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Parties, Regression Discontinuity Design**



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Political Colleagues Matter: The Impact of Multiple Office-Holding on Intergovernmental Grants

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Abstract

This paper brings new evidence on the politics of intergovernmental grants. I focus on multiple office-holding (i.e. whether a local incumbent who has concurrently a seat at an upper layer of government gets more funds from this layer). By using a new panel database on French local governments' accounts, I focus on grants counties allocate to municipalities. For identification, I rely on close electoral races. I find that aligned multiple office-holders (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. Evidence on the heterogeneity of this effect suggests that grantors' information on potential recipients, as well as local incumbents' access to upper layers politicians, are key determinants in the allocation of intergovernmental transfers.

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

JEL Codes: D72, D73, H27, H77

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1 Introduction

Local governments play an important role in providing public goods, and rely on intergovernmental grants for their funding. Among OECD countries, decentralized spending represented between 6% and 62% of public expenditures in 2012, while intergovernmental grants represented between 11% and 71% of local revenues.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 \(2012\)](#).² This kind of intergovernmental ties implies a direct access of local incumbents to upper councils which offer local grants. It also implies a lower asymmetry of information between grantors and these local incumbents relatively to others, which may be key in the allocation of intergovernmental transfers ([Besfamille, 2004](#)).

This paper aims at investigating the impact of this multiple office-holding practice on the allocation of intergovernmental grants, by focusing on intergovernmental ties between French municipalities and counties 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.

Given that I focus on political ties between municipalities and counties, my 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. For identification, I rely on Regression Discontinuity techniques in close electoral races. In order to identify the impact of multiple office-holding, I compare 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 party than the upper leading coalition or not). Because being in the upper leading group or not may impact the influence of an incumbent on the council's decisions, alignment has to be considered jointly with multiple office-holding. For this purpose, I jointly estimate the impact of multiple office-holding and political alignment by estimating for multiple office-holding the Heterogeneous Local Average Treatment Effect (HLATE) defined in [Becker et al. \(2013\)](#). This method consists in incorporating the interaction between multiple office-holding and political alignment in the regression discontinuity

¹See the OECD Fiscal Decentralisation Database:
<http://www.oecd.org/ctp/federalism/oecdiscaldecentralisationdatabase.htm>

²83% 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.

setting.

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 my findings. This result is robust to a battery of robustness checks related to the empirical specification, or to sample splitting according to the political affiliation of the county. Evidence that aligned multiple office-holders benefit from more grants while non-aligned ones do not is key. It suggests no role of information related to grants allocation. Discretionary investment grants are allocated through calls for project. Then, it is possible that multiple office-holders simply get more grants for their municipality because they have more information on grants application processes. The absence of evidence of a targeting in favour of non-aligned multiple office-holders is in tension with this channel.

This targeting in favour of aligned multiple office-holders is of key importance, as it is related to two alternative mechanisms which have never been emphasized to my knowledge in the literature on intergovernmental transfers. First, mayors who have concurrently a seat in the majority group of the county council may take advantage of their direct access to the county council to favour their municipality, by convincing their colleague in the county majority group to give more funds to their jurisdiction. By making grants of their municipality increase, these mayors may increase their probability of reelection. Second, additive grants allocated to aligned multiple office-holders can be the result of the asymmetric information issue grantors face in their decisions. County councillors may have an imperfect knowledge about the quality of municipal incumbents. Given the collective cost of this information setting (Besfamille, 2004), county councillors of the leading group may prefer to allocate more funds to their colleague in this group, as they may have better knowledge on their quality and higher monitoring power over them. Although I cannot disentangle these two channels, I provide a test for the validity of these two stories. Since these two mechanisms are related to advantages aligned multiple office-holders benefit from their position compared to other mayors, the targeting in favour of these mayors may decrease according to the degree of competition between aligned multiple office-holders in the county. Then, I interact the effect on aligned multiple office-holders with this degree of competition, measured by the share of aligned multiple office-holders among mayors in the county. Findings are in line with these two alternative explanations, as estimates suggest a decreasing and significant effect on aligned multiple office-holders according to this interaction variable.

Favouring aligned multiple office-holders can also be a strategic behaviour for members of the county council leading group to be reelected. Helping a member of this group to keep her seat at the municipal level through more grants may help her to be reelected in the county council as well, and then to make the current leading group more likely to keep his position in the county council. Since this effect may be stronger if competition in county elections is higher, I interact the effect on aligned multiple office-holders by the share of seats held by the majority group in the county

council. Results are in tension with this channel related to county councillors vote-seeking, as there is no evidence of heterogeneous targeting in favour of aligned multiple office-holders according to electoral competition at the county level.

These results are key regarding the existing literature, as they highlight mechanisms never investigated before in the literature on the impact of intergovernmental links on intergovernmental transfers. This existing 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. (2014) for Spain, Arulampalam et al. (2009) for India, Brollo & Nannicini (2012) for Brazil, Migueis (2013) for Portugal and Bracco et al. (2015) for Italy. 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 sense, and show that focusing on direct links between politicians of different governmental tiers reveals other mechanisms underlying the politics of intergovernmental grants.

Still, in order to provide a benchmark regarding this existing literature and to provide a complete picture of political forces underlying intergovernmental grants allocation, I also estimate the impact of political alignment per se. For identification, I follow Brollo & Nannicini (2012), Migueis (2013), Bracco et al. (2015), and Curto-Grau et al. (2014) by applying a Regression Discontinuity Design (RDD) which consists in comparing municipalities where the first aligned candidate won in last municipal elections with municipalities where she barely lost. Findings do not suggest any average impact of political alignment. This result is in tension with all previous empirical findings. However, they have to be considered with caution, as the French political context constraints to consider alignment in terms of broad political affiliation instead of political parties. Despite this limitation, this evidence highlights some doubts on the key role of political alignment, and put direct links between politicians of different tiers at the center of the politics of intergovernmental grants.

This paper follows a large literature on the politics of intergovernmental grants. 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.³ This paper brings new knowledge in this literature, by showing that in addition to local political support, direct links

³Evidence 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.

between politicians of different tiers of government matter.

This paper also brings new insight into the literature on the politics of the allocation of federal or central grants between electoral constituencies. A first set of papers investigates the impact of Congress committees membership on the allocation of grants, and consists in looking at whether members of Congress who have a seat in a committee which makes proposals on the allocation of federal funds manage to favour their electoral constituency. [Knight \(2005\)](#) and [Knight \(2008\)](#) provide evidence of such an impact, contrary to [Berry et al. \(2010\)](#). This strand of research is to some extent close to the investigation of the impact of multiple office-holding, since the idea is to analyse the influence of politicians who have a beneficial position in the grants allocation process. Another set of papers investigates the impact of the majority party in the US Congress on the allocation of federal funds. [Albouy \(2013\)](#) finds that electoral constituencies represented by the majority party at Congress get significantly more grants than others. [Berry et al. \(2010\)](#) find that electoral constituencies represented by legislators from the President's party receive more funds on average. These papers are also related to the present work, in the sense that they investigate the impact of alignment in terms of political affiliation. However, these two literatures do not include different tiers of government in the analysis: they consist in looking at the allocation of *federal* grants according to criteria related to *federal* elections. By contrast, this paper investigates political links between two different layers of government. The allocation of intergovernmental transfers needs specific investigation, as it has an impact on elections at different tiers simultaneously. Since a share of the political credit of these grants may go to local incumbents, these grants may be targeted through other channels than reelection concerns of grantors. Results of this paper illustrate this point.

This paper also contributes to the more specific 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. However, he 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 mine is [François \(2006\)](#). He shows that multiple office-holders raise more money for their electoral campaign. However, his identification strategy uses simple OLS and may not get rid of endogeneity issues, contrary to this paper which relies on close electoral races through regression discontinuity techniques.

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) is the only paper on distributive politics in France. However, they focus on the allocation of national investment across different regions, and not on grants which are allocated to lower tiers of government.

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 main findings, robustness and validity checks, as well as investigation of alternative mechanisms underlying main results. Section 6 concludes.

2 Institutional background

The French decentralization architecture is made of three tiers of local government: the territory is 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, retirement houses). 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 aid to firms. In most of the territory, there are inter-municipal communities (*intercommunalités*), which constitute an intermediate tier between municipalities and counties. These are groups of municipalities which decided to cooperate and merge for the provision of public goods for which there are potential economies of scale.⁴ 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, I focus 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

⁴Although 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.

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 A1). 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. There is no official rule for the way of allocating these grants. 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. These amounts related to discretionary investment grants have to be considered as a lower bound, since “Formula-based investment grants”, which account for 13.6% of municipal investment revenues, include funds for which eligibility depends on a formula, but the allocation between eligible jurisdictions is subject to discretion.⁵ 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.⁷

2.2 Elections of local incumbents

This subsection presents briefly electoral rules 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).⁸ 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). In the sample period, municipal incumbents come from two elections : one in 2001 and another in 2008.⁹

In county elections, citizens vote for members of their county council (*conseil général*). Then, county councillors vote for their executive chief. 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

⁵For instance, the *Dotation Globale d’Équipement* (DGE) is an investment grant whose eligibility depends on total municipal population and the municipal fiscal potential. Then, the allocation between eligible municipalities is decided by the Central State, after consultation of a committee composed by local elected incumbents. Since this grant allocation involves different decision makers, it is better not to consider this grant and to focus on funds whose allocation is decided by one well-identified organisation, without any ambiguity.

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.

⁷Assets transfers represent transfers of capital assets from other tiers of government due to transfers of competencies.

⁸Smaller municipalities have different municipal electoral rules. Since these jurisdictions often do not have any official political affiliation, it is not possible to infer information on alignment for these observations. Therefore, they are excluded from the analysis. They represent 33,866 jurisdictions over 36,688 in 2011, but only 65% of total French population.

⁹The 2008 elections took place 7 years after the previous ones in order not to have municipal elections during the same year as the presidential and the legislative ballots.

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. In the sample period, county incumbents come from four elections: 1998, 2001, 2004 and 2008.¹⁰ 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. Therefore, I attribute to a county council 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 additive 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, 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.

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 \(2011\)](#) and [François & Weill \(2016\)](#) for recent empirical investigations on this issue).

2.4 French political parties

During the period covered by electoral data I rely on (1998-2011 for county elections, and 2001-2011 for municipal ones), the French political landscape was dominated by two political parties: the

¹⁰The last county elections in the sample period were organized in 2008 instead of 2007 in order not to have county elections during the same year as the presidential and the legislative ballots.

Socialist Party (PS), which is left-wing, and a right-wing party, represented by the *Rassemblement pour la République* (RPR) until 2002 and then by the *Union pour un Mouvement Populaire* (UMP). These two political parties frequently make coalitions with smaller left-wing or right-wing organizations. Municipal elections also count an important share of candidates with no official party, but claiming themselves as being left-wing or right-wing (they are called “other left-wing candidates” and “other right-wing candidates” from now on). The French political landscape also counts centrists organizations, far-right and far-left parties. Finally, some political organisations are related to specific issues, and do not claim any position in the political spectrum (e.g. regionalist parties, some green organisations). See Section A in Appendix for more details.

This political background is key to choose the set of political affiliations from which political alignment will be defined. Since a high share of elected officials come from coalitions between different parties, electoral data do not allow to define accurately alignment with respect to political parties. Moreover, being left-wing or right-wing without any official party seems to be a reporting specific to local ballots.¹¹ Therefore, municipal and county councils are classified into five categories of political affiliation:

- *Right-wing councils*: this group is made of the main right-wing party, smaller right-wing organisations, as well as other right-wing candidates.
- *Left-wing councils*: this group is analogous to the first one. It is made of the PS, smaller left-wing parties, as well as other left-wing candidates.
- *Far-right councils*.
- *Far-left councils*.
- “*Other councils*”: this group is made of all incumbents which cannot be classified on the left or on the right of the political spectrum.

3 Identification

The identification of the multiple offices effect is subject to strong 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

¹¹Section A in Appendix illustrates these points, by providing a detailed description of political parties in France, as well as descriptive statistics related to candidates in municipal and county ballots.

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 which took place in the municipality. The assignment variable is the margin of victory of mayors in these last county elections. 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).

The equation associated to this regression discontinuity setting can be written as follows:

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

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. 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 during the whole term of county councillors. 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 during a specific year).¹² $g(\cdot)$ denotes a polynomial function of the margin MV_{it} . This function aims at providing enough flexibility in order to estimate accurately the impact of the margin of victory of mayors in last county elections on both sides of the cut-off. Then, α_1 and α_2 denote vectors containing coefficients on each polynomial term. The coefficient on MO_{it} is estimated through the constant term of the polynomial function. This equation can be estimated either through polynomial specification, or through local linear regressions.

X_{ie-1} is a vector of control variables. The subscript $e - 1$ means that I take for a given year the value of covariates during the year before last elections (municipal or county ones).¹³ These lagged

¹²I 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

¹³For example, I take for the year 2005 the value of covariates in year 2003. See Figure 1 for a picture of the timing between municipal and county elections.

terms prevent to have covariates affected by the multiple office-holding dummy.¹⁴ Covariates include variables related to total population, its age structure, as well as municipal area. They also include variables related to population income and individuals’ employment. Finally, they include variables related to political affiliation of the municipality, local taxation and inter-municipal cooperation. See Section B in Appendix for a complete description of these variables. 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).

Still, the multiple office-holding effect may have not the same effect according to 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. Although it is possible to estimate Equation (1) after splitting the sample according to political alignment, such separate regressions on different sub-samples may induce a loss of efficiency. A solution is to estimate the Heterogeneous Local Average Treatment Effect (HLATE) of multiple office-holding according to alignment, following the methodology proposed by Becker et al. (2013). This method aims at estimating heterogeneous average treatment effects in a Regression Discontinuity setting. In the present parametric framework, it simply consists in estimating the polynomial specification of Equation (1) after adding to the specification the alignment dummy as well as the interaction between alignment and multiple office-holding. Then, the HLATE is estimated through the following equation:

$$\ln(G_{it}) = [\alpha_1 g(MV_{it}) + \beta AL_{it}] + MO_{it} * [\alpha_2 g(MV_{it}) + \gamma AL_{it}] + \delta X_{ie-1} + \mu_c + \rho_t + \epsilon_{it} \quad (2)$$

AL_{it} is the alignment dummy of municipality i in year t . This equation is estimated using cubic polynomial functions.¹⁵ As Becker et al. (2013) point out, adding this heterogeneity in this Regression Discontinuity setting is valid under two conditions. First, the alignment dummy has to be continuous at the cut-off. Given the quasi-experimental setting of a RDD, this assumption has to be filled if the empirical model is well-specified. Second, the alignment dummy has to be randomly assigned conditional on MV_{it} . This second assumption is more challenging. The margin of victory of a candidate in county elections may be correlated with voters’ support in the county for

¹⁴Even if the RDD gives consistent estimates without any additive 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).

¹⁵Following 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 (2) (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. Although this width is relatively small in size, each resulting bin is related to a non-negligible amount of observations. Figures A1a to A1c show the number of observations in each of these bins. 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.

her political affiliation. Then, a high margin of victory may be correlated with political alignment.

To deal with this issue, I add to the HLATE equation a second regression discontinuity setting, related to political alignment. The main issue for the estimation of the alignment effect is that the alignment dummy may capture both the effect of alignment per se and a core supporter effect.¹⁶ Then, I follow [Brollo & Nannicini \(2012\)](#), [Migueis \(2013\)](#), [Bracco et al. \(2015\)](#) and [Curto-Grau et al. \(2014\)](#), by taking as an assignment variable the *margin of alignment*, defined as the difference between the share of votes obtained by the first aligned candidate in the last round of last municipal elections and the share of votes of the first non-aligned candidate.¹⁷ This strategy consists in comparing municipalities in which the first aligned candidate barely won in last municipal elections to those in which she barely lost.¹⁸ Adding this regression discontinuity setting related to alignment enforces the variable AL_{it} to be randomly assigned whatever the value of MV_{it} (and so, conditional on it). If MA_{it} denotes the margin of alignment of municipality i in year t , this leads to the following *joint RDD* equation:

$$\begin{aligned} \ln(G_{it}) = & [\alpha_{1g}(MV_{it})] + MO_{it} * [\alpha_{2g}(MV_{it})] + [\beta_1 f(MA_{it})] + AL_{it} * [\beta_2 f(MA_{it})] \\ & + \gamma MO_{it} * AL_{it} + \delta X_{ie-1} + \mu_c + \rho_t + \epsilon_{it} \end{aligned} \quad (3)$$

Finally, in order to provide a complete picture of the politics of intergovernmental grants counties allocate to municipalities, the effect of political alignment per se is also estimated. This effect is of different nature than the multiple office-holding impact, since it is underlain by political party considerations. To identify the effect of alignment per se, the previous regression discontinuity setting related to alignment is estimated separately. This gives the following equation:

$$\ln(G_{it}) = [\beta_1 f(MA_{it})] + AL_{it} * [\beta_2 f(MA_{it})] + \delta X_{ie-1} + \mu_c + \rho_t + \epsilon_{it} \quad (4)$$

4 Data and sample

Information on discretionary investment grants municipalities receive from counties comes from a new dataset on detailed financial accounts of all French local governments 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 local government a detailed decomposition of their revenues and expenditures, as well as all municipal decisions and characteristics

¹⁶Because of risk-aversion, county councils may allocate more funds to jurisdictions where their political affiliation benefits from high support ([Cox & McCubbins \(1986\)](#)).

¹⁷A low and positive (respectively negative) value of this margin means that the first aligned candidate barely won (respectively barely lost) in last municipal elections.

¹⁸The intuition underlying this strategy is the following. If the average effect of political alignment is driven by the core supporter story, then one should observe a positive relationship between the amount of grants and the alignment margin, without any discontinuity at the cut-off. A discontinuity at this point would correspond to the effect of alignment per se.

regarding local taxation.¹⁹

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. This database provides 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 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.²⁰ For brevity, mayors and heads of the winning list are referred to the unique denomination of “mayors” from now on. For political alignment, I define a dummy equal to one if the political affiliation of the winning list in last municipal elections is the same as the one of the county council’s executive chief. I consider the categories of political affiliation defined in Section 2.

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. Each variable in euros are deflated using the consumption price index with base 2010 provided by INSEE.

Different sample restrictions are made. Over the sample period, all county councils are either right-wing or left-wing, except four over 300 whose executive chief is centrist. As for municipalities, only 3.7% of them have a majority affiliation other than the two main ones. Given the low number of observations associated to counties and municipalities other than right-wing and left-wing, they are dropped from the sample. Two reasons support this choice. First, political alignment would be hard to define in centrist counties. Second, keeping municipalities other than left-wing or right-wing ones would give to non-alignment an ambiguous meaning from a political point of view.²¹ I also drop years of municipal and county elections from the sample, since it is not possible to know for

¹⁹The amount of discretionary investment grants, as well as all variables in euros are deflated using the consumption price index with base 2010 provided by the French National Institute of Statistics and Economic Studies (INSEE).

²⁰While 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.

²¹For instance, in a left-wing county council, a non-aligned municipality could be right-wing, far-right, far-left or in “other affiliations”.

these years whether a given grant is related to the former or the new local council.²²

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 I keep in the sample. Each bracket represents a “political cycle”, defined as a period between two elections (municipal *or* county ones). 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, a politician elected at the county level before being elected in a municipal council may have higher experience than a mayor who runs for municipal and county elections at the same time. However, the regression discontinuity setting allows to control for such unobservable factors, as it consists in comparing municipal incumbents whose success in getting a seat at the county level is random. Then, not distinguishing between the different timings is not an issue in this empirical framework.

After all sample restrictions mentioned above, the baseline sample is made of 14,824 observations, which correspond to 2,118 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 518 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.

Columns (2) to (7) of Table 2 provide descriptive statistics after the different sample restrictions to make for the RDD related to multiple office-holding, an for the RDD on alignment added in the joint RDD specification.²³ The RDD related to multiple office-holding (Equations (1) and (2)) needs to consider only municipalities whose mayor was candidate in last county elections. Column (2) describes this sample, and Column (3) presents descriptive statistics when one focuses

²²Municipal 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.

²³For each of these samples, I drop observations with extreme values of the assignment variable for which the dispersion in terms of grants is very high and may influence substantially the shape of the estimated polynomial functions. For both assignment variables (MV_{it} and MA_{it}), I drop observations with an absolute value of these variables higher than 40 percentage points. See Figures A1a and A2 which show respectively for MV_{it} and MA_{it} the number of observations in each bin of 1.25 percentage points of the corresponding assignment variable. However, the optimal bandwidth defined by Imbens & Kalyanaraman (2012) and used for local linear regressions is computed using the whole support of the assignment variables.

on observations whose assignment variable MV_{it} is lower than two percentage points in absolute value. Focusing on municipalities whose mayor was candidate in last county elections gives a sample of 4,492 observations. This sample restriction leads mechanically to an increase in the share of multiple office-holders, compared to the baseline sample. 72% 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 RDD. Importantly, the average of the alignment dummy also gets close to 50 percentage points when the sample is restricted to municipalities close to the cut-off. This may suggest a random assignment of the alignment variable for small absolute values of mayors' margin of victory in county elections. This evidence is comforting for the validity of the HLATE estimation. Columns (4) and (5) present an analogous description for the regression discontinuity setting related to political alignment. This setting needs to focus on municipalities in which the second candidate in last municipal elections was right-wing if the winner was left-wing, and left-wing if the winner was right-wing.²⁴ This restriction consists in keeping 9,108 observations over 14,824. Dropped jurisdictions are characterized by a lower political competition in terms of political affiliation. This higher average political competition in the remaining sample is an explanation for the lower proportion of aligned municipalities with respect to the baseline sample. As one moves close from the cut-off, the proportion of aligned municipalities gets close to 50 percentage points. Similarly to columns (2) and (3), this comforts the validity of the regression discontinuity setting related to alignment. Finally, Column (6) presents descriptive statistics on the intersection of the two RDD samples, used for joint RDD. Column (7) focuses on observations where both assignment variables (MV_{it} and MA_{it}) are lower than two percentage points in absolute value. By construction, the comparison between Columns (1) and (6) is a mix of the comparison between Columns (1) and (2), and the one between Columns (1) and (4). However, Column (7) shows that there are only 14 observations for which $|MV_{it}|$ and $|MA_{it}|$ are both lower than two percentage points. In this context, the distributions of the multiple office-holding and the alignment dummies are not balanced, contrary to previous samples. Although the joint RDD allows to ensure that multiple office-holding and political alignment are both randomly assigned, this specification has to be manipulated with caution as it relies on few observations close to both cut-offs. Then, it can only be used as a robustness check, instead of the key specification of the paper. Finally, Table 2 reveals differences in terms of covariates between the different RDD samples and the baseline one. This is not an issue for identification. What is needed for regression discontinuity settings is the similarity of municipalities close to the cut-off.²⁵

²⁴More precisely, two sample restrictions are needed. First, the sample has to be restricted to municipalities whose alignment status would have changed if the second candidate had won. Then, the first challenger in last municipal elections has to be non-aligned (respectively aligned) if the municipality is aligned (respectively non-aligned). This restriction also consists in dropping municipalities in which there was only one running list in last municipal elections. Second, as the baseline sample is restricted to right-wing and left-wing municipalities, the same restriction has to be made on the first challenger in last municipal elections in order to have a valid RDD. Not making this last restriction would bring heterogeneity between both sides of the cut-off in an artificial way. These two restrictions consist in keeping only municipalities in which the second candidate in last municipal elections was right-wing if the winner was left-wing, and left-wing if the winner was right-wing.

²⁵If no differences in covariates between the different samples and the different restrictions on assignment variables were observed, it would mean that assignment variables, as well as criteria to enter in samples for RDDs are

5 Results

5.1 Main results

Figures 2a and 2b present a graphical picture of the regression discontinuity setting related to multiple office-holding. They represent the fitted curve of the estimation of Equation (1) with no covariate and fixed effect. Figure 2a represents estimations through cubic polynomial estimation, while Figure 2b represents local linear regression results. In both figures, there is a positive jump of grants once one moves from the left to the right-hand side of the cut-off. Figures 2c and 2d (respectively 2e and 2f) provide the fitted curve from the same specifications when the sample is restricted to aligned (respectively non-aligned) municipalities. While a positive jump is still observed for aligned municipalities, 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.

This evidence is comforted through point estimates presented in Table 3. Columns (1) and (2) come from the estimation of a simple OLS specification, without any regression discontinuity design. Columns (3) and (4) present results from the HLATE estimation, while Columns (5) and (6) present point estimates from the joint RDD specification.²⁶ These results suggest robust evidence of a positive and significant impact of being aligned and a multiple office-holder. In other words, mayors who have concurrently a seat in the county council and are part of the leading group of this upper political assembly get on average more grants than other mayors. However, the coefficient on the multiple office-holding dummy is positive but has no robust significance. Finally, alignment per se, represented through the alignment dummy, has a positive but insignificant impact. The estimated elasticity of grants according to the interaction between multiple office-holding and alignment varies from 0.21 to 0.35 across the different specifications of Table 3. If one considers regressions which include covariates and fixed effects, results of Table 3 suggests that the simple OLS specification slightly underestimates the impact related to aligned multiple office-holders. This is consistent with aligned multiple office-holders having more experience and a higher ability to raise public funds by their own for municipal investment. By considering the HLATE estimation with the inclusion of all fixed effects and covariates, aligned multiple office-holders receive on average 28% more grants for their municipalities than other municipal incumbents.²⁷

This evidence of a targeting in favour of aligned multiple office-holders suggests an important role of direct ties between incumbents of different layers of government. However, evidence of an insignificant impact of alignment per se is in tension with political party considerations highlighted in the previous literature. To provide a complete picture on this issue, the regression discontinuity setting on political alignment represented by Equation (4) is estimated. Figure 3 provides a graphical picture of this estimation, and suggests only weak evidence of a positive and significant impact

uncorrelated with other municipal characteristics. Such evidence would be surprising.

²⁶Coefficients on covariates through simple OLS are presented in Table A4 in Appendix.

²⁷The HLATE estimation is considered instead of the joint RDD because of the high demanding feature of this last identification strategy. See Section 4 for more details.

of alignment per se. Point estimates are presented in Table 4. The first two columns (respectively the two last ones) present results from cubic polynomial estimations (respectively local linear regressions). In line with Figure 3, there is only weak evidence of a positive impact of alignment per se according to these results. Significance reaches a level lower than 10% only for local linear regressions.²⁸ This lack of evidence of a positive alignment has to be considered with caution, since the French political context constraints to consider aggregated political affiliations rather than political parties for the definition of alignment (see Section 2). However, these results on political alignment, combined with strong evidence of a targeting in favour of aligned multiple office-holders, give a novel picture of the politics of intergovernmental grants. They highlight the important role of direct ties between incumbents of different layers of jurisdiction, with other mechanisms to be considered in addition to grantors' pork-barrel through party favoritism.

5.2 Robustness and validity checks

A battery of checks regarding the empirical specification are made. Estimates on the multiple offices effect presented in Table 3 are obtained by considering $g(\cdot)$ as a cubic polynomial function. It is important to ensure that findings are robust to alternative choices regarding the polynomial order of this function. Table A5 in Appendix provides such robustness checks. The first two columns present point estimates of the HLATE specification with a first and a second order polynomial respectively. The two last columns are analogous for the joint RDD. This table suggests that evidence on the impact of multiple office-holding and alignment is robust to the choice of the polynomial order. Whatever this choice and the specification, the only significant coefficient is the one on the interaction between multiple office-holding and alignment. The size of this coefficient is stable relatively to cubic-polynomial estimates. While evidence of a significant effect of multiple office-holding independently from alignment is non-robust in Table 3, significance at conventional levels is never reached for first and second polynomial order specifications. Another check to do in order to ensure that main findings are not specific to the HLATE or the joint RDD specification is to see whether they still hold in a simple regression discontinuity setting, without any heterogeneous effect of multiple office holding included in the regression. Table A6 in Appendix shows estimates from Equation (1). The multiple offices effect is estimated on the whole sample, and on the sub-samples of aligned and non-aligned municipalities. For robustness issues, this table shows for each of these samples polynomial estimations for each order between one and three. It also shows estimates from local linear regressions with three alternative bandwidths. Consistently with previous evidence, there is strong and robust evidence of a multiple offices effect, driven by aligned municipalities.²⁹

It is key to check whether other municipal revenues which must not be driven by politics are not impacted by multiple office-holding according to the applied empirical strategy. As a placebo test,

²⁸As this can reveal weaknesses in the cubic polynomial specification, Table A7 in Appendix shows point estimates for alternative polynomial orders and alternative bandwidths. This table confirms the non-robust significance, both for the polynomial specification and the local linear regression.

²⁹Coefficients on multiple office-holding estimated on the sub-sample of aligned municipalities are much higher than previous coefficients on the interaction between multiple office-holding and alignment, since they correspond by construction to the sum of the effect of MO_{it} and $MO_{it} * AL_{it}$.

the dependent variable is replaced by the per capita *Dotation Globale de Fonctionnement* (DGF), which is the main formula-based intergovernmental transfer received by municipalities.³⁰ Table 5 presents results of this test from the HLATE estimation. Whatever the set of controls, the three coefficients of interest related to multiple office-holding and alignment are non-significant and have low size. This comforts the validity of the empirical strategy of this paper.

Table 6 presents point estimates from separate estimations for left-wing and right-wing counties. This check aims at knowing whether grants targeting according to multiple office-holding and alignment is specific to a county political affiliation, or whether this evidence is independent from the political affiliation of the grantor. This check is in favour of this second scenario. The first and the second columns of Table 6 present for right-wing and left-wing counties respectively results from the HLATE estimation after the inclusion of covariates and fixed effects. The coefficient on the interaction between multiple office-holding and alignment is positive and significant for both county political affiliations. The size of this effect is highly similar with respect to estimations with the whole sample.

Finally, conventional validity checks for regression discontinuity settings are implemented. For a given RDD, 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).³¹ Figure A3a in Appendix shows the density of the margin of victory of mayors in county elections. According to this figure, the null hypothesis of zero discontinuity at the cut-off cannot be rejected. Evidence is similar for the margin of alignment, as shown in Figure A3b. Second, municipalities just below and above the cut-off have to be similar. One way to test for this is to check whether there is no discontinuity in some covariates at the cut-off. As suggested in Lee & Lemieux (2010), this test is done for all covariates in X_{ie-1} simultaneously, by estimating a Seemingly Unrelated Regression (SUR).³² Then, a Chi-Square test for no discontinuity at the cut-off in all equations is implemented.³³ Table A8 in Appendix shows the p-value of this Chi-Square test for the RDD on multiple office-holding with no heterogeneous effect (Equation (1)), as well as for the RDD on alignment (Equation (4)). These two specifications are the only ones which need to be tested in order to check for the validity of the HLATE estimation and the joint RDD.³⁴ For each of these two investigated RDDs, the test is implemented for every polynomial order between the first

³⁰This transfer is allocated by the Central State. It accounts on average for 237 euros per head in the baseline sample (i.e. 16.5% of total municipal revenues). It mainly depends on municipal population and its age structure, municipal area, fiscal potential of the municipality, average income of residents, and the share of inhabitants who rely on social benefits.

³¹Both assignment variables (the margin of victory of mayors in county elections and the margin of alignment) are constant over a political cycle for a given municipality. In order not to have the same observation several times, only one observation per municipality per political cycle is used for this test.

³²The estimated system is composed by one equation per covariate. Each equation of this system is the same as the tested RDD specification (without fixed effects and other controls), where the dependent variable is replaced by the covariate.

³³Since covariates in X_{ie-1} take the same value over a political cycle for a given municipality, only one observation per municipality per political cycle is used to run this test.

³⁴The test for the HLATE estimation would be exactly the same as the one for the RDD on multiple office-holding without heterogeneity. Moreover, the validity of two tested RDDs implies the validity of the joint RDD.

and the third, and for local linear regressions using the optimal bandwidth defined by [Imbens & Kalyanaraman \(2012\)](#), as well as half and double this bandwidth. For the RDD on multiple office-holding, the null hypothesis of no discontinuity in all covariates cannot be rejected, except for the local linear regression with half the optimal bandwidth. For the RDD on alignment, the conclusion is the same, except for the first-order polynomial estimation, and the local linear regression with double the optimal bandwidth.³⁵

The correct identification of the HLATE needs an additive validity test. The political alignment dummy has to be continuous at the cut-off related to the margin of victory of mayors in county elections (see Section 3). Figure A4 in Appendix provides a test of this condition. It shows the fitted cubic polynomial estimation of Equation (1) where the dependent variable is the alignment dummy. This figure highlights no evidence of a discontinuity in the alignment status at the cut-off. This comforts the validity of the HLATE estimation.

5.3 Mechanisms

There is strong evidence that mayors who have concurrently a seat at the county level, and are part of the leading group in the county council get on average significantly more grants for their municipalities than other mayors. However, there is no similar evidence for non-aligned multiple office-holders. This heterogeneity is not in line with a significant role of a common feature of multiple office-holding (e.g. the better knowledge multiple office-holders may have on grants allocation procedures). Instead, it claims for mechanisms leading to a targeting in favour of a specific kind of multiple office-holders (those in the county’s majority group).

These mechanisms can be of different natures. First, multiple office-holders may take advantage of their seat at the county level to convince the majority of councillors to accept the municipal project they apply for (*Story I*). This effect may hold especially for aligned multiple office-holders, since they have better access to members of the county council leading group than non-aligned multiple office-holders. Second, county councillors have to face a problem of asymmetric information for the allocation of intergovernmental transfers. They may have an imperfect knowledge on mayors’ skills to manage an investment project, and on real municipal needs for new infrastructures. Mayors may have an incentive to take advantage of this situation, by exaggerating their needs or their municipality’s preferences for the investment project they apply for. Although some incentive devices can emerge from this setting, it has a collective cost, since some projects with low benefits may be accepted while some others with high benefits may be rejected ([Besfamille, 2004](#)). In this context, it may be optimal for county councillors to allocate more funds to their colleagues at the county council (*Story II*). Indeed, they may have a good knowledge on their skills. Moreover, they may have more monitoring power over them. Such an effect is likely to be concentrated on aligned multiple office-holders, since county councillors of the leading group (who may have greater power

³⁵This illustrates the non-randomness of the treatment assignment when one moves far from the cut-off. This is why it is necessary to include a sufficiently high polynomial order to capture these non-random components, or to rely on a small enough bandwidth for local linear regressions.

on grants than other county councillors) may benefit from better knowledge and higher monitoring power especially on their colleague of the same political group.

These two mechanisms bring new and interesting insight, as the existing empirical literature on the politics of intergovernmental grants has focused on political party considerations and grantors' vote-seeking behaviours through the alignment effect. *Story I* and *Story II* both support the fact that aligned multiple office-holders would be favoured as a result of an advantage they have on other mayors to get more grants, regardless of political interests of county councillors. Such an advantage may decrease with the degree of competition between aligned multiple office-holders in a given county. Then, in order to test for *Story I* and *Story II*, I interact coefficients related to multiple office-holding and alignment with this degree of competition, proxied by the share of aligned multiple office-holders among mayors in the county. This share has sufficient variability to identify heterogeneous effects: its standard deviation is equal to 8.8 percentage points, for a mean of 16.5. Although *Story I* and *Story II* are not disentangled through this specification, a result in favour of at least one of these two channels would bring interesting evidence in favour of other mechanisms than those linked to political parties and grantor's pork-barrel.

Still, a targeting in favour of aligned multiple office-holders can also be driven by vote-seeking behaviours of county councillors. If county incumbents of the leading group want to be reelected and to keep their leading position in the county council, they may have an incentive to help their colleagues in the county leading group to keep their municipal office (*Story III*). Indeed, an aligned mayor who has a seat in the county council may provide a strong support at the local level during next county elections. Moreover, higher grants may help aligned multiple office-holders to be reelected at the county level as well. A reelection of an aligned incumbent in the county council increases the probability that the current county leading group keeps his leading position. Since such an effect may be stronger when political competition in county elections is higher, I interact coefficients related to multiple office-holding and alignment with the share of seats held by the county majority in the county council. This share has a mean of 64.9 percentage points, with a standard deviation of 10.4, which illustrates the high variability of this variable.

For each of these two additive heterogeneity dimensions (the degree of competition among aligned multiple office-holders, and competition in county elections), the variable defining the investigated heterogeneity, as well as the interaction between this variable and each coefficient of interest are added in the HLATE equation. In order to get more interpretable coefficients, I take the deviation from the mean of variables defining heterogeneity, instead of the variables themselves. As pointed out by [Becker et al. \(2013\)](#), the two variables included as factors of heterogeneity (the share of seats held by the county majority in the county council and the share of aligned multiple office-holders among mayors of the county) have to be continuous at the cut-off of the regression discontinuity setting. Figures [A5a](#) and [A5b](#) in Appendix show for each of these two variables the fitted curve from this validity test, with 95% confidence intervals. For both variables, these figures show no evidence of a discontinuity at the cut-off, which comforts the validity of the HLATE estimation when these two heterogeneity dimensions are added.

Table 7 shows results from these heterogeneous effects estimations. Columns (1) to (3) show point estimates when the share of aligned multiple office-holders among mayors in the county is the only included dimension of heterogeneity. These three columns differ in the set of controls included in the regression: Column (1) does not include any control, Column (2) includes covariates, while Column (3) presents point estimates after the inclusion of covariates, year fixed effects and county council fixed effects. Columns (4) to (6) show results where coefficients of interest are interacted only with the share of seats held by the county majority group in the county council, while columns (7) to (9) show point estimates where both dimensions of heterogeneity are simultaneously included.

Columns (1) to (3) suggest evidence that the targeting in favour of aligned multiple office-holders decreases with the share of these mayors in the county. Point estimates related to this heterogeneity are negative. Significance at 5% level is reached after the inclusion of covariates, while the significance level is barely higher than 10% when county council and year fixed effects are included. When one moves to Columns (4) to (6), there is no evidence according to conventional significance level that the targeting towards aligned multiple office-holders significantly varies with the degree of competition in county elections. Both evidence hold in Columns (7) to (9), where the two heterogeneity dimensions are included. However, standard errors increase and may suggest a limited statistical power given the high number of regressors included in these three last columns. According to results in column (3), when all covariates and fixed effects are included and when the share of aligned multiple office-holders in the county is the only included heterogeneity dimension, an increase in this share by one standard deviation (i.e. 8.8 percentage points) leads to a decrease in the coefficient on aligned multiple office-holders by 0.202. This effect is important regarding the average coefficient without interaction.

Although these results do not allow to reject *Story III* and put *Story I* and *Story II* at the center, they give new insight on the mechanisms underlying the politics of intergovernmental grants.³⁶ They show that what matters is not only pork-barrel politics from the grantor. First, local incumbents directly linked to an upper council may exploit this tie to favour their jurisdiction. Second, the asymmetry of information problem faced by grantors may give strong advantages to jurisdictions whose elected officials are connected with the upper council responsible for grants allocation.

Finally, although there is no evidence of a positive and significant average impact of alignment per se, the effect of political alignment seems to decrease significantly with electoral competition in county elections.³⁷ This result is in line with [Curto-Grau et al. \(2014\)](#). It suggests that a targeting in favour of aligned municipalities is applied in counties where the majority coalition has few political constraints and is free to favour incumbents of its political affiliation. In case of a balanced composition of the county council, incumbents in the county majority group may have no incentive to favour political allies if they want to be reelected, or if they are constrained to bargain

³⁶Although the interaction term between multiple office-holding, alignment and electoral competition in county elections is not significant regarding conventional thresholds, the significance level is close to 10% in Columns (5) and (6).

³⁷Columns (1) to (3) also suggest that the alignment effect significantly increases with the share of aligned multiple office-holders in the county. However, Columns (7) to (9) suggest that this evidence is the result of a correlation between the share of aligned multiple office-holders in the county and the degree of competition in county elections.

with the other political groups of the county council.

6 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. It may reveal key features of intergovernmental grants allocation, like the ability of some local incumbents to benefit from their direct access to upper councillors, or concerns regarding asymmetry of information.

Using a new database on French local public accounts, I study this issue in the context of French 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, I rely on close electoral races through regression discontinuity techniques. The sample is restricted to mayors who were candidate in last county elections. Mayors who barely won in these upper elections are compared to mayors who barely lost. Since a mayor who has a seat in the county council may have different degrees of influence depending on whether she is in the leading political group of the county council, I estimate the heterogeneous effect of multiple office-holding according to political alignment of the mayor. In order to estimate this heterogeneous effect in a regression discontinuity setting, I rely on the HLATE identification proposed by [Becker et al. \(2013\)](#).

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 heterogeneous finding according to alignment suggests that there is no effect linked to a common feature of multiple office-holding, like the better information multiple office-holders may have on grants application procedures. Instead, having a seat in an upper council seems to be useful only for mayors who are in the majority political group at the county level.

This finding is key, as it suggests mechanisms of different natures than those investigated in the previous literature on the politics of intergovernmental grants. First, aligned multiple office-holders can benefit for their direct position in the leading team of the county council to favour their local jurisdiction. Second, a targeting of grants towards aligned multiple office-holders may be explained by efficiency considerations, as asymmetry of information between the municipality and the county council is likely to be lower when the municipality is leaded by a member of the county council majority. Since this twofold advantage of aligned multiple office-holders may decrease with the share of these mayors in the county for concerns of competition, the coefficient of interest is interacted with this variable. Although such a specification is highly demanding, evidence do not allow to reject these two stories.

The previous literature on the distributive politics of intergovernmental grants pointed out the

key role of pork-barrel behaviours of grantors. A targeting in favour of aligned multiple office-holders can also be explained by such behaviours, since county councillors may have an interest to help their colleague in the county council. Although it is not possible to properly discriminate between this channel and the two first ones, this paper clearly shows that grantors' pork-barrel behaviours is at best only one part of the story. Direct ties between mayors and upper councils play an important role, independently from political interests of grantors.

This targeting of grants towards aligned multiple office-holders may have an impact on the allocation of local infrastructures over the national territory. Through this channel, political links between the different tiers of government may have longer-term effects on agents mobility and the geographical allocation of economic activity. Given that these phenomena are subject to important externalities between jurisdictions, this potential indirect impact of politics on efficiency is of key importance and calls for further research.

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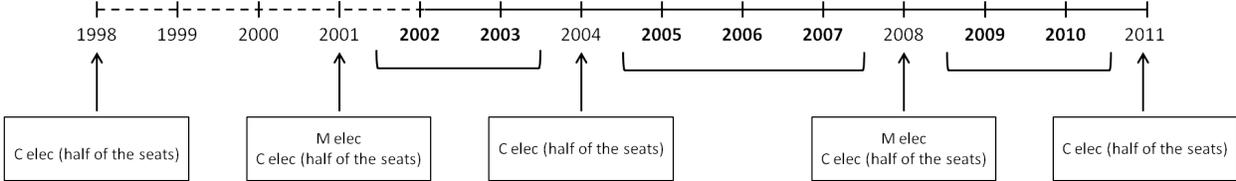
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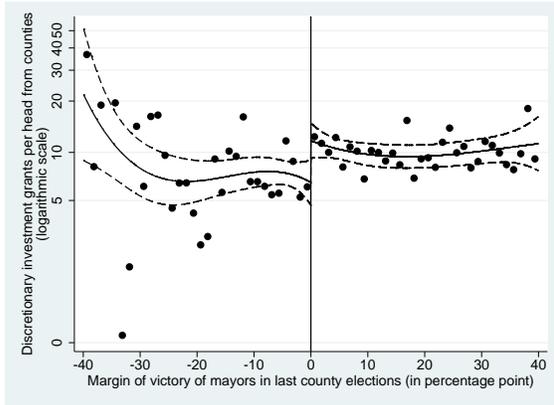
Figures

Figure 1: The timing between municipal and county elections

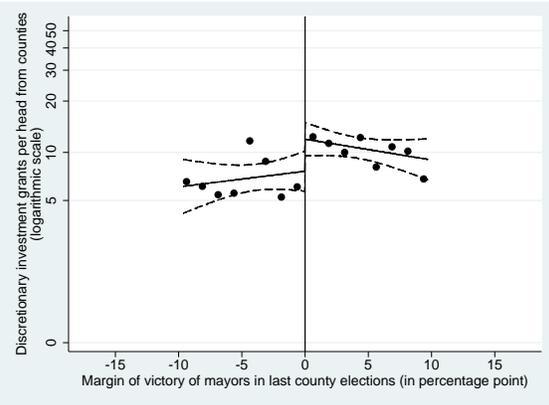


This figure shows the timing of municipal elections (denoted “M elec”) and county elections (denoted “C elec”). As explained in Section 2, each county election consists in renewing half of the seats. The dashed line represents years out of the sample period but during which there were elections in which some incumbents of the sample were elected. Years in bold and brackets are those included in the baseline sample.

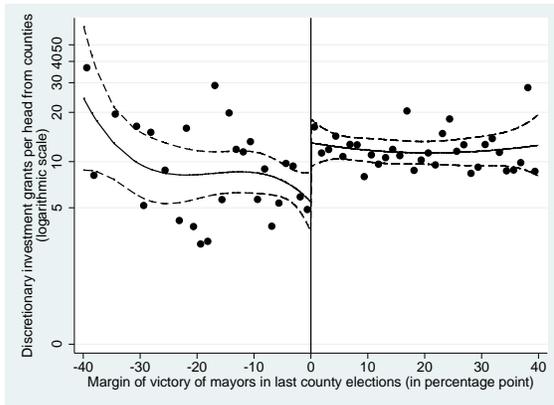
Figure 2: Fitted curves - Regression discontinuity on multiple office-holding



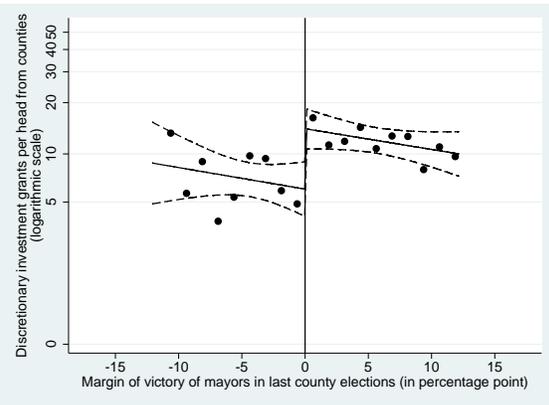
(a) *Whole Sample*
(cubic polynomial)



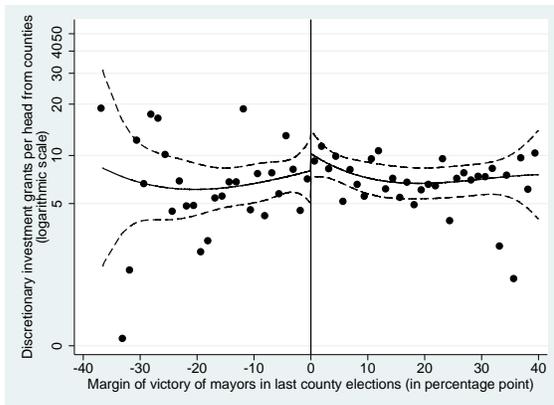
(b) *Whole Sample*
(local linear regression)



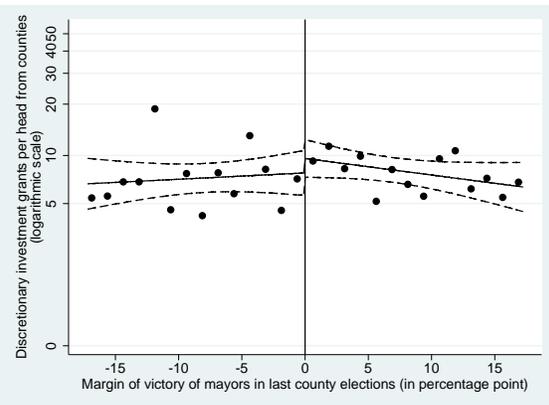
(c) *Aligned municipalities*
(cubic polynomial)



(d) *Aligned municipalities*
(local linear regression)



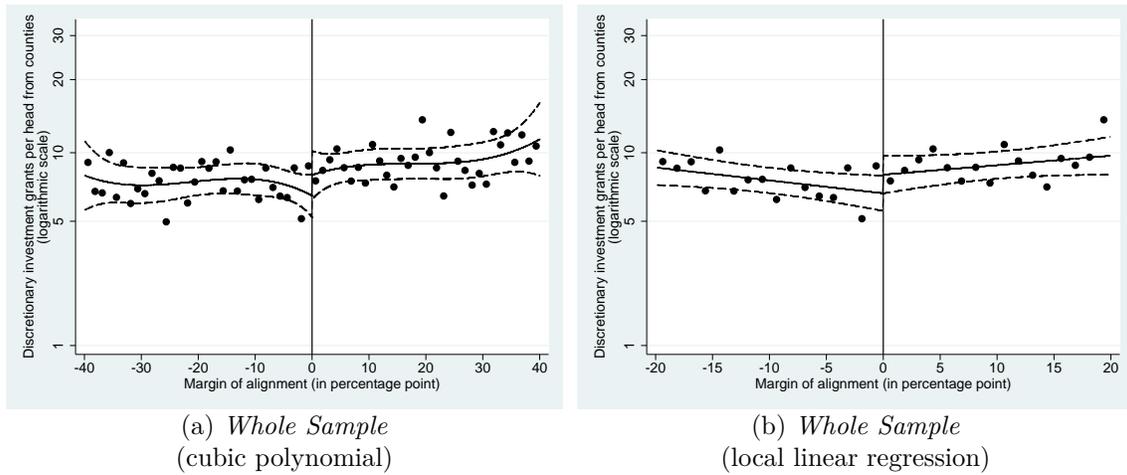
(e) *Non-aligned municipalities*
(cubic polynomial)



(f) *Non-aligned municipalities*
(local linear regression)

These figures show fitted curves from Equation (1) (with no covariate and fixed effect). Figures on the left come from cubic polynomial estimations, while figures on the right come from local linear regressions. The bandwidth used in local linear regressions is the optimal one as defined by [Imbens & Kalyanaraman \(2012\)](#). Figures 2a and 2b come from estimation on the whole sample (i.e. the sample described in Column (2) of Table 2). Figures 2c and 2d come from estimation on the same sample restricted to aligned municipalities, while Figures 2e and 2f focus on non-aligned municipalities. 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. See Figures A1a, A1b and A1c which show the number of observations in each bin for each of the three investigated samples.

Figure 3: Fitted curves - Regression discontinuity on political alignment



These figures show fitted curves from Equation (4) (with no covariate and fixed effect) on the sample described in Column (4) of Table 2. Figure 3a comes from a cubic polynomial estimation, while Figure 3b comes from a local linear regression, by taking the optimal bandwidth defined by Imbens & Kalyanaraman (2012). 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 alignment, with a bin width of 1.25. See Figure A2 which shows the number of observations in each of these bins.

Tables

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 (represented in the last line).

^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 These are grants from inter-municipal communities and the European Union.

^c This item represents transfers of capital assets due to transfers of competencies.

Table 2: Descriptive statistics

| | Baseline sample | | Sample for RDD on multiple office-holding and HLATE | | Sample for RDD on alignment | | Sample for joint RDD | |
|------------------------------------------------------------------------|--------------------|--------------------|-----------------------------------------------------|--------------------|-----------------------------|--------------------|----------------------|--------------|
| | Whole sample | Whole sample | Whole sample | Whole sample | Whole sample | Whole sample | Whole sample | Whole sample |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (7) |
| Discretionary investment grants per head from counties (in euros) | 20.65 (32.05) | 21.06 (31.57) | 18.74 (25.02) | 19.50 (29.86) | 18.10 (26.37) | 20.06 (28.59) | 45.93 (60.41) | |
| Total municipal investment spending per head (in euros) | 517.52 (381.42) | 525.84 (359.21) | 487.67 (319.76) | 519.59 (377.16) | 504.12 (498.70) | 532.23 (355.58) | 479.42 (254.96) | |
| Multiple office-holding | 0.25 (0.43) | 0.72 (0.43) | 0.56 (0.50) | 0.23 (0.42) | 0.14 (0.35) | 0.68 (0.47) | 0.71 (0.47) | |
| Alignment | 0.60 (0.49) | 0.59 (0.49) | 0.52 (0.50) | 0.55 (0.50) | 0.51 (0.50) | 0.56 (0.50) | 0.64 (0.50) | |
| (Alignment)*(Multiple office-holding) | 0.17 (0.37) | 0.47 (0.50) | 0.32 (0.47) | 0.15 (0.36) | 0.10 (0.30) | 0.43 (0.50) | 0.50 (0.52) | |
| Municipal surface (in km ²) | 21.67 (22.76) | 22.90 (24.43) | 25.30 (23.51) | 22.92 (23.03) | 24.59 (28.00) | 23.90 (24.92) | 37.62 (22.72) | |
| Total population (in thousands of inhab.) | 13.59 (21.70) | 12.95 (18.35) | 11.21 (10.73) | 15.55 (24.89) | 13.73 (18.15) | 14.37 (21.40) | 18.05 (11.34) | |
| % pop <=14 (in percentage point) | 18.63 (2.92) | 18.37 (2.81) | 18.97 (2.79) | 18.52 (2.92) | 18.29 (2.72) | 18.34 (2.72) | 19.46 (1.80) | |
| % pop >=65 (in percentage point) | 17.06 (5.50) | 17.71 (5.57) | 16.81 (5.17) | 17.16 (5.56) | 17.93 (5.32) | 17.76 (5.46) | 15.80 (2.09) | |
| Median income of residents per UC ^a (in thousands of euros) | 18.65 (4.01) | 18.40 (3.63) | 18.35 (3.71) | 18.51 (3.67) | 18.19 (3.50) | 18.32 (3.47) | 19.09 (1.61) | |
| Unemployment rate (in percentage point) | 10.41 (4.14) | 10.49 (3.96) | 10.62 (4.18) | 10.46 (4.00) | 10.70 (4.11) | 10.61 (3.80) | 9.51 (2.90) | |
| Left-wing municipality | 0.48 (0.50) | 0.47 (0.50) | 0.43 (0.50) | 0.45 (0.50) | 0.54 (0.50) | 0.46 (0.50) | 0.64 (0.50) | |
| Nb. observations | 14824 | 4492 | 324 | 9108 | 540 | 2969 | 14 | |

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 errors in parentheses. For each RDD sample (see the text for a definition of each of them), these descriptive statistics are presented for the whole sample and for the sample restricted to observations with an absolute value of the assignment variable (MV_{it} or MA_{it}) lower or equal than two percentage points. For the sample used for the joint RDD, this restriction is applied to both assignment variables.

^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.

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> (3) | <i>HLATE</i> (4) | <i>Joint RDD</i> (5) | <i>Joint RDD</i> (6) |
| Multiple office-holding | -0.00 (0.06) | 0.07 (0.05) | 0.34* (0.18) | 0.29* (0.16) | 0.22 (0.20) | 0.02 (0.19) |
| Alignment | 0.04 (0.04) | 0.07** (0.03) | 0.10 (0.12) | 0.03 (0.10) | 0.08 (0.23) | 0.12 (0.20) |
| (Alignment)*(Multiple office-holding) | 0.33*** (0.07) | 0.21*** (0.06) | 0.32** (0.14) | 0.28** (0.11) | 0.35** (0.15) | 0.24* (0.14) |
| Fixed effects and covariates ^a | No | Yes | No | Yes | No | Yes |
| Adjusted R-squared | 0.01 | 0.27 | 0.03 | 0.28 | 0.03 | 0.30 |
| Nb. Obs | 14824 | 14824 | 4492 | 4492 | 2969 | 2969 |

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

The two first columns show results from a simple OLS specification, without any regression discontinuity setting. The two following columns show results from the HLATE estimation (Equation (2)), while the two last ones come from the estimation of the joint RDD (Equation (3)). Estimations through regression discontinuity are made by using cubic polynomial functions in the assignment variables.

^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 4: The effect of political alignment

| | <i>Dependent variable: discretionary investment grants per head from counties (log of)</i> | | | |
|-------------------------------------------|--------------------------------------------------------------------------------------------|------------------|-------------------------|-------------------------|
| | Cubic polynomial | Cubic polynomial | Local linear regression | Local linear regression |
| Alignment | 0.19 (0.13) | 0.16 (0.13) | 0.17* (0.09) | 0.16* (0.09) |
| Bandwidth | | | 19.89 | 19.89 |
| Fixed effects and covariates ^a | No | Yes | No | Yes |
| Adjusted R-squared | 0.00 | 0.25 | 0.00 | 0.25 |
| Nb. Obs | 9108 | 9108 | 5268 | 5268 |

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

These results come from the estimation of the RDD on political alignment (Equation (4)). The bandwidth used in local linear regressions is the optimal one, as defined by [Imbens & Kalyanaraman \(2012\)](#).

^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 5: Placebo test - impact on the DGF

| | <i>Dependent variable: DGF per head (log of)</i> | |
|-------------------------------------------|--------------------------------------------------|-----------------|
| | (1) | (2) |
| Multiple office-holding | -0.09 (0.06) | -0.04 (0.05) |
| Alignment | -0.01 (0.04) | -0.01 (0.03) |
| (Alignment)*(Multiple office-holding) | 0.00 (0.04) | 0.03 (0.03) |
| Fixed effects and covariates ^a | No | Yes |
| Adjusted R-squared | 0.00 | 0.50 |
| Nb. Obs | 4492 | 4492 |

* 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 estimations from the *HLATE* estimation (Equation (2)), where the dependent variable is the logarithm of the amount of *Dotation Globale de Fonctionnement* (DGF) per head. The DGF is the main formula-based intergovernmental transfer received by municipalities (see the text for more details). These results come from estimations with cubic polynomial functions of the assignment variable.

^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 6: Separate regressions for municipalities in right-wing and left-wing counties

| | <i>Dependent variable: discretionary investment grants per head from counties (log of)</i> | |
|-------------------------------------------|--------------------------------------------------------------------------------------------|--------------------|
| | Right-wing counties | Left-wing counties |
| Multiple office-holding | 0.40 (0.24) | 0.20 (0.21) |
| Alignment | -0.04 (0.13) | 0.11 (0.14) |
| (Alignment)*(Multiple office-holding) | 0.28* (0.15) | 0.27* (0.16) |
| Fixed effects and covariates ^a | Yes | Yes |
| Adjusted R-squared | 0.24 | 0.31 |
| Nb. Obs | 2085 | 2407 |

* 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 separate estimations of the *HLATE* (Equation (2)) for municipalities in right-wing counties, and those in left-wing ones. These results come from estimations with cubic polynomial functions of the assignment variable.

^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 7: Investigation of mechanisms

| | Dependent variable: <i>discretionary investment grants per head from counties (log of)</i> | | | | | | | | |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Multiple office-holding | 0.405** (0.175) | 0.359** (0.161) | 0.326** (0.163) | 0.338* (0.178) | 0.262 (0.160) | 0.301* (0.161) | 0.383** (0.172) | 0.330** (0.158) | 0.320* (0.163) |
| Alignment | 0.149 (0.121) | 0.117 (0.110) | 0.077 (0.107) | 0.126 (0.120) | 0.074 (0.102) | 0.048 (0.099) | 0.152 (0.119) | 0.117 (0.108) | 0.075 (0.107) |
| (Alignment)*(Multiple office-holding) | 0.246 (0.152) | 0.258* (0.131) | 0.245** (0.119) | 0.312** (0.140) | 0.337*** (0.120) | 0.260** (0.110) | 0.259* (0.150) | 0.280** (0.130) | 0.246** (0.120) |
| Multiple office-holding*(<i>dmShALMO</i> ^a) | 0.006 (0.012) | 0.012 (0.010) | 0.002 (0.010) | | | | 0.005 (0.013) | 0.009 (0.011) | -0.001 (0.011) |
| Alignment*(<i>dmShALMO</i> ^a) | 0.022 (0.016) | 0.028** (0.014) | 0.022* (0.012) | | | | 0.015 (0.017) | 0.022 (0.014) | 0.016 (0.013) |
| (Alignment)*(Multiple office-holding)*(<i>dmShALMO</i> ^a) | -0.023 (0.019) | -0.034** (0.016) | -0.023 (0.015) | | | | -0.018 (0.020) | -0.028* (0.017) | -0.018 (0.016) |
| <i>dmShALMO</i> ^a | -0.001 (0.013) | -0.007 (0.011) | | | | | 0.002 (0.014) | -0.003 (0.012) | |
| Multiple office-holding*(<i>dmShCounty</i> ^b) | | | | 0.001 (0.009) | 0.002 (0.009) | 0.007 (0.008) | 0.001 (0.010) | 0.001 (0.009) | 0.007 (0.009) |
| Alignment*(<i>dmShCounty</i> ^b) | | | | 0.023** (0.011) | 0.024** (0.010) | 0.016* (0.009) | 0.021* (0.011) | 0.021** (0.010) | 0.014 (0.010) |
| (Alignment)*(Multiple office-holding)*(<i>dmShCounty</i> ^b) | | | | -0.016 (0.013) | -0.018 (0.012) | -0.017 (0.010) | -0.014 (0.013) | -0.014 (0.012) | -0.014 (0.011) |
| <i>dmShCounty</i> ^b | | | | -0.008 (0.008) | -0.011 (0.009) | | -0.008 (0.009) | -0.010 (0.009) | |
| Covariates | No | Yes | Yes | No | Yes | Yes | No | Yes | Yes |
| Fixed effects ^c | No | No | Yes | No | No | Yes | No | No | Yes |
| Adjusted R-squared | 0.03 | 0.08 | 0.28 | 0.03 | 0.09 | 0.28 | 0.03 | 0.09 | 0.28 |
| Nb. Obs | 4492 | 4492 | 4492 | 4492 | 4492 | 4492 | 4492 | 4492 | 4492 |

* 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 the *HLATE* estimation (Equation (2)) where heterogeneity dimensions of average treatment effects of interest are included. This consists in adding in Equation (2) variables defining these heterogeneity dimensions, as well as the interaction between these variables and dummies related to multiple office-holding and political alignment. These results come from estimations with cubic polynomial functions of the assignment variable.

^a *dmShALMO* denotes the deviation from the mean of the share of aligned multiple office-holders among mayors in the county (in percentage point).

^b *dmShCounty* denotes the deviation from the mean of the share of seats the county's majority coalition holds in the county council (in percentage point).
^c Fixed effects include year fixed effects (μ_t) and county council fixed effects (μ_c).

Appendix

A Political parties

During the period covered by electoral data (1998-2011 for county elections, and 2001-2011 for municipal ones), the French political debate was dominated by two political parties: the Socialist Party (PS), which is left-wing, and a right-wing party, represented by the *Rassemblement pour la République* (RPR) until 2002 and then by the *Union pour un Mouvement Populaire* (UMP). Apart from these two main organisations, there are smaller left-wing parties which frequently make coalitions with the PS for elections.³⁸ The picture has been different for the right-wing side since the UMP founding in 2002. Before this year, the RPR frequently made coalitions with smaller right-wing parties for elections. In 2002, the UMP founding consisted in merging the RPR with the main part of these smaller right-wing organisations, but the few number of parties out of this merge continued to frequently make coalitions with the main right-wing organisation.

Between left-wing and right-wing political parties, the French political landscape also counts some centrist organisations. The main one is the *Union pour la Démocratie Française* (UDF), which is center-right. Until 2007, this party frequently made coalitions with the RPR and then the UMP. This centrist party got divided between two organisations after the 2007 presidential elections: the *Mouvement Démocrate* (MODEM), which decided to get closer to the center of the political spectrum and not to make coalitions with the UMP anymore, and the *Nouveau Centre* (NC), which stayed at the center-right and carried out making coalitions with the main right-wing organisation.

The French political landscape also counts far-right and far-left parties. The far-right politics is dominated by the *National Front* (FN). Far-left politics is more divided, with two main organisations during the investigated period.³⁹ Finally, some political organisations are related to specific issues, and do not claim any position in the political spectrum (e.g. regionalist parties, some green organisations).

In practice, some candidates do not report any official party of affiliation. Some of them define their candidacy as being independent from any political orientation. However, the main part of these candidates with no party call themselves as being left-wing or right-wing (they are called “other left-wing candidates” and “other right-wing candidates” from now on). This is a common practice in local elections. It allows candidates to still claim their political affiliation, and at the same time to fit a context of local ballots where voters may be less partisan than for other elections. However, this does not necessarily mean that they are unconnected to political parties associated to their political orientations.

Table A2 provides a picture of political affiliations of all running lists in municipal elections covered by this paper. It gives for each kind of affiliation its share among these lists. This table

³⁸The main ones are the Communist Party (PC), *Europe Ecologie les Verts* (EELV) - the main green French party -, and the *Parti Radical de Gauche* (PRG).

³⁹These two parties are the *Nouveau Parti Anticapitaliste* (NPA) and *Lutte Ouvrière* (LO).

gives a good illustration of the above description of the French political landscape. The main right-wing party (the UMP or the RPR) and the PS manage only 9.74% and 5.49% of the running lists respectively. Lists led by smaller left-wing parties represent only 2.34% of municipal candidacies, while no running list is registered as being entirely managed by a smaller right-wing organisation. At the same time, 23.85% of lists correspond to left-wing coalitions and 11.45% to right-wing ones. These statistics illustrate the importance of coalitions between main political organisations and smaller parties. This table also confirms the importance of “other right-wing candidates” and “other left-wing candidates”. Finally, centrist lists, independent candidates, far-right and far-left parties take up few space in municipal elections.

Table A3 describes the distribution of political affiliations of county executive chiefs over my period of analysis. It illustrates the importance of the PS and the main right-wing party (the UMP and the RPR), despite coalitions which can be made at the municipal level. 42.11% of counties’ executive chiefs are members of the PS, while 26.32% of them are members of the UMP or the RPR. Smaller left-wing parties represent only 5.61% of county leaders. As for smaller right-wing ones, they represent 15.44% of them. This share is almost entirely driven by the UDF before 2007, which was the most important party among those who frequently made coalitions with the UMP or the RPR. The main contrast with Table A2 is the relatively low share of other right-wing candidates and other left-wing ones. This illustrates the fact that this reporting is more specific to local ballots. It also appears that no county executive chiefs are far-right or far-left.

Regarding this political landscape, municipal and county councils are classified into five categories of political affiliation:

- *Right-wing councils*: this group is made of the main right-wing party, smaller right-wing organisations, as well as other right-wing candidates. Grouping all these incumbents together is consistent with the above description of the French political context, since coalitions between right-wing parties is a frequent practice, and reporting to be right-wing without any party of affiliation seems to be specific to local ballots but may not be a sign of independence from political organisations.
- *Left-wing councils*: this group is analogous to the first one. It is made of the PS, smaller left-wing parties, as well as other left-wing candidates.
- *Far-right councils*.
- *Far-left councils*.
- *“Other councils”*: this group is made of all incumbents which cannot be classified on the left or on the right of the political spectrum. This is the case of the MODEM, other specific parties as well as candidates who report neither a party of affiliation, nor a political orientation.

B Control variables

Covariates included in regressions are the following. First, I control for total municipal population (in logarithm). 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. Second, I control for municipal area (in logarithm). Given the inclusion of total municipal population, this is equivalent to control for population density. 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. Third, I control for the share of people aged 14 and less in the municipal population and the share of people aged 65 and over. As an important part of municipal facilities are intended to young people (e.g. primary schools, cultural activities) and elderly people (e.g. retirement houses), one can expect a positive sign on these two variables. The vector X_{ie-1} also includes the median inhabitants' income per unit of consumption (in logarithm).⁴⁰ 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. I take the median instead of the mean, since this last indicator is by definition highly impacted by extreme values in the distribution of income. Still regarding the responsibility of counties in social policy, coefficients of interest are estimated after controlling for the municipal unemployment rate, as well as the log of fiscal potential per capita of the municipality.⁴¹ I also control for the share of self-employed among the population in employment, as well as the share of high-skilled workers (used as a proxy for higher education). These two variables aim at capturing local preferences of voters for redistribution. They may have explanatory power on discretionary investment grants, since public investment corresponds to future in-kind redistribution.⁴² Control variables also include a dummy equal to one for left-wing municipalities. Although there is mixed evidence on whether political parties per se matter on local policies (Ferreira & Gyourko (2009), Solé-Ollé & Viladecans-Marsal (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. Finally, covariates include a dummy for each status of inter-municipal cooperation (see Section 2), the reference group being municipalities which are not in an inter-municipal community. Although there is mixed evidence on the impact of inter-municipal cooperation on municipal spending (Frère et al. (2013), Guengant &

⁴⁰The 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.

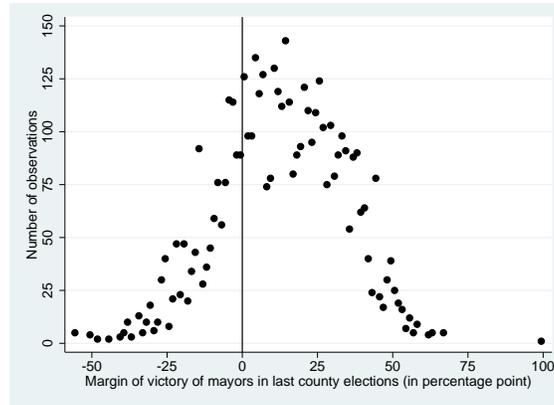
⁴¹The fiscal potential of a municipality is the sum of all its local tax bases multiplied by the average tax rate over the French territory. In other words, it is the amount of fiscal revenues a municipality could get if it applies tax rates municipalities decide on average. This variable could be seen 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. Table A1 in Appendix gives a description of municipal taxes.

⁴²Alesina & 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. Moreover, 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.

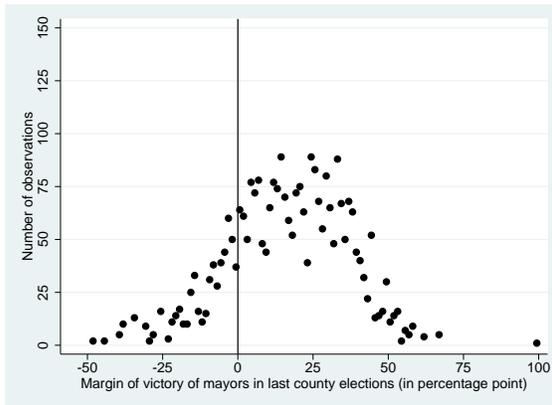
[Leprince \(2006\)](#), [Leprince & Guengant \(2002\)](#)), one could expect that municipalities with a higher degree of cooperation will undertake less investment, as a result of the delegation to the community.

C Additional figures

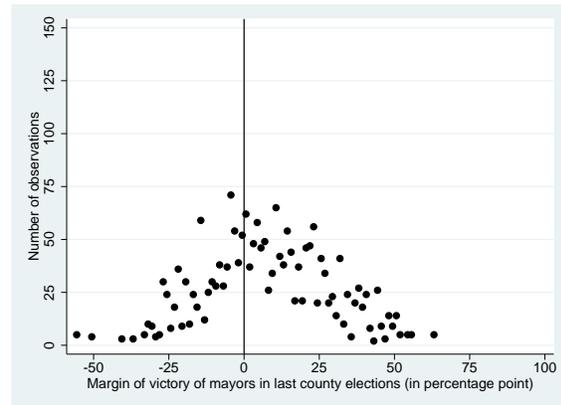
Figure A1: Number of observations per bin of the margin of victory of mayors in last county elections



(a) *Whole sample*



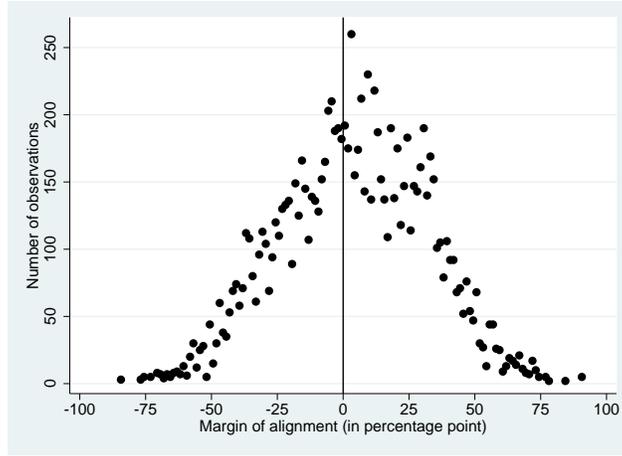
(b) *Aligned municipalities*



(c) *Non-aligned municipalities*

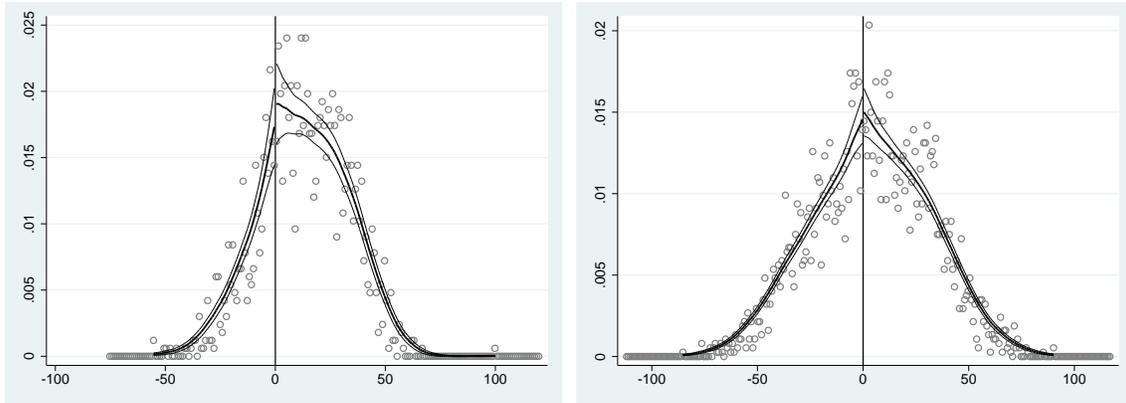
These figures show for the sample used for the RDD on multiple office-holding (described in Column (2) of Table 2), and for the two resulting split samples according to alignment, the number of observations in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25 percentage point.

Figure A2: Number of observations per bin of the margin of alignment



This figure shows for the sample used for the RDD on alignment (described in Column (4) of Table 2) the number of observations in each bin of the margin of alignment, with a bin width of 1.25 percentage point.

Figure A3: McCrary test for no discontinuity at the cut-off

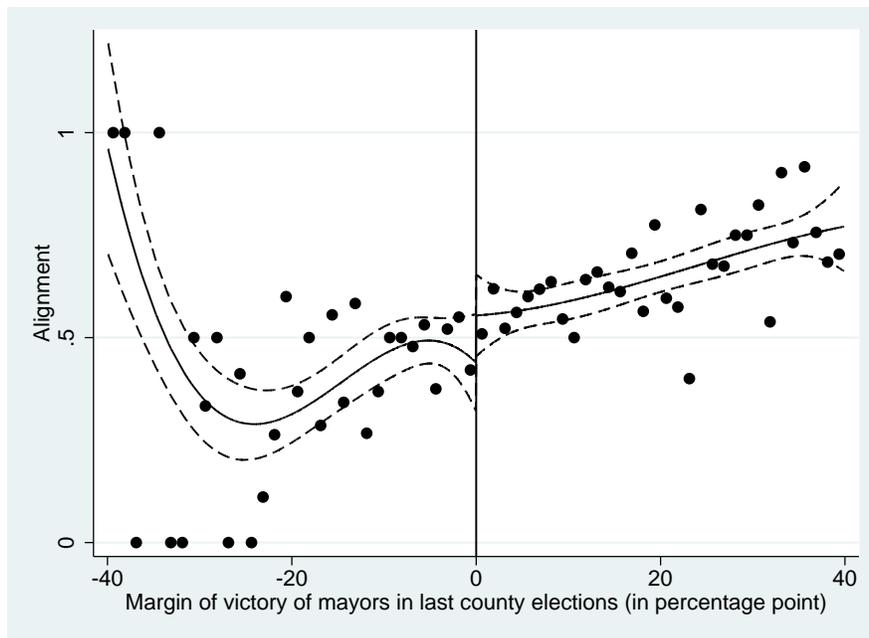


(a) *Margin of victory of mayors in county elections*

(b) *Margin of alignment*

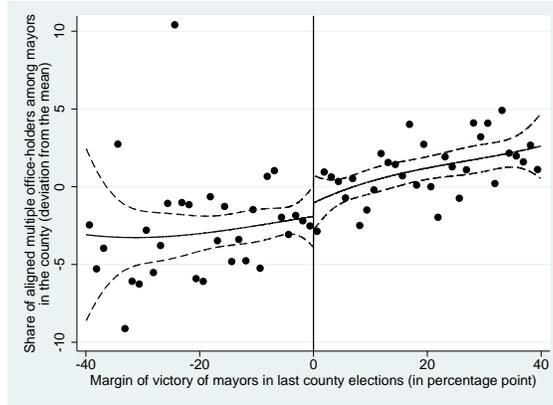
These two figures show the density of assignment variables, and show 95% confidence intervals from the test of no discontinuity at the cut-off, following McCrary (2008). The figure on the left shows this test for the margin of victory of mayors in last county elections (MV_{it}), while the figure on the right shows the analogous picture for the margin of alignment (MA_{it}).

Figure A4: Validity test of the *HLATE* estimation - Political alignment according to the margin of victory of mayors in last county elections

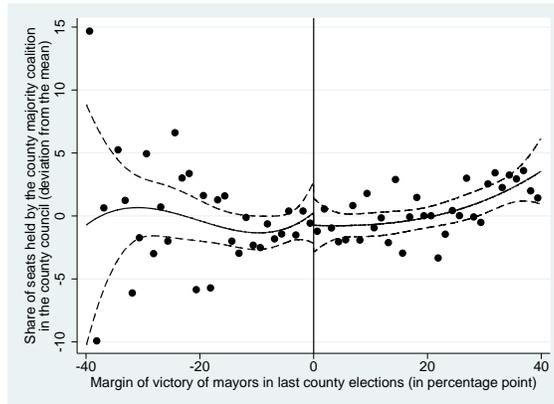


This figure shows the fitted curve from the estimation of Equation (1) (with no covariate and fixed effect) where the dependent variable is the alignment dummy. As the alignment dummy and the margin of victory in last county elections are constant for a given municipality over a political cycle, this 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 0.12, with a robust standard error of 0.08. 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. See Figure A1a which shows the number of observations in each bin.

Figure A5: Validity tests for the investigation of mechanisms - Variables of interaction according to the margin of victory of mayors in last county elections



(a) *The share of aligned multiple office-holders among mayors in the county (deviation from the mean) - in percentage point*



(b) *The share of seats held by the county majority coalition in the county council (deviation from the mean) - in percentage point*

These figures show the fitted curve from the estimation of Equation (1) (with no covariate and fixed effect) where the dependent variable is an interaction variable used for the investigation of mechanisms underlying baseline findings on the effect of multiple office-holding. As these variables and the margin of victory in last county elections are constant for a given municipality over a political cycle, these estimations are run by keeping only one observation per municipality per political cycle. For the share of aligned multiple office-holders among mayors in the county, the point estimate on the multiple office-holding dummy from the represented regression (i.e. the effect at the cut-off) is 0.88, with a robust standard error of 1.36. For the share of seats held by the county majority coalition in the county council, these two statistics are respectively -1.02 and 1.66. Dashed lines represent 95% confidence intervals. Each dot represents the average of the dependent variable in each bin of the margin of victory of mayors in last county elections, with a bin width of 1.25. See Figure A1a which shows the number of observations in each bin.

D Additional tables

Table A1: 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 ^a | 713 | 60.1% | . | 48.8% |
| Formula-based operating grants | 300 | 25.3% | . | 20.5% |
| Other operating revenues ^b | 173 | 14.6% | . | 11.8% |
| TOTAL operating revenues (1) | 1186 | 100.0% | . | 81.1% |
| <i>Investment section</i> | | | | |
| Surplus of the operating section ^c (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^d</i> | 19 | . | 4.0% | 1.3% |
| Assets transfers ^e | 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.

^a There are three municipal taxes in France. The housing tax (*la taxe d'habitation*) is paid by residents on the cadastral value of their accommodation. The property tax (*la taxe foncière*) is paid by owners on the cadastral value of their real estate. The local business tax (*la taxe professionnelle*) is paid by firms on their real estate and their production facilities. Municipalities decide tax rates and some tax base reductions for these three taxes.

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

^c 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.

^d These are grants from inter-municipal communities and the European Union.

^e This item represents transfers of capital assets due to transfers of competencies.

Table A2: Political affiliations - running lists in municipal elections

| | |
|-----------------------------|---------|
| UMP/RPR | 9.74% |
| PS | 5.49% |
| Right-wing coalition | 11.45% |
| Left-wing coalition | 23.85% |
| Small right-wing parties | 0.00% |
| Small left-wing parties | 2.34% |
| Other right-wing candidates | 22.48% |
| Other left-wing candidates | 13.74% |
| Centrists ^a | 4.32% |
| Far-right | 1.91% |
| Far-left | 1.77% |
| Independent candidates | 2.91% |
| TOTAL | 100.00% |

Source: French Home Office.

This table represents the share of each kind of political affiliation among all running lists in municipal elections of 2001 and 2008 for municipalities over 3,500 inhabitants. See the text (Section A) for a definition of the different political affiliations mentioned in this table.

^a This category corresponds to the Modem and running lists associated to UDF after 2007.

Table A3: Political affiliations - executive chiefs of county councils

| | |
|-----------------------------|---------|
| UMP/RPR | 26.32% |
| PS | 42.11% |
| Small right-wing parties | 15.44% |
| Small left-wing parties | 5.61% |
| Other right-wing candidates | 8.42% |
| Other left-wing candidates | 0.70% |
| Centrists ^a | 1.40% |
| TOTAL | 100.00% |

This table represents the share of each political affiliation among all county executive chiefs over the period 2002-2011. See the text (Section A) for a definition of the different political affiliations mentioned in this table.

^a This category includes executive chiefs reported as being member of UDF after 2007.

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 | 0.04 (0.04) | 0.07** (0.03) |
| (Alignment)*(Multiple office-holding) | 0.33*** (0.07) | 0.21*** (0.06) |
| log(Municipal surface in km ²) | | 0.12*** (0.02) |
| log(Total population) | | -0.11*** (0.02) |
| % pop <=14 (in percentage point) | | 0.01 (0.01) |
| % pop >=65 (in percentage point) | | 0.01** (0.00) |
| log(Median income of residents per UC ^a) | | -0.61*** (0.22) |
| Unemployment rate (in percentage point) | | -0.01 (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) | | -0.02 (0.04) |
| Left-wing municipality | | 0.07** (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 | 14824 | 14824 |

* 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 estimations from a baseline OLS specification, with no regression discontinuity setting.

^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 2 for a description of these status.

^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: Robustness checks - The heterogeneous effect of multiple office-holding according to alignment with alternative polynomial orders

| | <i>Dependent variable: discretionary investment grants per head from counties (log of)</i> | | | |
|-------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| | <i>HLATE</i> 1 st order polynomial | <i>HLATE</i> 2 nd order polynomial | <i>Joint RDD</i> 1 st order polynomial | <i>Joint RDD</i> 2 nd order polynomial |
| Multiple office-holding | 0.17 (0.12) | 0.18 (0.14) | 0.09 (0.13) | 0.19 (0.15) |
| Alignment | 0.14 (0.12) | 0.12 (0.12) | -0.12 (0.13) | 0.01 (0.18) |
| (Alignment)*(Multiple office-holding) | 0.28* (0.15) | 0.30** (0.14) | 0.33** (0.14) | 0.34** (0.14) |
| Fixed effects and covariates ^a | No | No | No | No |
| Adjusted R-squared | 0.02 | 0.03 | 0.03 | 0.03 |
| Nb. Obs | 4492 | 4492 | 2969 | 2969 |
| Multiple office-holding | 0.09 (0.11) | 0.16 (0.13) | 0.04 (0.13) | 0.17 (0.16) |
| Alignment | 0.05 (0.10) | 0.05 (0.10) | -0.07 (0.14) | 0.07 (0.17) |
| (Alignment)*(Multiple office-holding) | 0.26** (0.11) | 0.26** (0.11) | 0.27** (0.13) | 0.27** (0.13) |
| Fixed effects and covariates ^a | Yes | Yes | Yes | Yes |
| Adjusted R-squared | 0.28 | 0.28 | 0.30 | 0.30 |
| Nb. Obs | 4492 | 4492 | 2969 | 2969 |

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

The two first columns show results from the *HLATE* estimation (Equation (2)), while the two last ones come from the estimation of the joint RDD (Equation (3)).

^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: Robustness checks - The average effect of multiple office-holding in different samples

| <i>Dependent variable: discretionary investment grants per head from counties (log of)</i> | | | | | | |
|--------------------------------------------------------------------------------------------|---------------------------|-----------------------|-----------------------|--------------------------|-------------------|-------------------|
| | Polynomial specifications | | | Local linear regressions | | |
| | 1 st order | 2 nd order | 3 rd order | Opt bwth | 0.5*(Opt bwth) | 2*(Opt bwth) |
| <i>Whole sample</i> | | | | | | |
| Multiple office-holding | 0.33*** (0.10) | 0.34*** (0.12) | 0.53*** (0.17) | 0.40*** (0.15) | 0.76*** (0.23) | 0.36*** (0.12) |
| Bandwidth | | | | 9.66 | 4.83 | 19.33 |
| Fixed effects and covariates ^a | No | No | No | No | No | No |
| Adjusted R-squared | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.01 |
| Nb. Obs | 4492 | 4492 | 4492 | 1503 | 834 | 2684 |
| Multiple office-holding | 0.24** (0.10) | 0.30** (0.12) | 0.45*** (0.16) | 0.26 (0.16) | 0.58* (0.33) | 0.27** (0.12) |
| Bandwidth | | | | 9.66 | 4.83 | 19.33 |
| Fixed effects and covariates ^a | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R-squared | 0.28 | 0.28 | 0.28 | 0.27 | 0.26 | 0.27 |
| Nb. Obs | 4492 | 4492 | 4492 | 1503 | 834 | 2684 |
| <i>Aligned municipalities</i> | | | | | | |
| Multiple office-holding | 0.56*** (0.15) | 0.59*** (0.20) | 0.78*** (0.25) | 0.76*** (0.21) | 0.83*** (0.30) | 0.52*** (0.18) |
| Bandwidth | | | | 12.12 | 6.06 | 24.25 |
| Fixed effects and covariates ^a | No | No | No | No | No | No |
| Adjusted R-squared | 0.01 | 0.01 | 0.01 | 0.03 | 0.04 | 0.02 |
| Nb. Obs | 2649 | 2649 | 2649 | 969 | 543 | 1754 |
| Multiple office-holding | 0.45*** (0.15) | 0.52*** (0.20) | 0.69*** (0.26) | 0.63** (0.27) | 0.66 (0.46) | 0.39** (0.19) |
| Bandwidth | | | | 12.12 | 6.06 | 24.25 |
| Fixed effects and covariates ^a | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R-squared | 0.30 | 0.30 | 0.30 | 0.33 | 0.33 | 0.29 |
| Nb. Obs | 2649 | 2649 | 2649 | 969 | 543 | 1754 |
| <i>Non-aligned municipalities</i> | | | | | | |
| Multiple office-holding | 0.09 (0.14) | 0.14 (0.19) | 0.21 (0.24) | 0.18 (0.17) | 0.25 (0.23) | 0.11 (0.14) |
| Bandwidth | | | | 17.18 | 8.59 | 34.37 |
| Fixed effects and covariates ^a | No | No | No | No | No | No |
| Adjusted R-squared | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nb. Obs | 1843 | 1843 | 1843 | 1131 | 636 | 1758 |
| Multiple office-holding | 0.02 (0.13) | -0.01 (0.18) | 0.13 (0.25) | 0.16 (0.20) | 0.35 (0.33) | -0.02 (0.13) |
| Bandwidth | | | | 17.18 | 8.59 | 34.37 |
| Fixed effects and covariates ^a | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R-squared | 0.29 | 0.29 | 0.29 | 0.29 | 0.31 | 0.29 |
| Nb. Obs | 1843 | 1843 | 1843 | 1131 | 636 | 1758 |

* 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).

These results come from the estimation of the regression discontinuity setting on multiple office-holding, without any heterogeneity according to alignment (Equation (1)). This specification is estimated on the whole sample (described in Column (2) of Table 2), as well as on the sub-samples of aligned and non-aligned municipalities. For each of these samples, this table shows the estimated multiple offices effect with and without the inclusion of covariates and fixed effects. For robustness concerns, six estimations are run for each sample and each set of controls: polynomial regressions with orders going from one to three, and local linear regressions by considering the optimal bandwidth defined by Imbens & Kalyanaraman (2012) as well as half and double this optimal bandwidth.

^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: Robustness checks - The average effect of alignment with alternative regression discontinuity specifications

| <i>Dependent variable: discretionary investment grants per head from counties</i> | | | | |
|-----------------------------------------------------------------------------------|---------------------------|-----------------------|--------------------------|-----------------|
| | Polynomial specifications | | Local linear regressions | |
| | 1 st order | 2 nd order | 0.5*(Opt bwth) | 2*(Opt bwth) |
| Alignment | 0.12* (0.07) | 0.18 (0.11) | 0.19 (0.12) | 0.11* (0.07) |
| Bandwidth | | | 9.95 | 39.79 |
| Fixed effects and covariates ^a | No | No | No | No |
| Adjusted R-squared | 0.00 | 0.00 | 0.00 | 0.01 |
| Nb. Obs | 9108 | 9108 | 2949 | 9088 |
| Alignment | 0.10 (0.06) | 0.17* (0.10) | 0.18 (0.13) | 0.10 (0.06) |
| Bandwidth | | | 9.95 | 39.79 |
| Fixed effects and covariates ^a | Yes | Yes | Yes | Yes |
| Adjusted R-squared | 0.25 | 0.25 | 0.28 | 0.25 |
| Nb. Obs | 9108 | 9108 | 2949 | 9088 |

* 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).

These results come from the estimation of the RDD on alignment (Equation (4)). The first and the second columns show point estimates from first and second order polynomial specifications, while the third and the last ones show results from local linear regressions, by using respectively half and double the optimal bandwidth defined by [Imbens & Kalyanaraman \(2012\)](#). For each of these columns, this table shows results from two regressions: one which includes no additive control, and another one which includes covariates as well as year and county councils fixed effects.

^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: Test for no discontinuity in covariates at the cut-off - P-values of the Chi-Square test performed from the SUR model

| | Polynomial specifications | | | Local linear regressions | | |
|--------------------------------|---------------------------|-----------------------|-----------------------|--------------------------|----------------|--------------|
| | 1 st order | 2 nd order | 3 rd order | Opt bwth | 0.5*(Opt bwth) | 2*(Opt bwth) |
| RDD on multiple office-holding | 0.190 | 0.199 | 0.143 | 0.322 | 0.044 | 0.176 |
| RDD on alignment | 0.000 | 0.365 | 0.103 | 0.168 | 0.374 | 0.000 |

For each RDD, the implemented SUR model contains one equation per covariate of the vector X_{ie-1} (see Section B for a description of this set of covariates). Each equation of the system consists in replacing the dependent variable in the tested RDD by a different covariate. See the text (Section 5.2) for more details on this procedure.