, L.-H. & Stephan, A. (2006), ‘Contribution to productivity or pork barrel? The two faces of infrastructure investment’, *Journal of Public Economics* **90**(6-7), 1133 – 1153.
- Cassette, A. & Farvaque, E. (2014), ‘Are elections debt brakes? evidence from french municipalities’, *Economics Letters* **122**(2), 314–316.
- Cassette, A., Farvaque, E. & Hericourt, J. (2013), ‘Two-round elections, one-round determinants? evidence from the french municipal elections’, *Public Choice* **156**, 563–591.
- Cox, G. W. & McCubbins, M. D. (1986), ‘Electoral politics as a redistributive game’, *The Journal of Politics* **48**(2), pp. 370–389.
- Curto-Grau, M., Solé-Ollé, A. & Sorribas-Navarro, P. (2018), ‘Does electoral competition curb party favoritism?’, *American Economic Journal: Applied Economics* **10**(4), 378–407.

- Cutts, D. (2014), ‘Local elections as a “stepping stone”: Does winning council seats boost the liberal democrats’ performance in general elections?’, *Political Studies* **62**(2), 361–380.
- Dahlberg, M. & Johansson, E. (2002), ‘On the vote-purchasing behavior of incumbent governments’, *American political Science review* **96**(01), 27–40.
- Dixit, A. & Londregan, J. (1998), ‘Fiscal federalism and redistributive politics’, *Journal of Public Economics* **68**(2), 153 – 180.
- Dubois, E., Leprince, M. & Paty, S. (2005), ‘Les déterminants politiques des choix fiscaux locaux’, *Revue de l’OFCE* **94**(3), 317–349.
- Ferreira, F. & Gyourko, J. (2009), ‘Do political parties matter? Evidence from U.S. cities’, *The Quarterly Journal of Economics* **124**(1), 399–422.
- Foucault, M. (2006), ‘How useful is the “cumul des mandats” for being re-elected? Empirical evidence from the 1997 French legislative elections’, *French Politics* **4**, 292 – 311.
- Foucault, M., Madies, T. & Paty, S. (2008), ‘Public spending interactions and local politics. Empirical evidence from French municipalities’, *Public Choice* **137**(1-2), 57–80.
- François, A. (2006), ‘Testing the baobab tree hypothesis: The “cumul des mandats” as a way of obtaining more political resources and limiting electoral competition’, *French Politics* **4**, 269 – 291.
- François, A. (2010), ‘Économie politique d’un plan de relance macroéconomique’, *Revue économique* **61**(4), 783–792.
- François, A. & Weill, L. (2014), ‘Le cumul de mandats locaux affecte-t-il l’activité des députés français?’, *Revue économique* **65**(6), 881–906.
- François, A. & Weill, L. (2016), ‘Does holding a local mandate alter the activities of deputies? Evidence from the French Assemblée Nationale’, *French Politics* **14**(1), 30–54.
- Frère, Q., Leprince, M. & Paty, S. (2013), ‘The impact of intermunicipal cooperation on local public spending’, *Urban Studies* pp. 1741–1760.
- Garmann, S. (2016), ‘Concurrent elections and turnout: Causal estimates from a german quasi-experiment’, *Journal of Economic Behavior & Organization* **126**, 167 – 178.
- Guengant, A. & Leprince, M. (2006), ‘Évaluation des effets des régimes de coopération intercommunale sur les dépenses publiques locales’, *Economie & prévision* **4**(175 - 176), 79–99.
- Helland, L. & Sørensen, R. J. (2009), ‘Geographical redistribution with disproportional representation: A politico-economic model of Norwegian road projects’, *Public Choice* **139**(1), 5–19.

- Imbens, G. & Kalyanaraman, K. (2012), ‘Optimal bandwidth choice for the regression discontinuity estimator’, *The Review of Economic Studies* **79**(3), pp. 933–959.
- Joanis, M. (2011), ‘The road to power: Partisan loyalty and the centralized provision of local infrastructure’, *Public Choice* **146**(1), 117–143.
- Johansson, E. (2003), ‘Intergovernmental grants as a tactical instrument: Empirical evidence from Swedish municipalities’, *Journal of Public Economics* **87**(5-6), 883 – 915.
- Kantorowicz, J. & Köppl-Turyna, M. (2019), ‘Disentangling the fiscal effects of local constitutions’, *Journal of Economic Behavior & Organization* **163**, 63 – 87.
- Kauder, B., Potrafke, N. & Reischmann, M. (2016), ‘Do politicians reward core supporters? Evidence from a discretionary grant program’, *European Journal of Political Economy* **45**, 39 – 56.
- Lara, B. & Toro, S. (2019), ‘Tactical distribution in local funding: The value of an aligned mayor’, *European Journal of Political Economy* **56**, 74 – 89.
- Larcinese, V., Rizzo, L. & Testa, C. (2006), ‘Allocating the US federal budget to the states: The impact of the president’, *Journal of Politics* **68**(2), 447–456.
- Lee, D. S. & Lemieux, T. (2010), ‘Regression discontinuity designs in economics’, *Journal of Economic Literature* **48**(2), pp. 281–355.
- Leprince, M. & Guengant, A. (2002), ‘Interactions fiscales verticales et réaction des communes à la coopération intercommunale’, *Revue économique* **53**(3), 525–535.
- Lévêque, C. (2019), ‘Political connections, political favoritism and political competition: evidence from the granting of building permits by French mayors’, *Public Choice* pp. 1–21.
- Levitt, S. D. & Snyder Jr, J. M. (1995), ‘Political parties and the distribution of federal outlays’, *American Journal of Political Science* **39**(4), 958–980.
- Lindbeck, A. & Weibull, J. W. (1987), ‘Balanced-budget redistribution as the outcome of political competition’, *Public Choice* **52**(3), 273–297.
- Litschig, S. (2012), ‘Are rules-based government programs shielded from special-interest politics? Evidence from revenue-sharing transfers in Brazil’, *Journal of Public Economics* **96**(11-12), 1047 – 1060.
- McCrary, J. (2008), ‘Manipulation of the running variable in the regression discontinuity design: A density test’, *Journal of Econometrics* **142**(2), 698 – 714.
- Migueis, M. (2013), ‘The effect of political alignment on transfers to Portuguese municipalities’, *Economics & Politics* **25**(1), 110–133.

- Rosenbaum, P. R. & Rubin, D. B. (1985), ‘Constructing a control group using multivariate matched sampling methods that incorporate the propensity score’, *The American Statistician* **39**(1), 33–38.
- Solé-Ollé, A. (2013), ‘Inter-regional redistribution through infrastructure investment: Tactical or programmatic?’, *Public Choice* **156**(1), 229–252.
- Solé-Ollé, A. & Sorribas-Navarro, P. (2008), ‘The effects of partisan alignment on the allocation of intergovernmental transfers. Differences-in-differences estimates for Spain’, *Journal of Public Economics* **92**(12), 2302 – 2319.
- Solé-Ollé, A. & Viladecans-Marsal, E. (2013), ‘Do political parties matter for local land use policies?’, *Journal of Urban Economics* **78**, 42 – 56.

Appendix

A Political alignment definition

A mayor and a county council are “aligned” if they share the same “political affiliation”. This section discusses the definition of the set of affiliations.

Two sets of affiliations can be defined. The first is the set of political parties. The second is a set of “broad political affiliations”, which aims at proxying the coalitions which can take place in a local council. Municipal elections follow a list system, which frequently bring different parties to run together. A county council is a sum of councillors elected individually, who have to elect an executive broad. The election of this broad may need a coalition between different parties. See sub-section 2.2 for institutional features of these two elections.

Table A1 shows the list of all political labels, as they are exactly in electoral data. More precisely, this table shows for municipal and county data the list of labels of winning candidates, and the share of each label among these winning candidates. For municipal elections, a candidate is a list. For county ones, a candidate is an individual.

In this table, I group all these labels into five categories, which appear in the left-hand column: right-wing, left-wing, far-right, far-left and “others”. I use these five categories to define an alignment dummy in terms of “broad political affiliations”. This dummy is constructed by confronting the category of the municipal winning list and the category of the county council executive chief (*président du conseil départemental*). The last column of the table shows the share of each label among county executive chiefs.

I also build a dummy of alignment in terms of political party. This dummy is equal to one when the party of the municipal winning list is the same as the party of the county executive chief. However, as illustrated by Table A1, many lists in municipal elections cannot be attributed a political party. This is consistent with the features of the municipal ballot, which is a list system. Then, it is highly challenging to construct a dummy of alignment in terms of party by relying on municipal electoral data.

However, the picture is different for county elections. This ballot is a first-past-the-post vote. Candidates are individuals. Therefore, party membership of candidates is more transparent, and frequently mentioned in county election data, as illustrated in Column (4) of Table A1. Still, some county councillors have no party affiliation (*DVD* and *DVG* labels), which can simply label candidates who have indeed no party affiliation in the facts. Therefore, to construct the alignment dummy in terms of political party, I allocate to a municipality the political label of the mayor in county elections, if the mayor was also candidate in these elections. This alignment dummy in terms of party is built on reliable political labels, but can be defined only for this subset of municipalities. This subset corresponds to the sample used for the HLATE estimate.

Table A1: Political affiliations

	<i>Municipal elections</i>		<i>County elections</i>		
	Label	Share	Label	Share	Share among executive chiefs
(1)		(2)	(3)	(4)	(5)
Right-wing	LDR : Liste de la droite	21.1%	UMP : Union pour un mouvement populaire	13.3%	28.7%
	LDD, LDVD : Liste divers droite	22.0%	RPR : Rassemblement pour la République	7.4%	1.8%
	LMAJ : Liste de la majorité	7.6%	UDF : Union pour la démocratie française	7.0%	15.0%
	LMC : Liste majorité centriste	0.8%	DVD : Divers droite	17.6%	4.4%
			M-NC : Nouveau Centre	0.3%	
			DL : Démocratie libérale	1.5%	0.5%
			CPNT : Chasse, pêche, nature et traditions	0.1%	
		RPF : Rassemblement pour la France	0.3%		
Left-wing	LGA, LUG : Liste de gauche	29.3%	SOC : Parti socialiste	33.0%	42.7%
	LSOC : Liste du parti socialiste	4.3%	RDG, PRG : Parti radical de gauche	2.1%	3.9%
	LVE, LVEC : Liste Verts	0.1%	VEC : les Verts	0.5%	
	LCOM : Liste communiste	0.7%	COM : Parti communiste	5.9%	2.1%
	LDVG, LDG : Liste divers gauche	10.8%	MDC : Mouvement des Citoyens	0.2%	0.2%
			DVG : Divers gauche	9.0%	0.7%
Far-right	LEXD : Liste extrême droite		EXD : Extrême droite	0.1%	
	LFN : Liste Front national	0.1%	FRN, FN : Front national	0.1%	
	LMN : Liste Mouvement National Républicain	0.1%			
Far-left	LXG, LEXG : Liste extrême gauche	0.1%	EXG : Extrême gauche	0.2%	
Others	LDV, LAUT : Liste divers, autre liste	1.6%	AUT, DIV : autres, divers	0.7%	
	LEC : Liste écologiste	0.1%	ECO : Ecologistes (autres que les Verts)	0.1%	
	LRG, LREG : Liste régionaliste	0.3%	REG : Régionalistes	0.2%	
	LCMD : Liste centre-MoDem	0.4%	UDFD : UDF-MODEM	0.4%	
	LGC : Liste gauche-centristes	0.6%			

Column (1) shows the list of political labels as they are in municipal electoral data. Column (2) shows the share of each label among winning lists over the period of analysis. Column (3) shows the list of political labels as they are in county electoral data. Column (4) shows the share of each label among winning candidates (one observation per constituency) over the period of analysis. Column (5) shows this share among county executive chiefs. All these labels are grouped into five categories, which are in the left-hand side column of this table.

B Control variables

Covariates included in regressions are the following:

- *Total municipal population.* Some municipal investments may need a critical size in terms of inhabitants to be funded. In such cases, counties may allocate more investment grants to smaller municipalities. This is why one can expect a negative sign of the coefficient on total municipal population. This variable comes from the French national census. In order to have an harmonized measure across time, I rely on the *Données harmonisées de recensement*, provided by INSEE. Information from these data is available for 1999, 2006 and 2011. I assume that municipal population varies in a linear way in a given municipality between two of these years.
- *Municipal area.* Municipal area may increase the cost per inhabitant of transportation facilities. Since municipalities are in charge of local roads, one can expect that municipal jurisdictions with a higher area given their population receive more investment grants. This variable comes from the *GEOFLA* database.
- *Share of people aged 20 and less.* An important part of municipal facilities are intended to young people (e.g. primary schools, cultural activities). This variable comes from the same source than total municipal population, and is constructed with the same assumptions.

- *Share of people aged 60 and over.* An important part of municipal facilities are intended to elderly people (elderly care policies). This variable comes from the same source than total municipal population, and is constructed with the same assumptions.
- *Median income of residents per unit of consumption.*¹⁶ As one of the competencies of counties is social policy, one can expect that county councillors will decide to allocate more grants to lower income municipalities. This variable comes from the *RFL* dataset (*dispositif Revenus Fiscaux Localisés des ménages*), which gives information on the residents' income distribution of each municipal jurisdiction for each year between 2000 and 2011.
- *Municipal unemployment rate.* This variable is another proxy of social policy needs. It comes from the French national census. In order to have an harmonized measure of unemployment across time, I rely on the *Données harmonisées de recensement*, provided by INSEE. Information from these data is available for 1999, 2006 and 2011. I assume that the unemployment rate is constant in a given municipality between two of these years.
- *Fiscal potential per capita of the municipality.* The fiscal potential of a municipality is the sum of all its local tax bases multiplied by the average tax rate over the French territory. In other words, it is the amount of fiscal revenues a municipality could get if it applies tax rates municipalities decide on average.¹⁷ This variable comes from the *REI* database, which gives for each municipality and each year from 2002 a complete information on local taxation (local tax bases, local tax rates, etc.).
- *Share of self-employed in the population in employment.* This variable aims at better capturing local preferences of voters for redistribution. [Alesina & Ferrara \(2005\)](#) show that self-employed have a lower preference for redistribution, which could be explained by a lower risk-aversion or a more “individualistic behaviour” of this category of worker. This variable comes from the same source and is constructed with the same assumptions as the municipal unemployment rate.
- *Share of high-skilled workers in the population in employment.* This variable is used as a proxy for higher education. [Alesina & Giuliano \(2011\)](#) show that higher education has a negative impact on preferences for redistribution, which can be interpreted as the result of expectations of social mobility due to higher education. This variable comes from the same source and is constructed with the same assumptions as the municipal unemployment rate.
- *Left-wing municipality dummy.* Although there is mixed evidence on whether political parties per se matter on local policies ([Ferreira & Gyourko \(2009\)](#), [Solé-Ollé & Viladecans-Marsal](#)

¹⁶The number of consumption units is a measure of households size used by INSEE. It takes into account economies of scale in consumption needs according to household's size. The rule is the following: one unit for the first adult, 0.5 unit per other individual who is 14 or more and 0.3 unit per child below 14.

¹⁷This variable could be seen as being redundant with median income. However, French local taxes are mainly based on real estate, with tax reductions and exemptions for low-income households. Then, municipalities with the same median income can have different values of fiscal potential.

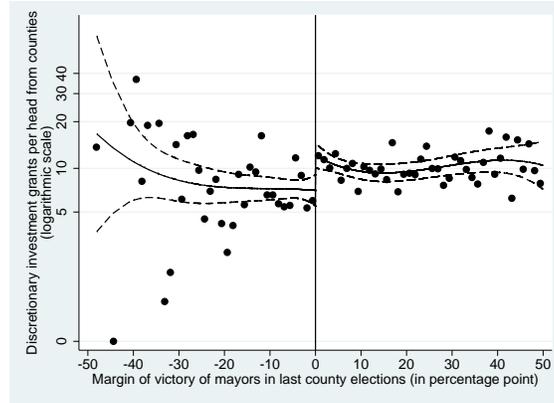
(2013)), this dummy can in any case be useful since some components of voters preferences for public investment may be correlated with the political affiliation of the mayor. This variable comes from municipal electoral data.

- *A dummy for each status of inter-municipal cooperation.*¹⁸ Although there is mixed evidence on the impact of inter-municipal cooperation on municipal spending (Frère et al. (2013), Guengant & Leprince (2006), Leprince & Guengant (2002)), one could expect that municipalities with a higher degree of cooperation will undertake less investment, as a result of the delegation to the community. This variable comes from the *REI* database.

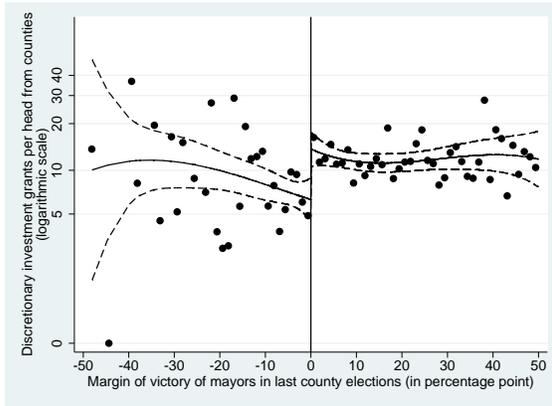
¹⁸Although being in such a community has been mandatory for every municipality since 2013, this was not the case during the period covered by data used in this paper (the share of municipalities which are in a community moves from 73.3% in 2002 to 95.5% in 2011.). Municipalities which decided to cooperate had to choose between different status of inter-municipal cooperation, which differ in the number of competencies municipalities delegate to the community. These different status of cooperation are important for the investigation of the allocation of investment grants received by municipalities, as the degree of cooperation may be an important factor of investment expenditures municipalities keep in their scope. The higher the degree of cooperation of a status (i.e. the number of delegated competencies), the higher the requested degree of urbanisation of the group of municipalities to benefit from this status. During the period of analysis of this paper, there were four status of inter-municipal community. They can be listed from the lowest to the highest degree of cooperation as follows: *communauté de communes* (CC), *communauté d'agglomération* (CA), *communauté urbaine* (CU), and *syndicats d'agglomération nouvelle* (SAN). Requests on the degree of urbanisation are defined according to population. For instance, to cooperate through a CA, a group of municipalities has to count at least 50,000 inhabitants, and to be organized around one or more center-municipalities with more than 15,000 inhabitants.

C Additional figures

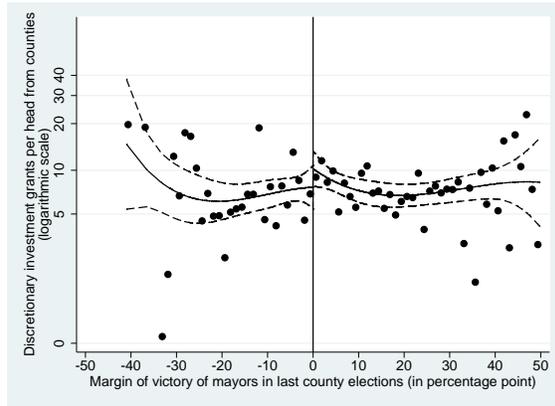
Figure A1: Robustness check: Fitted curves with global polynomial estimations



(a) *Whole Sample*



(b) *Aligned municipalities*



(c) *Non-aligned municipalities*

These figures show fitted global cubic polynomial estimations of Equation (1) (with no covariate, no fixed effect and no alignment dummy). The whole support of $MV_{i,t}$ is used for these estimations. Figure A1a comes from the estimation on the whole sample (i.e. the sample described in Column (2) of Table 2). Figure A1b comes from the estimation on the same sample restricted to aligned municipalities, while Figure A1c focuses on non-aligned municipalities. *Alignment* is defined in terms of the five broad political affiliations described in Section A in Appendix. The vertical axis represents the logarithm scale of the amount of discretionary investment grants received from the county. Labels on this axis are in euros. Dashed lines represent 95% confidence intervals. Each dot represents the average amount of grants in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25.

D Additional tables

Table A2: Revenues of French municipalities in 2011

Category of revenue	Amounts (in € per head)	Share in operating revenues	Share in investment revenues	Share in total revenues
<i>Operating section</i>				
Local taxes	713	60.1%	.	48.8%
Formula-based operating grants	300	25.3%	.	20.5%
Other operating revenues ^a	173	14.6%	.	11.8%
TOTAL operating revenues (1)	1186	100.0%	.	81.1%
<i>Investment section</i>				
Surplus of the operating section ^b (2)	203	.	42.4%	13.9%
Loans	100	.	20.9%	6.9%
Formula-based investment grants	65	.	13.6%	4.4%
Discretionary investment grants	57	.	11.8%	3.9%
<i>from counties</i>	18	.	3.8%	1.2%
<i>from provinces</i>	9	.	1.8%	0.6%
<i>from the Central State</i>	11	.	2.2%	0.8%
<i>from others^c</i>	19	.	4.0%	1.3%
Assets transfers ^d	54	.	11.3%	3.7%
TOTAL investment revenues (3)	479	.	100.0%	32.8%
TOTAL municipal revenues : (1)+(3)-(2)	1462	.	.	100.0%
<i>Used for operating spending : (1)-(2)</i>	983	.	.	67.2%
<i>Used for investment spending : (3)</i>	479	.	.	32.8%

Source: DGFIP (French Ministry of Economy and Finance).

The first column of this table represents the sum of each category of investment revenue over all French municipalities in 2011, divided by the total French population of this same year. The second (respectively the third) column represents for each category of revenue the ratio between the amount of the first column and the sum of operating revenues (respectively the sum of investment revenues) at the national level. The last column represents for each category of revenue its sum at the national level over the total national amount of municipal revenues. Investment grants correspond to the sum of all accounts of class 1022 and 13 in the *M14* nomenclature. In this aggregate, discretionary investment grants are related to accounts of class 131 and 132. Formula-based investment grants correspond to all other accounts in this aggregate.

^a “Other operating revenues” mainly contain fees and sales.

^b The budget of each municipality is made of an operating section and an investment one. The national law requires the operating section to be either in equilibrium, or in surplus. In case of a surplus, it can be used to fund investment spending. The item *operating section surplus* refers to this category of investment revenue.

^c Grants from inter-municipal communities and the European Union.

^d Transfers of capital assets due to transfers of competencies.

Table A3: Summary of the propensity score matching procedure

Nb. of matched treated municipalities	836
Nb. of treated municipalities out of the common support	6
Nb. of matched non-treated municipalities	836
Pseudo R2 probit before matching	0.029
Pseudo R2 probit after matching	0.001
p>chi2 probit before matching	0.000
p>chi2 probit after matching	0.998
Median bias before matching ⁵	9.7
Median bias after matching ⁵	2.0

The method used is the “nearest neighbour matching without replacement”, with a caliper of 0.05. The matching procedure is based on a probit model, using as explanatory variables all covariates listed in Section B in Appendix. See sub-section 4.2 for more details on the procedure.

The median bias before and after matching are median absolute standardized bias as defined by Rosenbaum & Rubin (1985). The “standardized bias” between the treated and the control group for a given covariate x is defined as: $100 \cdot \frac{\bar{x}_1 - \bar{x}_0}{\sqrt{\frac{1}{2}(V_1(x) + V_0(x))}}$, where \bar{x}_1 (respectively \bar{x}_0) is the mean of the covariate among treated (respectively untreated) units, while $V_1(x)$ (respectively $V_0(x)$) is the variance among treated (respectively untreated) observations. The median absolute standardized bias is the median of the absolute value of this statistics across the different covariates.

Table A4: OLS regressions

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>	
	(1)	(2)
Multiple office-holding	-0.00 (0.06)	0.07 (0.05)
Alignment	0.06 (0.04)	0.08** (0.03)
(Alignment)*(Multiple office-holding)	0.32*** (0.07)	0.20*** (0.06)
log(Municipal surface in km ²)		0.12*** (0.02)
log(Total population)		-0.12*** (0.02)
% pop <=20 (in percentage point)		-0.00 (0.01)
% pop >=60 (in percentage point)		0.01 (0.01)
log(Median income of residents per UC ^a)		-0.70*** (0.23)
Unemployment rate (in percentage point)		-0.00 (0.01)
Share of self-employed (in percentage point)		0.02** (0.01)
Share of high-skilled workers (in percentage point)		0.00 (0.00)
log(Fiscal potential per capita)		-0.03 (0.04)
Left-wing municipality		0.08** (0.03)
CC ^b		-0.01 (0.05)
CA ^b		-0.22*** (0.05)
CU or SAN ^b		-0.47*** (0.08)
Fixed effects and covariates ^c	No	Yes
Adjusted R-squared	0.01	0.27
Nb. Obs	15106	15106

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections).

This table presents the same results as Columns (1) and (2) of Table 3, and shows point estimates for all covariates described in Section B in Appendix.

^a UC : unit of consumption. It is a measure of household size: one unit for the first adult, 0.5 unit per other individual who is 14 or more and 0.3 unit per child below 14.

^b These variables are dummies for each status of inter-municipal cooperation (see Section B in Appendix for more details).

^c Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

Table A5: Heterogeneity: The share of seats in the county council held by the leading coalition

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	<i>HLATE</i> <i>GPR</i> (1)	<i>HLATE</i> <i>GPR</i> (2)	<i>HLATE</i> <i>GPR</i> (3)
Multiple office-holding	0.314* (0.164)	0.287* (0.148)	0.323** (0.151)
Alignment	0.156 (0.126)	0.089 (0.101)	0.051 (0.094)
(Alignment)*(Multiple office-holding)	0.269* (0.141)	0.311*** (0.116)	0.255** (0.106)
Multiple office-holding*(<i>interaction</i>)	0.003 (0.008)	0.004 (0.009)	0.011 (0.008)
Alignment*(<i>interaction</i>)	0.024** (0.011)	0.024** (0.010)	0.019** (0.009)
(Alignment)*(Multiple office-holding)*(<i>interaction</i>)	-0.022* (0.013)	-0.021* (0.012)	-0.022** (0.010)
<i>interaction</i>	-0.008 (0.008)	-0.012 (0.008)	
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.03	0.09	0.29
Nb. Obs	4918	4918	4918

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table presents the same results as *Panel A* of Table 7, and shows coefficients on every terms related to alignment and multiple office-holding.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

Table A6: Heterogeneity: The share of seats in the county council held by the leading party

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	<i>HLATE GPR</i> (1)	<i>HLATE GPR</i> (2)	<i>HLATE GPR</i> (3)
Multiple office-holding	0.387** (0.168)	0.370** (0.154)	0.384** (0.153)
Alignment party	0.235* (0.126)	0.195* (0.117)	0.197* (0.110)
(Alignment party)*(Multiple office-holding)	0.098 (0.142)	0.137 (0.126)	0.057 (0.117)
Multiple office-holding*(<i>interaction</i>)	0.002 (0.005)	0.003 (0.005)	0.006 (0.004)
Alignment (party)*(<i>interaction</i>)	0.004 (0.006)	-0.001 (0.006)	-0.005 (0.006)
(Alignment party)*(Multiple office-holding)*(<i>interaction</i>)	-0.004 (0.008)	-0.000 (0.007)	0.003 (0.007)
<i>interaction</i>	-0.004 (0.006)	-0.003 (0.005)	
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.02	0.10	0.29
Nb. Obs	4755	4755	4755

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table presents the same results as *Panel B* of Table 7, and shows coefficients on every terms related to alignment and multiple office-holding. The lower number of observations, compared to baseline results, is related to counties whose executive chiefs have no party of affiliation. For these counties, the share of seats in the county council held by the leading party is not defined.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

Table A7: Heterogeneity: The share of the municipality in the county constituency population

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	<i>HLATE</i>	<i>HLATE</i>	<i>HLATE</i>
	<i>GPR</i>	<i>GPR</i>	<i>GPR</i>
	(1)	(2)	(3)
Multiple office-holding	0.303* (0.157)	0.298** (0.145)	0.319** (0.150)
Alignment	0.117 (0.114)	0.052 (0.101)	0.036 (0.099)
(Alignment)*(Multiple office-holding)	0.277** (0.130)	0.303*** (0.115)	0.269** (0.108)
Multiple office-holding*(<i>interaction</i>)	-0.005 (0.005)	-0.004 (0.004)	-0.001 (0.002)
Alignment*(<i>interaction</i>)	-0.007 (0.005)	-0.006 (0.005)	-0.001 (0.003)
(Alignment)*(Multiple office-holding)*(<i>interaction</i>)	0.013** (0.006)	0.013** (0.006)	0.005 (0.004)
<i>interaction</i>	-0.001 (0.005)	-0.001 (0.004)	
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.03	0.09	0.29
Nb. Obs	4912	4912	4912

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table presents the same results as *Panel C* of Table 7, and shows coefficients on every terms related to alignment and multiple office-holding.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .

Table A8: Heterogeneity: The margin of victory of the mayor in municipal elections

	<i>Dependent variable: discretionary investment grants per head from counties (log of)</i>		
	<i>HLATE</i>	<i>HLATE</i>	<i>HLATE</i>
	<i>GPR</i>	<i>GPR</i>	<i>GPR</i>
	(1)	(2)	(3)
Multiple office-holding	0.381** (0.158)	0.371** (0.144)	0.361** (0.156)
Alignment	0.228* (0.136)	0.187 (0.120)	0.116 (0.105)
(Alignment)*(Multiple office-holding)	0.185 (0.149)	0.206 (0.132)	0.191* (0.115)
Multiple office-holding*(<i>interaction</i>)	0.013* (0.007)	0.012* (0.006)	0.003 (0.003)
Alignment*(<i>interaction</i>)	0.016** (0.008)	0.017** (0.008)	0.009* (0.005)
(Alignment)*(Multiple office-holding)*(<i>interaction</i>)	-0.016* (0.009)	-0.016* (0.009)	-0.007 (0.006)
<i>interaction</i>	-0.008 (0.005)	-0.007 (0.005)	
Covariates	No	Yes	Yes
Fixed effects ^c	No	No	Yes
Adjusted R-squared	0.03	0.10	0.30
Nb. Obs	4480	4480	4480

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses are clustered at the county council level (one cluster per county per period between two county elections). *GPR* stands for “global polynomial regressions”.

This table presents the same results as *Panel D* of Table 7, and shows coefficients on every terms related to alignment and multiple office-holding. The lower number of observations, compared to baseline results, is related to municipalities where there is only one candidate in municipal elections. For these municipalities, the margin of victory in municipal elections is not defined.

^a Fixed effects and covariates include year fixed effects (ρ_t), county council fixed effects (μ_c), and covariates represented by the vector X_{ie-1} .