Where and why do politicians send pork? Evidence from central government transfers to French municipalities *

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Abstract

This paper uses French data to simultaneously estimate the impact of two types of connections on government subsidies allocated to municipalities. Investigating different types of connection in a same setting helps to distinguish between the different motivations that could drive pork-barreling. We differentiate between municipalities where ministers held office before their appointment to the government and those where they lived as children. Exploiting ministers' entries into and exits from the government, we show that municipalities where a minister was mayor receive 30% more investment subsidies when the politician they are linked to joins the government, and a similar size decrease when the minister departs. In contrast, we do not observe these outcomes for municipalities where ministers lived as children. These findings indicate that altruism towards childhood friends and family does not fuel pork-barreling, and suggest that altruism toward adulthood social relations or career concerns matter. We also present complementary evidence suggesting that observed pork-barreling is the result of soft influence of ministers, rather than of their formal control over the administration they lead.

KEYWORDS: Local favouritism, distributive politics, political connections, personal connections.
JEL CLASSIFICATION: D72, D73, H50, H77.

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1 Introduction

The literature on distributive politics has exposed much evidence of *pork-barreling*, i.e. situations in which high-level politicians influence the allocation of public resources to favour people or places they cherish, at the expense of efficiency or policy criteria. This literature identifies groups or places that politicians are connected to and investigates whether they receive preferential treatment from government. The two main categories of connections that are studied are those associated with politicians' birthplaces and those that arise from politicians' political careers (e.g., districts of election in parliamentary systems). Both types of connections are found to matter in different contexts. However, while pork-barreling along different types of connections could relate to different motivations of high-level politicians, to date, research has only looked at one type of connection at a time. This leaves open the question of the relative importance of potentially different politicians' motivations in explaining pork-barrel politics.

In this paper, we use French data to simultaneously estimate the impact of two types of connections on the allocation of government subsidies to municipalities. To this end, we use an original data set made of the detailed curricula of all individuals who were members of the French central government over the 1995–2021 period. These data allow us to construct two types of links between a municipality and a minister. We distinguish between municipalities in which a politician held office before being appointed to the government and municipalities that ministers lived in as children (as proxied by ministers' birthplace and municipalities where ministers attended high school). Combining this with ministers' terms in office and municipalities' detailed accounts of discretionary grants received from the central government, we can study whether municipalities experience significant changes in the subsidies they receive from the central government while politicians municipalities are connected to are in office. For this, we use the difference-in-differences methodology of de Chaisemartin and D'Haultfœuille (2023) that makes it possible to estimate several treatment effects in a staggered design.

The interest of studying two types of connection in a same framework is that each might be related to different motivations. More precisely, different types of connections likely represent different categories of individuals to whom high-level politicians are linked. Consequently, these connections may give rise to potentially different motivations for politicians to engage in pork-barreling. The two main motivations that are typically considered as explanations of pork-barreling by politicians are personal connections and political career concerns. Connections studied in this paper differently relate to these motivations. On the one hand, connections built during childhood likely relate to links between an individual and her personal childhood friends or family. Pork-barreling in favour of places where a politician has such connections would thus reveal the politician's altruism toward these people and cannot be explained by political career concerns as family and childhood friends have *a priori* no lever to directly support an individual's political career. On the other hand, connections formed during the early steps of one's political career likely relate to links between an individual and the local political elite or friends and social relations met during adulthood. Pork-barreling that favours places where a politician has such connections could thus be motivated by the politician's altruism toward adulthood social relations, as well as by her career concerns as members of a local political elite could be important in supporting a politician's career. In addition, multiple types of connections might be correlated depending on politicians' individual trajectories. Studying both types of connections in the same analytical framework is therefore key in order to be able to safely assess their relative importance in explaining pork-barreling and makes it possible to further investigate underlying motivations.

We find that municipalities in which a minister previously held the position of mayor experience a 30% increase in investment subsidies from the central government when the politician they are linked to enters into the government, and a similar sized decrease when she leaves. In contrast, we find no such effects for municipalities that ministers lived in as children. These findings are robust to a variety of robustness checks and falsification

tests, such as using formula-based transfers to municipalities or using different estimation methodologies.

According to the preceding conceptual development, these results show that altruism toward childhood friends and family can be excluded from the list of potential motivations of politicians to engage in pork-barreling. In contrast, results indicate that both altruism toward adulthood social relations and career concerns might matter. The empirical framework we use makes it possible to further disentangle between these potential motivations. In particular, because members of the central government are appointed and do not face any short term electoral motivation at the local level, their political career concerns can only relate to delayed reward for past electoral support or to an anticipated reward for future electoral support at the local level. Given that pork-barreling is only found to matter for places in which ministers started their political career, all of them *a priori* have the same incentives to provide their early supporters with delayed rewards.[1] In contrast, only those who anticipate that they will run again in local elections have incentives to seek future support. Accordingly, if only altruism toward adulthood social relations or delayed reward of past support matter, pork-barreling in favor of places where ministers were mayors should not vary along electoral competitions they will participate in after their time in the central government. In contrast, if anticipated reward for future political support matter, pork-barreling should be different depending on whether a minister will run or not in future local elections. To apply this approach, we take advantage of comprehensive information about ministers participation in local elections and compare pork-barreling in favour of municipalities where ministers were mayors depending on ministers' participation in local elections after their time in the central government. Results turn out not to offer strong evidence that the overall treatment effect would be driven by ministers who will run again for local elections related to the munici-

[1]Delayed reward for past political support can be rationalized by the existence of some commitment mechanism. See for instance Drazen and Ozbay (2019) who document political reciprocity by elected leaders in favor of voters in an experimental setting. Under the alternative assumption of no such commitment power or no feature enforcing the politician to respect it, delayed reward for early political support amounts to altruism.

pality where they previously hold a mayoral position. Accordingly, we can't conclude that anticipated reward for future political support is the most important motivation for ministers to engage in pork-barreling. In the same time, issues related to statistical inference due to small sample size imply that we can't either conclude that future political support plays no role in pork-barreling. We are thus unable to further disentangle altruism towards adulthood social relations from career concerns in this paper's context.

The source of variation in our identification strategy is the period in which a politician is a member of the French government. Identification and interpretation would be severely threatened if appointments to the government were related to the circumstances of specific municipalities. However, two facts help us to discard this threat. First, we are not aware of any anecdotal evidence that would suggest that appointments to the government are made in response to local politics. Second, formal and visual pre-treatment tests show that connected municipalities don't receive atypical subsidies before the politicians they are linked to are appointed as ministers of the central government.

This paper's findings contribute to two strands of the literature. The first is the literature that offers evidence of pork-barrel practices along politicians' connections.[2] This literature typically studies one type of connection to high-level politicians at a time. For instance, Carozzi and Repetto (2016), Mattos et al. (2021) and Widmer and Zurlinden (2022) study birthplaces of members of parliament in Italy, of members of parliament in Brazil, and of cabinet members in 36 African countries, respectively; Fiva and Halse (2016) and Baskaran and Lopes da Fonseca (2021) study places of residence of members of the regional government in Norway and Germany, respectively; Golden and Picci (2008) and Jennes and Persyn (2015) study electoral districts of members of the Belgian federal government and of the Italian parliament, respectively; and Do et al. (2017) study the home towns of Vietnamese officials'

[2]Part of the literature about pork-barrel politics focuses on the political alignment of lower administrative tiers with higher ones or on the importance of political support at large. See for example Castells and Solé-Ollé (2005), Cadot et al. (2006), Solé-Ollé and Sorribas-Navarro (2008), Arulampalam et al. (2009), Aidt and Shvets (2012), Brollo and Nannicini (2012), Albouy (2013), Migueis (2013), Bracco et al. (2015), Kauder et al. (2016) and Curto-Grau et al. (2018).

ancestries. Cross-country works by Hodler and Raschky (2014), Gehring and Schneider (2018) or Bommer et al. (2022) use the birth region of a country's leader or the nationality of EU Commissioners to construct connections. We extend this literature by studying two types of links in the same context.[3] Mattos et al. (2021) and Carozzi and Repetto (2016) illustrate well how this paper contributes to the literature by studying different types of link in a same setting. Indeed, both papers highlight the importance of birthplace favoritism and provide some evidence that it is more important when the policy-maker born in the favoured municipality will run for municipal elections in this municipality. However, because of possible correlations between the different types of connections and because birthplace can be correlated with other ties related to politicians' past, these evidence do not make it possible to firmly conclude about their relative importance in explaining pork-barreling. In contrast, this paper's approach makes it explicitly possible to distinguish between types of connections and shows how such distinction can be used to elicit politicians' motivations. We show that, in the French context, connections associated with top-politicians' early careers matter and that connections inherited from their childhood don't. While these results might be specific to our context, they allow us to partly elicit the relative importance of politicians' motivations for pork-barreling as discussed above. Altruism toward childhood friends or families turns out not to matter. In contrast, career concerns and/or altruism toward adulthood social relations do matter.

Second, by investigating the impact of different types of connections on public transfers, we contribute to the broader literature that documents the impact of connections to executive politicians rather than to members of parliament. Works by Fisman (2001), Faccio (2006), Goldman et al. (2009), Cingano and Pinotti (2013), Coulomb and Sangnier (2014), Fafchamps and Labonne (2017), Folke et al. (2017) and Bourveau et al. (2021), among others, show that firms or individuals actually benefit from being connected to politicians in

[3]To the best of our knowledge, Carozzi and Repetto (2016) are the only ones to account for different types of links, although indirectly, by distinguishing between birthplaces of Italian members of parliament depending on whether they are located within the district the politician was elected to.

office. As findings by Baskaran and Lopes da Fonseca (2021) and Widmer and Zurlinden (2022), our results indicate that ties between executive members of a government and lower administrative tiers also matter for the allocation of resources.

We also present several additional results that offer new insights about the mechanisms at play in pork-barreling. First, we show that targeting is accurate, as neighbouring municipalities do not benefit from the additional resources that flow to municipalities where ministers were mayors, which suggests that ministers' influence can be used to favour precisely located affiliates. Second, we provide evidence that subsidies from intermediate administrative tiers are not affected by links between municipalities and top-level politicians. This suggests that ministers' influence does not or cannot reach outside of the government. Third, we do not find any heterogeneity in effects depending on the status and the importance of ministers. This suggests that soft influence within the government matters more than direct and formal control over parts of the central government budget.

All in all, this paper's results confirm the importance of connections in distributive politics and offers a way to disentangle and to quantify to the different possible underlying motivations of high-level politicians to engage in pork-barreling. In the studied context, reported results suggest that altruism toward childhood friends and family is not a driver of pork. This targeting is precise and concentrated on the specific connected jurisdictions. Additional evidence we present further suggests that politicians use soft power within the administration to favour the local jurisdiction they are connected to.

The remainder of this paper is organized as follows. Section 2 describes the context and the assembled data, and lays-out the estimation strategy. Section 3 presents and discusses the results. Section 4 contains concluding remarks.

2 Data and methodology

In this section, we present the institutional context, the data, and our empirical strategy.

2.1 Institutional context and changes in government composition

France is a parliamentary democracy. Since 2002, parliamentary and presidential elections are synchronized and take place every five years. The French President is elected by direct universal suffrage. Members of the parliament are elected using a two-round system with single-member constituencies. The President appoints the Prime Minister to reflect the dominant political orientation of members of the parliament. The Prime Minister selects members of the government, the country's highest decision-making body.[4,5] We collected information about the composition of the government over the 1995–2021 period from the French government official website and archives.

Shaded areas of Figure 1 map the different heads of State and of the government from mid-1995 to mid-2021. Over this period, the French government was made up of 35 ministers on average and its composition changed frequently. The monthly counts of entries into and exits from the government are represented by upward and downward spikes of Figure 1. Large flows occur following elections or decisions by leaders of the political majority to change the head of the government and its composition. Changes of smaller magnitude also frequently occur in response to day-to-day events in national politics. As illustrated by the distribution of lengths of ministers' terms displayed in Figure 2, the median length of terms in government is just above 2 years.

[4] A feature of French politics is that the government is typically supported by a single political party or by a very homogeneous coalition of parties. As such, there is no strong heterogeneity in the political orientation of members of the government.

[5] Members of the government do *not* need to be members of the parliament. In case they hold such a position, they are automatically replaced by a substitute who was elected to step in if this happened.

2.2 Links of members of the government to municipalities

We constructed the detailed curricula of the 333 individuals who served as members of the French government between mid-1995 and mid-2021. We manually collected and cross-checked information using online resources such as the French parliament and government's websites, politicians' official websites, Wikipedia and, occasionally, information websites. From this, we gathered detailed information about ministers' political careers and places where they lived when young.

Figure 3 uses the collected list of political positions held by ministers to display the dynamics of the share of individuals who ever held an electoral mandate at each age. Electoral mandates include membership of *départemental* and regional assemblies, membership of municipal councils and terms as a member of national and European parliaments. As shown by the long-dashed line of Figure 3, a large majority of ministers completed at least one electoral mandate before entering the government. Only 42 out of the 333 observed members of the government (12.6%) did not complete any electoral mandate before being appointed to the government.

The solid line of Figure 3 represents the share of individuals who served as mayors of municipalities. The short-dashed line represents the share of individuals who completed at least one electoral mandate but did not serve as mayor. They illustrate the importance of mayoral positions in the careers of top French politicians, as they were held by about 45% of ministers before they reached the age of 53, the median of observed ages while serving in the government.

Municipal elections take place every six years. Voters elect a municipal council, whose members designate the mayor. While it is not a legal requirement, the mayor is virtually always the candidate who was ranked first on the winning list. Once in office, the mayor is an agent of both the state and the municipality. She holds a variety of administrative responsibilities that exceed by far those associated with any other electoral mandate.[6] As

[6]The mayor fulfils administrative duties that include the publication of general laws and executive orders,

highlighted by Peveri and Sangnier (2023), mayoral positions are actually peculiar in French politics. Online Appendix Figure A1(a) illustrates this claim by plotting the share of people interviewed in the *Baromètre de la confiance politique* who report having much or some trust in different political roles. French mayors appear to consistently benefit from higher trust from citizens than individuals in any other political roles. This and the importance of mayors' responsibilities mentioned above translate into a higher turnout in municipal elections than in other local elections. We show this in Online Appendix Figure A1(b), which plots turnout in the different rounds of all elections held in France from 1995 to 2020. Presidential elections are the only elections to outclass municipal elections in terms of turnout.

We identify municipalities in which people who served as ministers had previously acted as mayor before being appointed to the government. We also identify municipalities that ministers lived in when young. We identify these municipalities as municipalities in which ministers were born or attended high school.[7,8] We exclude France's three largest municipalities (Paris, Marseille and Lyon) from the sample because they are outliers in numerous dimensions. For instance, they have different administrative regulations, use a slightly different system for municipal elections, and are so populous that there is virtually always one member of the government who is linked to them.

the application of national safety rules, and some judiciary tasks. She presides over the municipal council, signs contracts on behalf of the municipality, prepares and administrates the budget, rules on municipal properties, organizes the work of the municipal staff. The mayor is also responsible for building permits and vehicle traffic organization in the municipality's territory. The mayor is also in charge of the security of the town, the logistics of primary education, childhood and youth policy, sport and cultural local infrastructures. While some tasks can be delegated to deputy mayors, the mayor is the only executive authority of the municipal council and is the only member to be legally responsible for the management of the municipality.

[7]Birthplaces of politicians are generally used in the literature to identify "home towns" or "personal connections" (in contrast to political or career-oriented connections). There are however no *a priori* reasons to believe that such connections are more precisely captured by birthplace information than by other information about the early life of individuals, especially in societies were mobility is possible. In addition, hospitals are frequently located in nearby municipalities and the official birthplace might not accurately reflect individual origins. Up to 63.9% of the politicians we observe actually attended high school in a different municipality than the one in which they were born. However, there are no strong *a priori* reasons either to believe that high school attendance is a better proxy for personal connections, as high school students also commute. We thus make the most of both sources of information.

[8]Because of the geographical structure of French higher education, which is highly concentrated in a few large municipalities, and of the self-selection of (future) top-level politicians in a handful of curricula, variation in places where ministers attended a higher education institution is very low and cannot be used as a supplementary source of relevant information.

We supplement our information about the composition of the government with personal information and dates of service of individuals who served as President of the Republic or as heads of the upper and lower houses (the *Sénat* and the *Assemblée nationale*) since 1995.[9] Our final dataset comprises 341 politicians.[10] For convenience, we indistinctly refer to this group as members of the government.

Online Appendix Figure A2 illustrates the spatial distribution of these municipalities and shows that they are distributed over the whole French territory. In total, members of the French government over the 1995–2021 period held mayoral positions in 135 municipalities before entering in the government. They are born and/or attended high school in 227 distinct municipalities. 61 municipalities satisfy both criteria, either simultaneously or not, over the full period. Among politicians who were mayors, only 19.3% held positions in a municipality that is also classified as their childhood municipality.

2.3 Connections of municipalities to members of the government

We define a municipality as connected to a member of the French government in a given year if this municipality is a place where a current member of the government lived when young or acted as mayor before being appointed to the government. To account for the fact that ministers are typically not appointed or dismissed on January 1 and December 31, we consider that connection is first (last) active if the minister starts (ends) before (after) the first 4 months of the start (end) year of her/his term in office.

Differences in ministers' past personal and electoral history and in the above-documented composition of the government imply that there is variation over time in the number of connected municipalities. As shown by upward and downward spikes in Figure 4, each

[9]The President of the Republic officially shares executive power with the Prime Minister and is ranked first in the official French order of precedence. The Prime Minister is ranked second. The heads of the upper and lower houses are ranked third and fourth in the order of precedence and are strongly connected with the government to organize parliamentary tasks. The fifth rank is for former Presidents of the Republic. Members of the active government are ranked sixth and lower.

[10]333 of them were members of the government during the mid-1995 and mid-2021 period, and 8 were President of the Republic or head of one of the two parliamentary houses during the studied period.

year a number of municipalities lose or gain connections to the government. The shaded areas of Figure 4 plot the yearly number of municipalities in which members of the current government held mayoral positions or lived when young. On average, 47.3 municipalities are connected to a member of the government each year. 12.5 are places where members of the current government served as mayors, 29.9 are childhood places of ministers, and 4.9 satisfy both criteria simultaneously.

Because of the distribution of lengths of ministers' terms that peaks at two years (see Figure 2), most municipalities connected to a minister are observed in their first or second year in treatment, as illustrated in Online Appendix Figures A3(a) and (b). In contrast, connected municipalities are less frequently observed after longer times in treatment.

2.4 Discretionary investment subsidies to municipalities

We obtained from the French *Direction Générale des Finances Publiques* the yearly amount of investment grants received by each of the 36,670 French municipalities from higher administrative levels for the 2002–2017 period. These data allow us to observe the amount of discretionary investment funds granted to each municipality by the central state. This amount includes all investment subsidies allocated by the government and by national agencies that are only overseen by the government.[11] To benefit from these investment grants, municipalities must submit a proposal for a specific project.[12] Grant decisions are typically discretionary, as there is no pre-defined formula or explicit criteria. Unfortunately, only the yearly total of grants allocated to a municipality are available from the data and we cannot tell which central state entity paid grants, nor the projects for which grants are allocated. Similarly, we cannot tell from the data how decisions were made, nor whether each was formally made by a minister, a ministry's staff or a national agency. Once allocated, grants

[11] National agencies include for example the *Agence nationale de l'environnement et de la maîtrise de lénergie*, newly renamed *Agence de la transition écologique* (Agency for ecological transition), the *Agences de l'eau* (Water agencies), the *Agence nationale de l'habitat* (National agency for housing), the *Agence nationale pour la rénovation urbaine* (National agency for urban renewal) or the *Centre national de développement du sport* (National sports development center).

[12] Information about failed grant applications by municipalities cannot be accessed.

are paid conditional on the project actually taking place. Payments can be made in multiple parts in case the building project takes several years to be completed. Selected investment projects are usually related to policy scopes municipalities are in charge of: primary schools, housing and territory planning, municipal roads, cultural and sport infrastructures.[13]

The solid line in Online Appendix Figure A4 plots the yearly sum of investment subsidies paid by the central state to municipalities. It increases from about €450 million, in 2000 constant euros, before 2005 to about €600 million for the rest of the observation period. The long-dashed line represents the yearly share of municipalities that receive at least €1 in investment grants. It illustrates that a large share of municipalities eventually received these grants. All in all, investment subsidies from the central state amount to €9 per inhabitant and per year on average. This figure peaks to €34 per inhabitant if we exclude from the calculation municipalities that receive no grants. As a comparison, the average yearly amount that is transferred by the central state to municipalities for their general operating expenditure is €174 per inhabitant.

2.5 Estimation strategy

We are interested in estimating the change in investment subsidies received by a municipality when a politician to which it has a link is a member of the government. Given the variation in connections to the government that is driven by entries into and exit from the government, this setting compares to a typical staggered treatment design or to a traditional event-study. In such a setting, potential heterogeneous and dynamic treatment effects make it impossible to correctly estimate coefficients of interest from a standard two-way fixed effects regression as documented by de Chaisemartin and D'Haultfœuille (2020), Borusyak et al. (2024), Callaway and Sant'Anna (2021), Goodman-Bacon (2021), Sun and Abraham (2021) and Athey and

[13] Exceptions to the rule exist, as municipalities benefit, contrary to the *départements* and the regions, from the *clause générale de compétence*, which allows municipalities to act in any policy scope they want in case of a substantial local stake and if the policy is not related to an exclusive competency of any tier of government.

Imbens (2022).[14] Our empirical setting further departs from classic settings in two important dimensions. One, because we are interested in studying whether the connection-induced change varies with the nature of the link, i.e. in distinguishing between municipalities in which ministers served as mayors and municipalities in which they lived when young. In other words, two treatments may arise, either simultaneously or not. Two, because treatment stops when the politician to which a municipality is linked exits the government. The main intuition why standard two-way fixed effects regressions fail in such settings is that it mechanically makes a series of "forbidden comparisons" (Borusyak et al., 2024) that do not account for the fact that units complete treatment's history matters in the selection of control and treatment units.

We use the approach by de Chaisemartin and D'Haultfœuille (2023) that builds on de Chaisemartin and D'Haultfœuille (2020, 2024) and Callaway and Sant'Anna (2021) to overcome the above-mentioned challenges. This method delivers a difference-in-differences estimator that is a weighted average of a series of difference-in-differences estimators obtained through the careful selection of units that switch treatment status at a given date and of control units observed at the same time. Let us consider the two treatments we are interested in : a current member of the government was a mayor of a municipality or lived in a municipality when young. We estimate the effect of each treatment switching on using municipalities that never receive either treatment and municipality × year observations such that a municipality will receive or receives a treatment and has not received the other one. We then estimate the effect of a treatment switching off using municipality × year observations such that a municipality receives or stopped receiving a treatment and has not received the other treatment.[15] We use the history of links since 1995 to assess whether a municipality has received either treatment.[16] The light grey distributions displayed in Online

[14] See also de Chaisemartin and D'Haultfœuille (2022) and Freyaldenhoven et al. (2021).

[15] Note that simultaneously receiving both treatments constitutes a third treatment. Conceptually, estimating this treatment's effect would inform us about the substitutability or the complementarity of treatments. The number of municipalities that receive both treatments at the same time is however too small for this effect to be estimated.

[16] Given that the accounting data used for estimations only start in 2002, this amounts to impose a period

Appendix Figures A3(a) and (b) show the final number of observations that are used for the estimation of the treatments switching on.[17] We obtain clustered standard errors from 1,000 bootstrap replications made at the municipality level. We use the log of the yearly amount of investment subsidies per inhabitant received from the central government by a municipality as the dependent variable.

3 Results

This section first presents results obtained by simultaneously estimating the impact of two types of connections to members of the central government on the allocation of government subsidies to French municipalities. Robustness checks, falsification tests and sensitivity tests are presented next. We then discuss how reported results can be used to disentangle the different motivations that might lead high-level politicians to engage in pork-barreling. Finally, a heterogeneity analysis is introduced to tentatively inform about the mechanics at play.

3.1 Which connections matter for pork-barreling?

Table 1 displays the estimated treatment effects of a minister's entry into and exit from the government on the investment subsidies received from the central government by municipalities in which a minister was mayor, or lived as child. As shown by the estimated coefficients displayed in the top panel of Table 1, municipalities where a minister was mayor experience a quantitatively and statistically significant change in investment subsidies received when the politicians they are linked to are appointed to the central government. No comparable treatment effect is found for childhood municipalities of ministers. The bottom panel of Table 1 presents the estimated treatment effects when ministers leave the government. A quantitatively and statistically significant negative change is uncovered for municipalities

of at least 7 years during which a treated municipality had no link with members of the government.

[17] In addition to the mentioned selection rules that apply to observations, estimation requires that the dependent variable is observed both in the first year in treatment and in the last year before the treatment starts.

where a minister was mayor, but not for ministers' childhood municipalities.

Figures 5(a) and (b) help to visualize the dynamics of starting treatments. They show that the dynamic experienced by municipalities where a minister was mayor continues after the treatment starts. Those municipalities receive up to 50% more subsidies from the central government if the politician they are linked to spends more than 3 years in government. In contrast, childhood municipalities of ministers do not experience such a consistent increase in investment subsidies received from the central government.[18]

Figures 6(a) and (b) plot the estimated pattern of investment subsidies following the exit of ministers from the government. The estimated drop in subsidies received by municipalities where a minister was mayor that follows a politician's exit from the government is persistent. There is no drop for childhood municipalities of ministers. This is consistent with the lack of response for these municipalities when a politician they are linked to first entered into the government.

The p-values of placebo tests that follow de Chaisemartin and D'Haultfœuille (2023), which are displayed in each part of Table 1, and the visual inspection of pre-treatment estimates of Figures 5 and 6, show that municipalities connected to politicians do not experience atypical changes in the subsidies they receive from the central government before the politician they are linked to is appointed as a minister.

All in all, estimated treatment effects suggest that municipalities where a minister was mayor experience a significant increase in the investment subsidies they receive when the politician they are linked to is appointed to the government and a significant decrease when they leave. As shown in Table 1, the initial increase amounts about 30% and the estimated subsequent decrease is about 45%. A rough interpretation of these figures is that treated municipalities end-up receiving fewer subsidies once the treatment is over than before it started. However, this is not the case because estimates of switching off the treatment use

[18] As shown by Figure 5(b), the effects estimated for childhood municipalities of ministers in the second and third years in treatment are negative and close to conventional statistical significance levels. These effects are however similar to pre-treatment placebo effects and are not confirmed by the effect estimated for more than four years in treatment.

a reference that does not correspond to the same time in treatment for all observations. In fact, this discards the above-mentioned crude interpretation. To see how, we first construct an end-of-treatment benchmark from the weighted average of treatment effects, using as weights the shares of municipalities used to estimate the effect of switching off the treatment that spent different times in treatment until it stops. We next use this benchmark value to rescale the estimated effects of switching off the treatment.[19] We proceed similarly with bounds of confidence intervals. We finally combine Figure 5(a) and the rescaled estimated treatment effects of Figure 6(a). Figure 7 displays the output of this approach and shows that treated municipalities do actually return to their pre-treatment level of subsidies once the politician they are linked to leaves the government.[20, 21]

3.2 Robustness checks and falsification tests

This subsection presents a series of robustness checks and falsification tests.

Alternative dependent variables

The top panel of Table 2 displays estimated effects of the treatments switching on and off when using differently constructed dependent variables. First, we use the value of received investment subsidies per inhabitant (rather than the log of this quantity). As shown by estimated treatment effects, the initial increase and the subsequent decrease persist for municipalities where a minister was mayor. In contrast, no such effects are found for childhood municipalities of ministers. Second, we construct a variable equal to one if a municipality

[19] The end-of-treatment benchmark is $\tilde{\mu} = \sum_{\tau} \mu_{\tau} s_{\tau}$ with $\tau \in \{+1, +4 \textit{ and more}\}$, where μ_{τ} is the estimate at $t+\tau$ of the treatment switching on in t, and s_{τ} is the share of municipalities (in the share of treated municipalities used to estimate the effect of the treatment switching off) that spend τ years in treatment before the exit from government of the minister they are linked to. Rescaled estimated effects of switching off the treatment are $x'_{\Gamma} = (1+\tilde{\mu}) * (1+x_{\Gamma}) - 1$, where x_{Γ} is the original estimated effect at $t+\Gamma$ of switching off the treatment in t.

[20] Online Appendix Figure A5 is constructed using the same approach for childhood municipalities of ministers.

[21] Online Appendix Figures A6(a) and (b) display series of coefficients that are obtained with standard two-way fixed effects regressions and illustrate how they differ from those that are delivered using the approach by de Chaisemartin and D'Haultfœuille (2023).

receives a positive amount of investment subsidies from the central government in a given year. This variable serves both as an alternative measure of access to subsidies and as a way to explore the extensive margin of the effects. As shown by estimated coefficients displayed in the right part of Table 2's top panel, municipalities where a minister was mayor are about 8% more (less) likely to receive investment subsidies from the central government when a politician they are linked to enters (leaves) the government. In contrast, we find no increase in the probability of receiving such subsidies for childhood municipalities when the treatment starts. Note that we find a decline in this probability for these municipalities when the treatment stops. However, this effect cannot be consistently interpreted in the absence of any earlier increase.

Past treatment status and political alignment

In the left middle panel of Table 2, we show estimated treatment effects obtained when using a uniform 7-year period to assess whether a municipality has received a treatment in the past and is therefore excluded from the sample. This contrasts with the baseline estimate that uses all events since 1995. This change results in a slightly higher number of included observations but leaves estimates of interest virtually unchanged.

We next test whether part of the estimated treatment effect could be driven by municipalities' political alignment with the government. The distribution of political orientations at the local level and the frequency at which changes take place are indeed such that most municipalities in which ministers were mayors are of the same political orientation as the government to which the minister belongs. Out of the 355 municipality $\times$ year observations in which the mayor or a former mayor is a member of the national government, 297 are politically aligned with the national government.[22] As the main part of treated municipali-

[22]We qualify a municipality as politically aligned if the municipal majority and the government share the same political orientation (right-wing, left-wing, center-wing, others). Alignment is assessed using data on municipal elections over the 2001–2020 period. No data on municipal elections are available before 2001. Therefore, alignment is only observed over this period and these numbers of municipality $\times$ year observations only apply to this period rather to the full period over which the curricula were collected and the baseline treatment effects are estimated (1995–2021).

ties (municipalities where the mayor or a former mayor is a minister) are politically aligned with the government, but the main part of aligned municipality × year observations are not treated (297 are treated over 38,837), a way to test whether part of the estimated treatment effect is driven by political alignment is to estimate the treatment effect among aligned municipalities. Implementing this test in our estimation strategy implies to restrict the sample to municipalities which are politically aligned in both the pre-treatment and the treatment periods. This condition strongly reduces the sample size and harms the precision of reported estimates as shown by the right middle panel of Table 2.[23] Treatment effects estimated within the sample of politically aligned municipalities do however turn out to be consistent with previously reported ones. This shows that political alignment between municipalities and the government is not driving estimated treatment effects.

Placebo dependent variables

The bottom panel of Table 2 displays estimated effects of the treatments switching on and off when swapping the dependent variable for variables that should not be modified by treatments. First, we use the amount of the global operation allocation given to municipalities. This is a formula-based amount that corresponds to funds allocated by the central administration to municipalities for general operating expenditure.[24] As illustrated by estimated treatment effects presented in the left part of the bottom panel of Table 2, the global operation allocation is left unchanged by politicians entering and exiting government. Second, we use as an alternative dependent variable investment subsidies allocated by other administrative tiers, the *départements* and the *régions*. Treatment effects tabulated in the right part of

[23]This sample reduction is also driven by the fact that political alignment is only directly observable for municipalities with more than 3,500 inhabitants. For smaller municipalities, data about the political orientation of the mayor are typically missing from official data. This is not an important issue since 105 municipalities out of the 135 municipalities that are treated at least once are above the inhabitants threshold. For the remaining 30, we collected their political orientation by hand.

[24]The global operation allocation ("*dotation globale de fonctionnement*") received by a municipality is derived from a formula that takes into account the number of inhabitants, the age structure of the population, a municipality's area, local tax bases, average income of residents, the share of inhabitants who rely on social benefits, and other factors such as whether part of a municipality's area overlaps with a national park.

the bottom panel of Table 2 suggest that these subsidies are not affected by municipalities' links to members of the central government.

Geographical targeting

Table 3 displays estimates that explore the geographical dimension of subsidies allocation depending on ministers' connections to municipalities. We first use French municipalities' full adjacency matrix to identify neighbouring municipalities of treated municipalities.[25] The top left panel of Table 3 reports treatment effects estimated for these municipalities. We find that the amount of subsidies received from the central government does not change during the term in office of a politician who is linked to a neighbouring municipality. This result can serves as a placebo test as it shows that non-connected but geographically close municipalities do not receive supplementary subsidies. It also show that benefits from links to the governments are precisely located as they do not translate in higher subsidies for close neighbours.

The other panels of Table 3 report treatment effects for municipalities in the same electoral constituencies as treated ones for *départemental*, regional and parliamentary elections. Treatment effects for municipalities located in the same *départemental* constituencies as connected municipalities are not statistically significant. For municipalities located in parliamentary and regional constituencies, coefficients associated with entry into government are statistically significant at conventional levels but of small magnitude compared to previously reported estimates. Coefficients associated with exit from the government are not statistically significant. All in all, reported treatment effects do not provide strong support in favour of spillovers to municipalities located in the same electoral constituencies as treated municipalities. This, again, suggests that pork-barreling is precisely located.

[25] The average number of neighbours across French municipalities is 5.95. The number of municipalities considered as neighbours of a actually treated municipality is about 6 times larger than the number of treated municipalities.

Sample's composition

By construction, the number of treated municipalities is quite small, so we test the sensitivity of estimated treatment effects to particular observations. To this end, we re-estimated the coefficients of interest while omitting treated municipalities one-by-one. Online Appendix Figures A7(a)–(d) are plots of the series of estimated effects. While some series are actually distinct from others, showing the large influence of some municipalities, the overall patterns are consistent with point estimates reported in Figures 5(a)–6(b).

A municipality's size might matter for both the probability that a municipality receives investment subsidies from the central government and the probability that it is linked with a top-level politician.[26] As shown in Online Appendix Figure A8(a), very small municipalities are over-represented among municipalities that never received any investment subsidy from the central government over the 2002–2017 period. Similarly, municipalities linked to at least one member of the government over the 1995–2021 period are larger than others, as shown in Online Appendix Figure A8(b). While such differences only weakly threaten estimations of treatment effects in the research design we use, we undertake two exercises that show that reported results are robust to concerns that relate to municipalities' size and other characteristics that might correlate with the probability to be treated or to receive subsidies from the central government. We first exclude from the sample municipalities that never received investment subsidies over the observation period. As shown by the top left panel of Table 4, estimated treatment effects are only marginally modified by this sample restriction.

Second, we use propensity score matching to select observations used for identification. The propensity score model we use includes the following variables : population, shares of population below 20 and above 60, rural status and business and property per capita tax bases as measured in 2000. Online Appendix Figure A8(c) use size distributions to

[26]Larger municipalities might be more likely to request and receive subsidies because they conduct larger projects or because they have more information about funding grants and more resources that can be devoted to applications. Larger municipalities are also more likely to be linked with a minister because their size makes them more likely to be childhood municipalities of future top-level politicians or because holding a mayor position in a large municipalities is associated with higher prestige and boosts a political career more.

illustrate how well this approach helps us to make the characteristics of treated and control municipalities similar. The estimated treatment effects obtained using this matched sample are shown in the top right panel of Table 4. Results hardly differ from previously reported estimates.

Methodological choices and alternative estimation methods

We next test the sensitivity of reported results to methodological choices. First, we investigate whether using information about both politicians' birthplaces and high school places to identify childhood municipalities of ministers matters, as this approach differs from the literature that mostly uses birthplaces to identify home towns of leaders. The middle left panel of Table 4 displays estimated treatment effects when using only information about birthplaces to identify childhood municipalities of ministers. It shows that treatment estimates are not affected by this choice.

Second, we test the sensitivity of estimated treatment effects to changes in the estimation methodology. The middle right, bottom left and bottom right panels of Table 4 report estimates obtained when using the estimation methodologies developed by Sun and Abraham (2021), Borusyak et al. (2024) and Callaway and Sant'Anna (2021).[27] While point estimates differ from those obtained using the methodology of de Chaisemartin and D'Haultfœuille (2023), all alternative methods lead to estimated treatment effects of similar magnitude and comparable statistical significance. Significant treatment effects are generally found for municipalities where a minister was mayor.[28] In contrast, all methods confirm that changes in subsidies are small and not statistically significant for childhood municipalities of ministers.

[27] Sun and Abraham (2021), Borusyak et al. (2024) and Callaway and Sant'Anna (2021) do not provide explicit guidelines to deal with with several treatments, nor with the estimation of a treatment switching off. We thus follow recommendations by de Chaisemartin and D'Haultfœuille (2023) for such contexts and apply the different methodologies to estimate the effect of a treatment switching on (off) on sub-samples that exclude municipalities that have received the second treatment and post-treatment (pre-treatment) observations of treated municipalities.

[28] The major discrepancy between returned estimates is found when using the methodology by Borusyak et al. (2024) to estimate the treatment effect of switching off the treatment for municipalities where a minister was mayor. In this case, the treatment effect is smaller and less precisely estimated.

All in all, estimates tabulated in Table 4 demonstrate that reported results are not strongly affected by estimation method.[29]

3.3 Disentangling motivations for pork-barreling

Estimates presented above show that municipalities in which government members were mayors receive significantly more subsidies from the central government during the time in office of the politician they are linked to. In contrast, municipalities where government members lived as children do not experience this increase in subsidies. As discussed earlier, different types of connections between ministers and municipalities correspond to different types of people to whom high-level politicians are connected, and therefore to potentially different motivations for them to engage in pork-barreling. Based on the earlier reasoning, the reported results demonstrate that altruism toward childhood friends and family can be excluded from the list of potential motivations of politicians to engage in pork-barreling. In contrast, results indicate that both altruism towards adulthood social relations and career concerns might matter.

The empirical framework we use makes it *a priori* possible to further disentangle between remaining potential motivations for pork-barreling by focusing on municipalities in which ministers were mayors and investigating whether treatment effects vary depending on minister's future participation in local elections, i.e. in elections in which a municipality's political support might matter. The intuition is as follows. While altruism toward adulthood social relations or delayed reward of past support should matter for all ministers who were mayors, only ministers who anticipate that they will run in future local election are likely to engage in pork-barreling so as to secure future local political support. Accordingly, if anticipated reward for future political support matters, pork-barreling should be different depending on whether a minister will run or not in future local elections.

[29] See Online Appendix Figures A9, A10 and A11 for graphical representations of estimates obtained with the methodologies developed by Sun and Abraham (2021), Borusyak et al. (2024) and Callaway and Sant'Anna (2021), respectively.

Future local elections include future municipal races, but also other elections, such as *départemental*, regional or parliamentary elections, for which municipalities can be used as beachheads to run for seats attached to the constituencies in which municipalities are located.[30, 31] We collected comprehensive information about candidates in local elections that took place over the 1995–2022 period to track participation of (former) ministers in these elections. As shown by Online Appendix Table A1, 75% of ministers who were mayors do participate in local elections after their time in the government. About one third of their total population participates in municipal elections in the same municipality as the one in which they hold office, and about two thirds participate in other local elections for seats in the electoral constituency that includes this municipality.

Note that, by using the distinction in terms of running for future local elections to disentangle between different motivations for pork-barreling, we implicitly assume that whether a former minister runs for future elections does not depend on realized pork-barreling. Although obtaining more grants for a municipality one is connected to can indeed *a priori* help a politician to be chosen by her party to run for future elections in this municipality (or in a jurisdiction the municipality is included in), we consider this mechanism as unlikely to be important for former ministers for two main reasons. First, former ministers are top politicians, who have usually often been nominated for several elections in the past and turned to be successful candidates. This suggests that they already demonstrated their political abilities and that it seems reasonable to consider that whether they run or not for a given election does not primarily depend on their ability to bring external funds to the municipality they are connected to. Second, we are not aware of any anecdotal evidence of a former minister

[30] On average, municipalities in which ministers were mayors amount for 64%, 26% and 6% of the total population of constituencies used for *départemental*, parliamentary and regional elections, respectively. As a comparison, other municipalities individually represent on average 5.4%, 0.9% and 0.2% of the total population of aforementioned constituencies. These figures show that these municipalities are *a priori* quantitatively important for these elections. And, even in the case of smaller municipalities, a minister may still want to build for herself a reputation and provide good signals to all the voters of the constituency by favoring the municipality she is linked to (for the literature on reputation and elections, see Maskin and Tirole 2004, Acemoglu et al. 2013, Morelli and Van Weelden 2013 and Kartik et al. 2019 among others).

[31] 92.2% of candidacies in local elections by ministers who were mayors takes place in the same municipality as the one in which they hold office or in the electoral constituency that includes this municipality.

willing to run for a local elections not being nominated by her political party.

Online Appendix Table A2 displays estimates obtained when splitting the sample according to whether ministers will run for a seat in any local election (municipal, parliamentary, *départemental* and regional) occurring in the municipality. In other terms, it distinguishes between politicians who have some incentives to seek future support and those who don't. The latter only incentives to engage in pork-barreling are altruism toward local people and delayed reward for past political support. The former also face these incentives, but also have interest in seeking future local political support. Reported estimates indicate that the treatment effect related to entry is barely statistically significant for municipalities that are connected to a minister who will participate in local elections after her time in the central government (p-value = 0.123), while the treatment effect for other municipalities is found to be statistically insignificant (p-value = 0.347). Estimates related to exit give a similar picture.

Overall, Online Appendix Table A2 does not provide strong evidence that the overall treatment effect would be driven by ministers who will run again for local elections related to the municipality where they previously hold a mayoral position. Accordingly, we can't conclude that anticipated reward for future political support is the most important motivation for ministers to engage in pork-barreling. In the same time, issues related to statistical inference due to small sample size imply that we can't either conclude that future political support plays no role in pork-barreling.

As a conclusion, while the above presented methodological approach using future career concerns could help to further disentangle altruism towards adulthood social relations from career concerns, its application in this paper's context remains inconclusive.

3.4 Supplementary evidence about the mechanics of pork-barreling

In this subsection, we take advantage of the assembled data to present supplementary evidence that can inform about part of the mechanics through which additional subsidies flow

to municipalities ministers favour. We first question whether ministers use their influence within the central administration or some direct control over public funds. We next discuss the role of information in explaining the excess of subsidies received by municipalities where ministers were mayors and attempt to test whether this excess occurs along the extensive or the intensive margin.

A direct way to investigate whether ministers use public budgets they directly control would be to tag subsidies depending on the administration (and so, the ministry) by which they are allocated. Unfortunately, such information is not accessible and only total amounts received by municipalities can be retrieved. However, if ministers mostly use public budgets they directly control to engage in pork-barreling, additional subsidies allocated to municipalities they are connected to would likely increase with the size of the budget a minister directly controls. We thus use official budget information about expenditure of each French ministry to sort ministries according to their importance in terms of public budgets, and distinguish small ministries from large ministries.[32] The top panel of Table 5 reports treatment effects after entry into and exit from the government of the politicians to which municipalities are linked, depending on whether the budget of related ministries is qualified as small or large, as well as the difference across the two groups. Treatment effects seem to be larger for municipalities where a minister who serves in a small ministry was mayor, and are statistically significant at conventional levels, while the one related to entry into government of ministers in large ministries is not. Differences across entry and exit coefficients are however not unambiguously statistically significant at conventional levels. The difference between these two groups must therefore be considered with caution. If anything, this result suggests that municipalities where a minister was mayor do not receive more subsidies if the minister

[32]For each administration (defined as a term of a politician as head of the government), we collected budgetary information in the median year of the period covered by this administration. We then split ministries into two groups depending on whether their budget is above or below the median budget across ministries. We then allocate politicians to small and large ministries depending on the ministries they are attached to. We further allocate politicians attached to the *Premier ministre* and the President of the Republic as belonging to a large ministry, and heads of the upper and lower houses as belonging to a small ministry.

is in charge of a larger public budget.

Since we cannot properly conclude whether targeting varies along the size of public budgets controlled by ministers, we next attempt to investigate whether ministers' status plays a role. Not all members of the government have the same formal status. Namely, ministers hold different ranks that reflect their political weight within the government, as well as their responsibilities within each ministry. We distinguish between low- and high-rank ministers and estimate effects for municipalities in which ministers of the different ranks were mayors.[33] These estimations are shown in the middle panel of Table 5. Coefficients for these two groups are relatively close and share similar statistical significance issues in the case of entry of ministers into government . The difference between these two groups is however not statistically significant. Overall, we cannot conclude that there is a difference along the dimension of the rank of the minister municipalities are connected to.

To further investigate the difference in status between ministers, we split ministries depending on whether their competences are considered kingly.[34] As with preceding splits, evidence does not suggest heterogeneity across this dimension, as shown in the bottom panel of Table 5. None of the coefficients related to entry into government are statistically significant and those related to exit from government have similar size. Differences between these two groups are not statistically significant.

All in all, results presented in Table 5 do not allow to conclude that municipalities where ministers were mayors receive more subsidies if the politician they are connected to has higher power, whether measured by the size of the budget she controls, her official rank, or the prestige of the ministries she is in charge of. This suggests that soft influence within the administration is sufficient for any minister to achieve pork-barreling. This would be

[33]High-rank ministers include positions as *Premier ministre* (the head of the government) and *ministres*. Low-rank ministers include *secrétaires d'État* and *ministres délégués*. On average, a ministry hosts one high-rank minister and 1.05 low-rank ministers. We also categorize positions as President of the Republic, as heads of the upper and lower houses and as *haut-commissaire* (an *ad-hoc* position that was used only once over the 1995–2021 period) as high-rank ministers as they rank above *ministres* in the official French order of precedence.

[34]Kingly ministries are the *ministère des Armées*, the *ministère de l'Intérieur* , the *ministère de la Justice*, the *ministère des Affaires étrangères* and the *ministère de l'Économie et des Finances*.

consistent with the fact that, whatever the status of the minister, being a member of the central government is a prominent position in French national politics.

The absence of evidence of heterogeneity along the power of ministers could also be consistent with municipalities being able to acquire better information about grant applications, or even about the existence of funding opportunities. A direct way to test this would be to use municipalities' application rate and municipalities' success rate in grant applications as a dependent variable. Data about grant applications are however not available and cannot be retrieved. However, note that improved information about opportunities or the application process should *a priori* translate into persistent higher access to subsidies. The documented decrease in subsidies once the politician who was mayor in a municipality exits from the government does not support this prediction. The initial increase is thus likely driven by ministers themselves rather than by better access to information.

Finally, and although we have no information about grant applications, we attempt to investigate whether additional subsidies to municipalities where a minister was mayor relate to higher probability of getting a grant or to higher grants given they get some. To achieve this, we undertake a decomposition exercise of results of the first column of Table 1. Results of this approach are displayed in Online Appendix Table A3. The first and second columns relate to the extensive and intensive margins of subsidies, respectively. To study the extensive margin, we replace the yearly allocated subsidies of treated municipalities who receive a positive amount of subsidies on a given year by the yearly average of investment subsidies per inhabitant received by non-treated municipalities in that year. To capture the intensive margin, we use as dependent variable for treated municipalities the difference between the actual dependent variable and the average constructed for the extensive margin. By construction, the sum of treatment effects of these two margins is equal to the corresponding treatment effect of the first column of Table 1. Although the coefficient of entry into government is higher for the extensive margin than for the intensive one, none of the displayed treatment effects of this table is statistically significant at conventional levels. It is thus not

possible to conclude that one margin matters more than the other.

4 Conclusion

This paper contributes to the literature on pork-barrel politics by simultaneously estimating the impact of two types of connections between French municipalities and top-level political appointees to the central government. Jurisdictions can be connected to a top-level incumbents either through private links or via the political career of politicians. While previous works have highlighted the role of both kinds of connections, each contribution focuses on just one type of connection. Since a given and precise type of connections can be related to different motivations for pork-barreling, either directly or indirectly through a correlation with another type of connection, identifying the impact of just one connection is not sufficient to state what are the underlying drivers of connection effects. By identifying simultaneously the impact of two types of connections in a same context, this paper gives new insight on the motivations at play. We create an original data set that captures childhood and early career information of members of the French central government, and combine this with detailed information on municipalities' accounts. For identification, we exploit entries and exits of politicians into and from the central government in a difference-in-differences setting. We find robust evidence that municipalities receive about 30% more investment subsidies from the central government when a former mayor holds office as a minister. A consistent symmetrical decrease is found after the politician departs from the central government. In contrast, we find no evidence for similar effects for ministers' childhood municipalities.

Favouritism of top-level politicians towards local public jurisdictions can be motivated either by altruism related to personal connections or political career concerns. Altruism can be toward childhood friends, family or adulthood friends and social relations. Political career concerns might relate to reward for past political support, as well as to the seek for local support for future elections. The absence of evidence of favouritism towards childhood mu-

nicipalities of members of the central government suggests that altruism towards childhood friends and family is not at play, which is a key contribution especially on the literature exploiting top-politicians' birthplace. Pork-barrelling highlighted in our results could be related to altruism toward adulthood social relations or career concerns. We propose an approach that could allow to disentangle between these remaining motives, although the limited size of our sample prevents us from drawing a clear conclusion on this point. Finally, the dynamics of treatment effects combined with supplementary evidence suggests that pork-barreling we observe is likely to be the result of soft influence of ministers, rather than of their direct control of public budget managed by the administration they are responsible for.

Still, many grounds should be explored to improve the understanding of pork-barreling and give relevant insight for public policy decisions. Data on grant applications would allow to better understand the precise mechanisms at play, and to think about necessary regulation. Such information would also make it possible to know the nature of investment projects conducted by local jurisdictions thanks to additionally received funds, which is key to understand the full social implications of pork-barreling.

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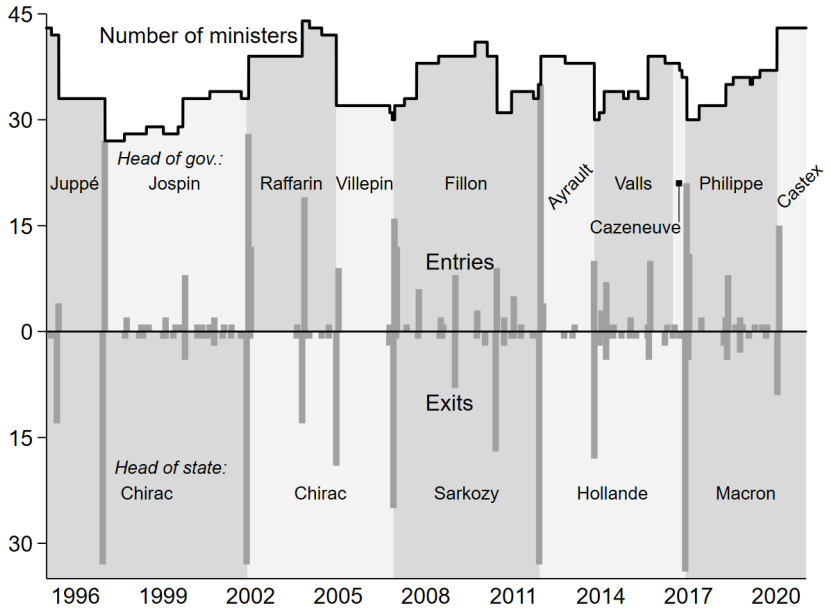
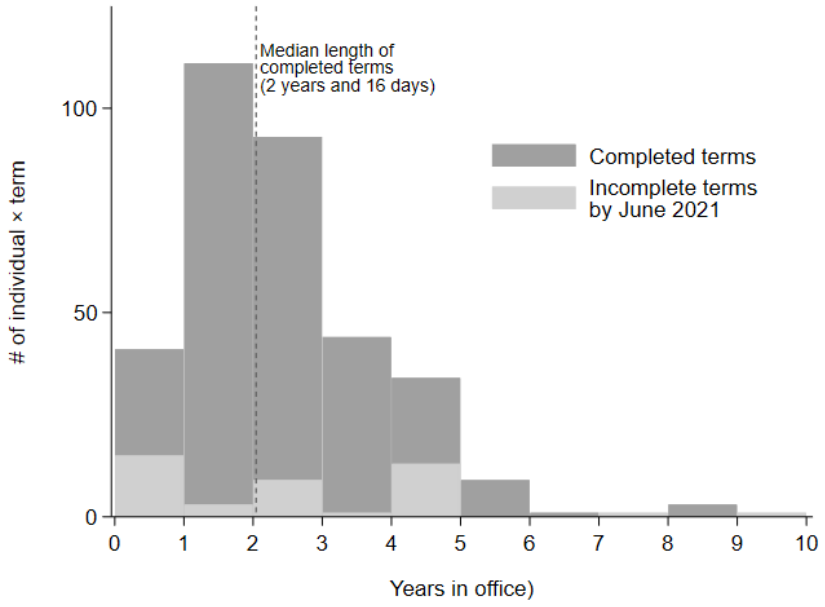
Figure 1: Changes in the composition of the government.



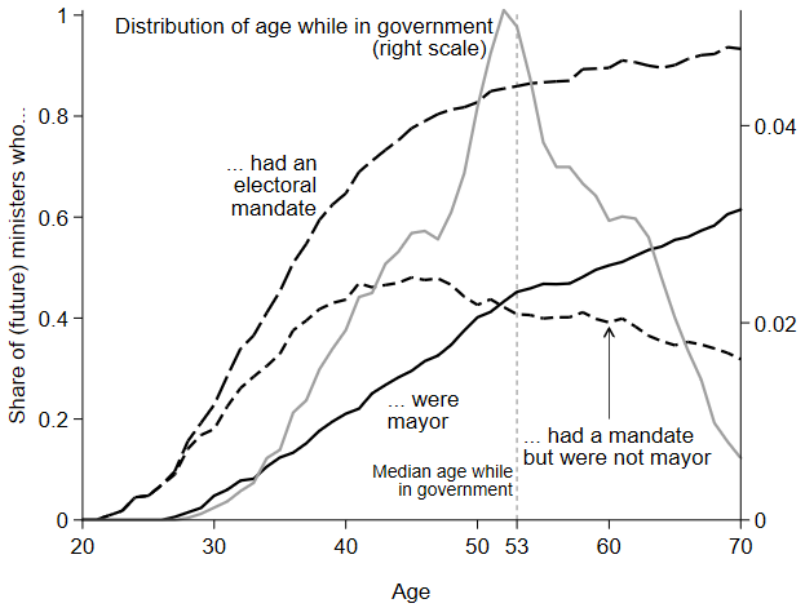
Daily number of members of the French government and monthly count of entries into and exits from the government constructed from the French government official website and archives. Exits followed by re-entries within less than 30 days are ignored. In the upper part of the figure, shaded areas and associated names indicate the different governments. In the lower part of the figure, shaded areas and associated names represent presidential terms.

Figure 2: Distribution of lengths of ministers' terms.



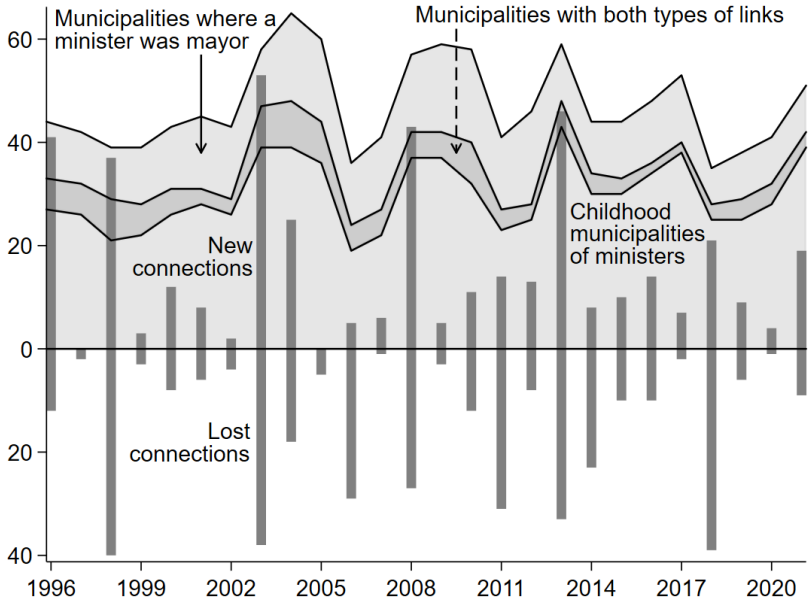
Term lengths binned in yearly intervals. Consecutive positions in the government in different responsibilities are counted as the same term. Two terms separated by 30 days or less are counted as a single term.

Figure 3: Distribution of age while in government and shares of (future) ministers who served as elected officials at each age.



The distribution of age while in government is constructed using all completed terms in the government. Electoral mandates include all French electoral mandates.

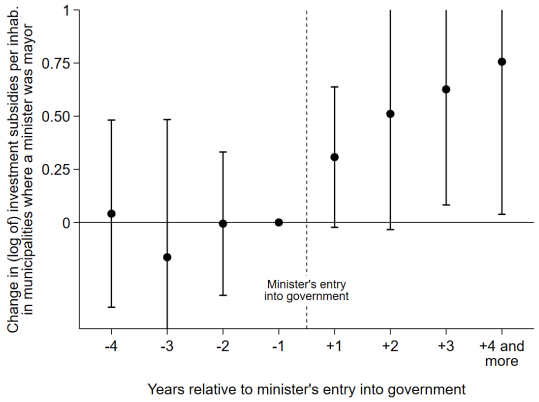
Figure 4: Yearly count of links from municipalities to members of the government.



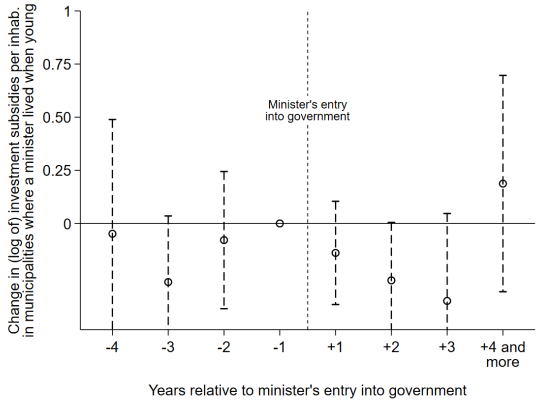
See the text for details about the identification of municipalities where a minister was mayor and of childhood municipalities of ministers, and for the detailed construction of connections to members of the current government in a given year. Upward and downward spikes count both types of connections. A connection is considered as a *lost connection* in a given year if it was active in the preceding year and is not active anymore. A connection is considered as a *new connection* in a given year if it is active but was not active in the preceding year.

Figure 5: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's entry into the government.

(a) Municipalities where a minister was mayor.



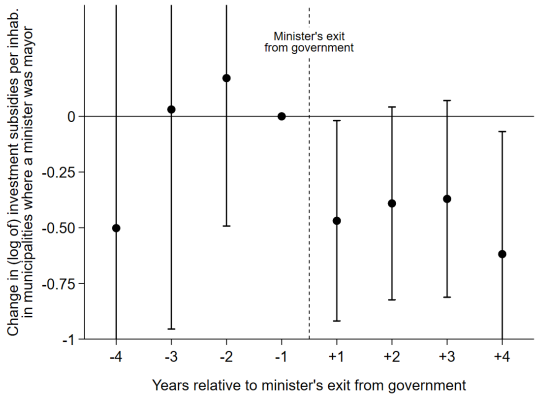
(b) Childhood municipalities of ministers.



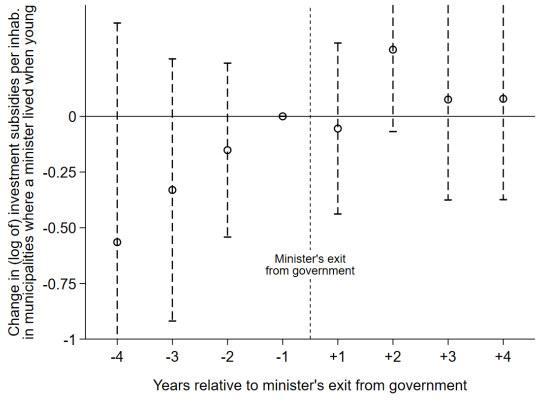
Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. 95% confidence intervals constructed from 1,000 bootstrap replications. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years from $t+4$ to $t+8$ (the longest observed time in treatment), where t is the time at which the treatment starts. Bounds of some confidence intervals are truncated for representation reasons.

Figure 6: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's exit from the government.

(a) Municipalities where a minister was mayor.



(b) Childhood municipalities of ministers.



Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. 95% confidence intervals constructed from 1,000 bootstrap replications. Bounds of some confidence intervals are truncated for representation reasons.

Figure 7: Changes in investment subsidies received by municipalities where a minister was mayor following minister's entry into and exit from the government: Rescaled exit estimates.

The left and middle parts of this figure are identical to the two parts of Figure 5(a). The right part of this figure displays rescaled treatment effects from the right part of Figure 6(a). See notes to Figures 5 and 6. See the text for details about the rescaling procedure. Bounds of some confidence intervals are truncated for representation reasons.

Table 1: Changes in investment subsidies received by municipalities where a minister was mayor and childhood municipalities of ministers following minister's entry into and exit from the government.

	Minister's entry into government	
	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry into government	0.307	-0.139
	(0.169)	(0.124)
	[0.068]	[0.263]
P-value of placebos	0.906	0.215
# of switchers	48	93
# of obs.	436,431	435,057
	Minister's exit from government	
	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after exit from government	-0.469	-0.055
	(0.230)	(0.196)
	[0.041]	[0.779]
P-value of placebos	0.663	0.588
# of switchers	54	88
# of obs.	962	579

Each cell reports estimates from a separate estimation. The dependent variable is the (log of) investment subsidies per inhabitant. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. Standard errors and p-values, calculated from 1,000 bootstrap replications, between parentheses and brackets, respectively. The *P-value of placebos* tests for the joint statistical significance of the $t-4$ to $t-2$ pre-treatment placebo effects, where t is the time at which the treatment starts. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of first differences of the outcome and of the treatment used in the estimation of the treatment effect. For ministers' entry into government, the reference period is the last year before entry of the minister into government. For minister's exit from government, the reference period is the last year before exit of the minister from government.

Table 2: Changes in investment subsidies received by municipalities where a minister was mayor and childhood municipalities of ministries following minister's entry into and exit from the government: Robustness checks and falsification tests.

	Investment subsidies per inhabitant		Receiving investment subsidies	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after	14.323	-3.203	0.082	-0.013
entry into government	(6.952)	(2.043)	(0.052)	(0.042)
	[0.039]	[0.117]	[0.112]	[0.756]
# of switchers / obs.	48 / 436,431	93 / 435,057	48 / 436,431	93 / 435,057
First year after	-14.948	3.439	-0.086	-0.094
exit from government	(7.805)	(2.891)	(0.052)	(0.051)
	[0.055]	[0.234]	[0.096]	[0.063]
# of switchers / obs.	54 / 962	88 / 579	54 / 962	88 / 579
	Uniform time without treatment		Aligned municipalities only	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after	0.285	-0.119	0.383	0.017
entry into government	(0.167)	(0.120)	(0.197)	(0.220)
	[0.088]	[0.323]	[0.052]	[0.937]
# of switchers / obs.	50 / 436,941	96 / 435,398	24 / 15,278	25 / 15,729
First year after	-0.423	-0.085	-0.218	-0.546
exit from government	(0.219)	(0.191)	(0.248)	(0.341)
	[0.054]	[0.657]	[0.380]	[0.109]
# of switchers / obs.	54 / 1,322	91 / 823	25 / 395	30 / 282
	Per inhab. global operating allocation (log of)		Per inhab. investment subsidies from other administrative tiers (log of)	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after	-0.014	-0.015	0.288	0.023
entry into government	(0.011)	(0.007)	(0.194)	(0.131)
	[0.216]	[0.038]	[0.138]	[0.858]
# of switchers / obs.	48 / 436,215	93 / 434,609	48 / 436,431	93 / 435,057
First year after	-0.027	-0.006	0.088	0.024
exit from government	(0.022)	(0.014)	(0.217)	(0.178)
	[0.218]	[0.656]	[0.685]	[0.894]
# of switchers / obs.	54 / 962	88 / 579	54 / 962	88 / 579

Each cell reports estimates from a separate estimation. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. Standard errors and p-values, calculated from 1,000 bootstrap replications, between parentheses and brackets, respectively. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of first differences of the outcome and of the treatment used in the estimation of the treatment effect. In the left upper panel, the dependent variable is the amount of investment subsidies received from the central government. In the right upper panel, the dependent variable is a dummy variable equal to 1 if a strictly positive amount of investment subsidies is received from the central government by a municipality in a given year. In the left middle panel, treated municipalities are included only if they have not received a treatment in the previous 7 years. In the right middle panel, the sample is restricted to control and treated municipalities that are politically aligned with the government in both the pre-treatment and the treatment periods. In the bottom left panel, the dependent variable is the (log of) the received global operating allocation ("*dotation global de fonctionnement*") per inhabitant. In the bottom right panel, the dependent variable is the (log of) investment subsidies received from intermediary administrative tiers (*départements* and *régions*).

Table 3: Changes in investment subsidies received by municipalities where a minister was mayor and childhood municipalities of ministries following minister's entry into and exit from the government: Geographical targeting.

	Neighbouring municipalities		Municipalities in same *départemental* constituency	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry in government	0.091	-0.042	0.088	-0.073
	(0.095)	(0.057)	(0.088)	(0.055)
	[0.339]	[0.460]	[0.316]	[0.182]
# of switchers / obs.	296 / 406,760	622 / 406,026	348 / 421,027	518 / 385,808
First year after exit from government	-0.110	0.115	-0.002	0.069
	(0.120)	(0.095)	(0.109)	(0.083)
	[0.359]	[0.224]	[0.983]	[0.403]
# of switchers / obs.	314 / 5,956	615 / 3,645	339 / 5,308	582 / 3,602
	Municipalities in same parliamentary constituency		Municipalities in same regional constituency	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry into government	0.065	-0.034	0.038	-0.041
	(0.033)	(0.025)	(0.022)	(0.026)
	[0.049]	[0.167]	[0.088]	[0.123]
# of switchers / obs.	2,554 / 234,321	3,821 / 231,831	5,392 / 48,276	3,881 / 32,138
First year after exit from government	0.018	0.036	-0.022	0.017
	(0.041)	(0.035)	(0.033)	(0.028)
	[0.657]	[0.300]	[0.496]	[0.560]
# of switchers / obs.	2,487 / 31,358	4,783 / 23,402	3,764 / 11,896	5,565 / 28,729

Each cell reports estimates from a separate estimation. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. Standard errors and p-values, calculated from 1,000 bootstrap replications, between parentheses and brackets, respectively. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of first differences of the outcome and of the treatment used in the estimation of the treatment effect. In the left upper panel, neighbouring municipalities of treated municipalities are considered as treated and actually treated municipalities are excluded from the sample. In the right upper, left bottom and right bottom panels, municipalities that belong to the same constituencies used for *départemental*, parliamentary and regional elections as treated municipalities are considered as treated and actually treated municipalities are excluded from the sample.

Table 4: Changes in investment subsidies received by municipalities where a minister was mayor and childhood municipalities of ministers following minister's entry into and exit from the government: Accounting for differences in municipalities' characteristics, defining childhood municipalities as birthplaces of ministers and alternative estimation methods.

	Excluding municipalities that never receive subsidies		Matched sample	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry into government	0.307	-0.144	0.302	-0.104
	(0.177)	(0.132)	(0.176)	(0.140)
	[0.084]	[0.277]	[0.086]	[0.455]
# of switchers / obs.	48 / 339,596	91 / 338,634	48 / 4,279	81 / 4,221
First year after exit from government	-0.477	-0.057	-0.466	-0.061
	(0.234)	(0.206)	(0.203)	(0.201)
	[0.041]	[0.782]	[0.022]	[0.763]
# of switchers / obs.	53 / 942	87 / 575	54 / 897	76 / 479
	Birthplaces as childhood municipalities of ministers		Sun and Abraham (2021) treatment effects	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry into government	0.254	-0.193	0.301	-0.137
	(0.161)	(0.152)	(0.165)	(0.118)
	[0.116]	[0.203]	[0.068]	[0.247]
# of switchers / obs.	55 / 436,839	69 / 400,337	48 / 581,088	95 / 581,212
First year after exit from government	-0.448	-0.177	-0.255	0.022
	(0.205)	(0.195)	(0.126)	(0.141)
	[0.029]	[0.364]	[0.043]	[0.874]
# of switchers / obs.	61 / 1,418	65 / 1,080	63 / 581,183	113 / 581,124
	Borusyak et al. (2024) treatment effects		Callaway and Sant'Anna (2021) treatment effects	
	Municipalities where a minister was mayor	Childhood municipalities of ministers	Municipalities where a minister was mayor	Childhood municipalities of ministers
First year after entry into government	0.473	-0.042	0.307	-0.139
	(0.175)	(0.094)	(0.169)	(0.120)
	[0.007]	[0.658]	[0.068]	[0.246]
# of switchers / obs.	48 / 580,977	93 / 580,977	49 / 581,132	94 / 581,245
First year after exit from government	-0.156	0.028	-0.263	0.002
	(0.125)	(0.122)	(0.128)	(0.143)
	[0.210]	[0.816]	[0.040]	[0.991]
# of switchers / obs.	54 / 580,595	88 / 580,136	54 / 581,204	106 / 581,138

Each cell reports estimates from a separate estimation. The dependent variable is the (log of) investment subsidies per inhabitant. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023) and excluding municipalities that never received investment subsidies from the central government over the 2002–2017 period in the top left panel. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023) with 1,000 bootstrap replications and using treated and control municipalities selected using propensity score matching in the top right panel. Treatment effects estimated using the methodology by de Chaisemartin and D'Haultfœuille (2023) with 1,000 bootstrap replications and identifying childhood municipalities of ministers as ministers' birthplaces in the middle left panel. See the text for more details. Treatment effects estimated using the methodologies of Sun and Abraham (2021), Borusyak et al. (2024) and Callaway and Sant'Anna (2021) in the middle right, bottom left and bottom right panels, receptively. Standard errors clustered at the municipality level between parentheses. P-values in brackets. For ministers' entry into government, the reference period is the last year before entry of the minister in government. For minister's exit from government, the reference period is the last year before exit of the minister from government. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of observations used in the estimation of the treatment effect.

Table 5: Changes in investment subsidies received by municipalities where a minister was mayor following minister's entry into and exit from the government: Heterogeneity along ministers' status.

	Municipalities where a minister was mayor: Small and large ministries		
	Small ministries	Large ministries	Difference
First year after	0.635	0.030	0.605
entry into government	(0.256)	(0.212)	(0.331)
	[0.013]	[0.887]	[0.068]
# of switchers / obs.	22 / 400,047	26 / 291,511	
First year after	-0.827	-0.594	-0.233
exit from government	(0.385)	(0.229)	(0.441)
	[0.032]	[0.010]	[0.598]
# of switchers / obs.	18 / 685	31 / 685	
	Municipalities where a minister was mayor: Low- and high-rank ministers		
	Low-rank minister	High-rank minister	Difference
First year after	0.344	0.235	0.109
entry into government	(0.234)	(0.230)	(0.337)
	[0.141]	[0.308]	[0.746]
# of switchers / obs.	32 / 363,457	16 / 327,187	
First year after	-0.631	-0.776	0.145
exit from government	(0.235)	(0.252)	(0.348)
	[0.007]	[0.002]	[0.678]
# of switchers / obs.	30 / 832	19 / 614	
	Municipalities where a minister was mayor: Non-kingly and kingly ministries		
	Non-kingly ministries	Kingly ministries	Difference
First year after	0.100	0.552	-0.452
entry into government	(0.202)	(0.317)	(0.371)
	[0.620]	[0.082]	[0.223]
# of switchers / obs.	24 / 399,949	19 / 2555,077	
First year after	-0.636	-0.578	-0.058
exit from government	(0.334)	(0.235)	(0.399)
	[0.057]	[0.014]	[0.885]
# of switchers / obs.	25 / 763	23 / 706	

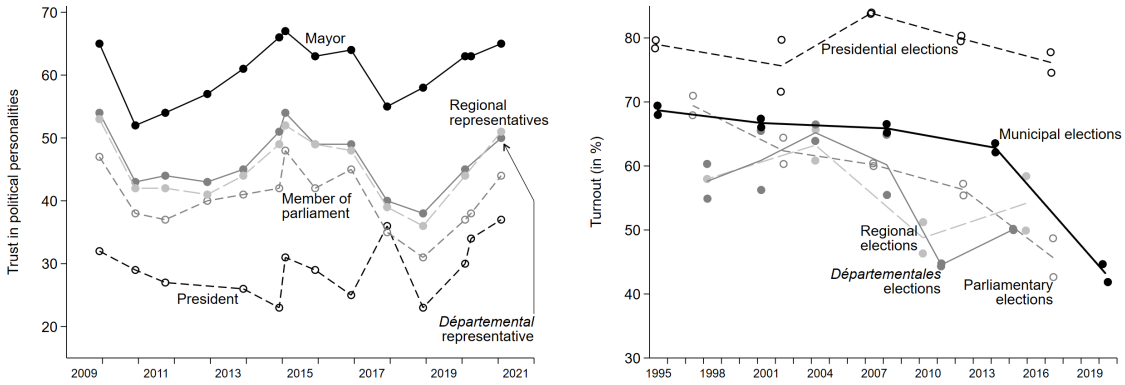
Each cell of the first two columns reports estimates from a separate estimation. Cells of the third column report the difference between the first two columns. The dependent variable is the (log of) investment subsidies per inhabitant. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. Standard errors and p-values, calculated from 1,000 bootstrap replications, between parentheses and brackets, respectively. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of first differences of the outcome and of the treatment used in the estimation of the treatment effect. See the text for the definition of the different groups.

Online Appendix

A Supplementary figures and tables

Figure A1: Trust in political personalities and electoral turnout.

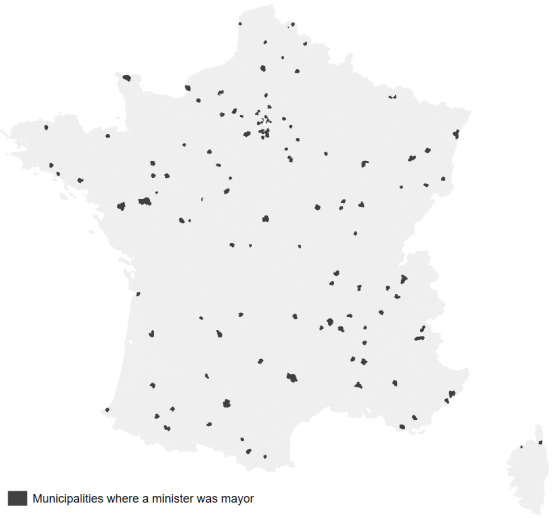
(a) Trust in political personalities. (b) Turnout.



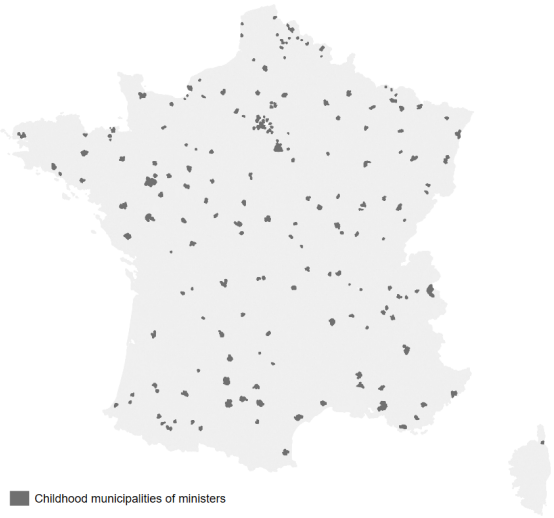
Figures and notes taken over from Peveri and Sangnier (2023). Sub-figure (a) uses the *Baromètre de la confiance politique* and plots, for each wave of the survey, the share of interviewees who report to have much or some trust in different political personalities. The question is framed as follows: "*Avez-vous très confiance, plutôt confiance, plutôt pas confiance ou pas confiance du tout dans les personnalités politiques suivantes: Le maire de votre commune* (your municipality's mayor) ; *votre conseiller général* (your representative at the *départemental* level) ; *vos conseillers régionaux* (your representatives at the regional level) ; *votre député* (your member of parliament) ; *le président de la République actuel* (the current President)." Sub-figure (b) uses official reports from the *Ministère de l'Intérieur* and plots turnout at the different rounds of all elections held in France from 1995 to 2020, but at referenda and European elections. For each series, the line goes through the values of average turnout across the two rounds of each election.

Figure A2: Spatial distributions of treatments.

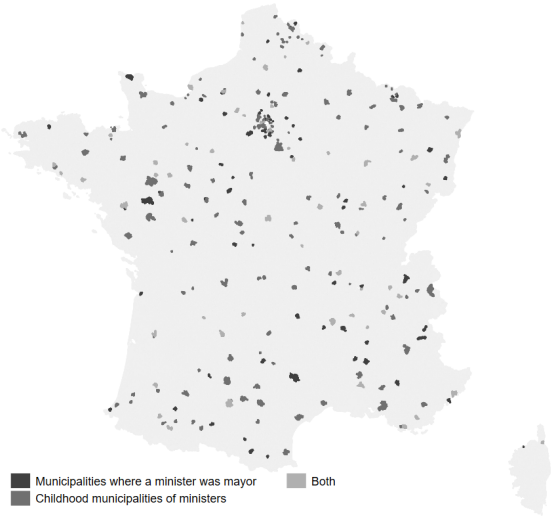
(a) Municipalities where a minister was mayor.



(b) Childhood municipalities of ministers.



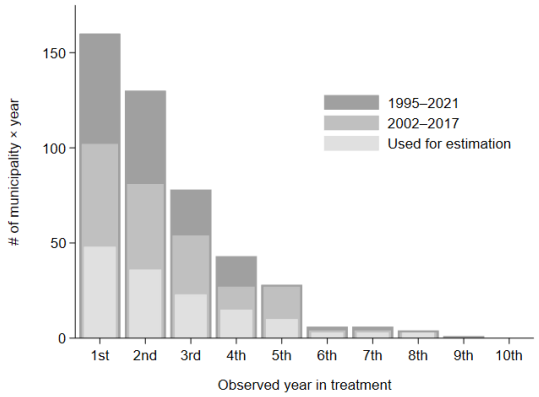
(c) Municipalities where a minister was mayor and childhood municipalities of ministers.



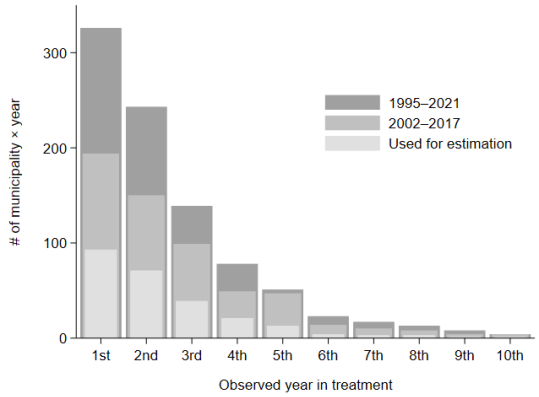
Maps (a) and (b) display the spatial distributions of municipalities in which ministers who hold office between 1995 and 2021 were elected as mayor before their time in the central government, or were born or attended high school, respectively. Map (c) combines both distributions. See the text for details about the construction of links of municipalities to members of the government.

Figure A3: Distributions of observed years in treatments.

(a) Municipalities where a minister was mayor.

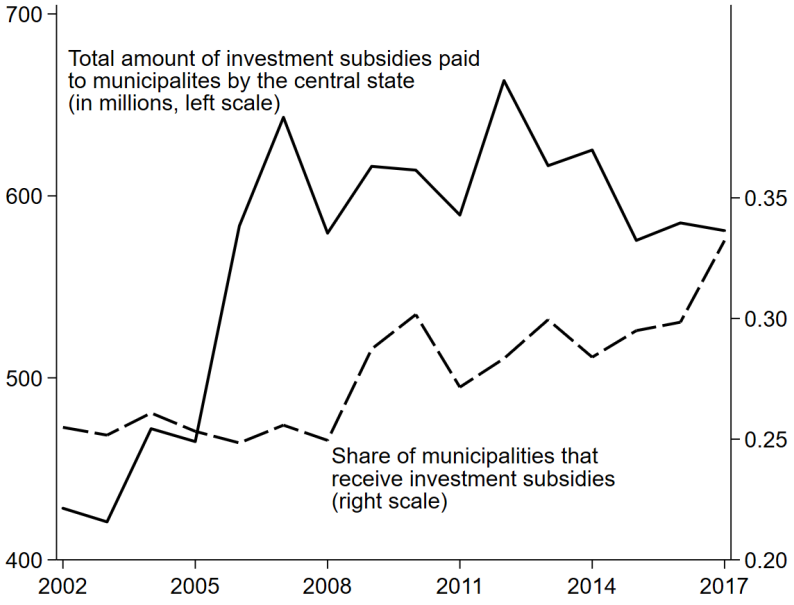


(b) Childhood municipalities of ministers.



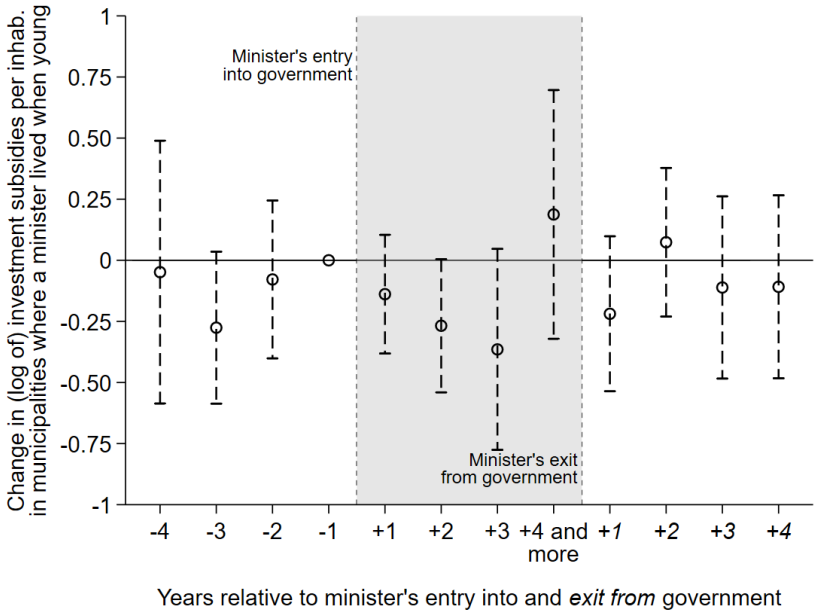
Dark grey bars use the 1995–2021 period. Medium grey bars use the 2002–2017 period (the period over which municipalities accounting data are available). Distributions constructed using all spells in the government over indicated time periods. A municipality can thus be observed more than once in the same treatment year. Light grey bars use the 2002–2017 observations that satisfy sample selection criteria. See the text for details about the construction of links of municipalities to members of the government and sample selection criteria.

Figure A4: Total amount of investment subsidies paid by the central state to municipalities and share of beneficiary municipalities.



In 2000 constant euros.

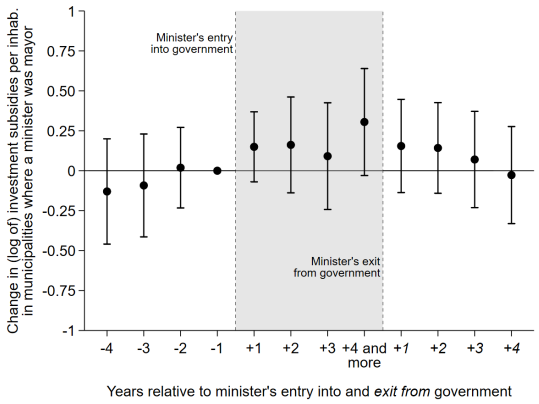
Figure A5: Changes in investment subsidies received by childhood municipalities of ministers following minister's entry into and exit from the government, with rescaled exit-estimates.



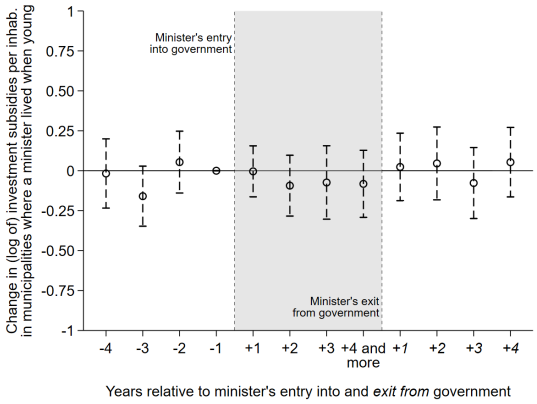
The left and middle parts of this figure are identical to the two parts of Figure 5(b). The right part of this figure displays rescaled treatment effects from the right part of Figure 6(b). See notes to Figures 5 and 6. See the text for details about the rescaling procedure.

Figure A6: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministries following minister's entry into and exit from the government: Two-way fixed effects ordinary least squares regressions.

(a) Municipalities where a minister was mayor.



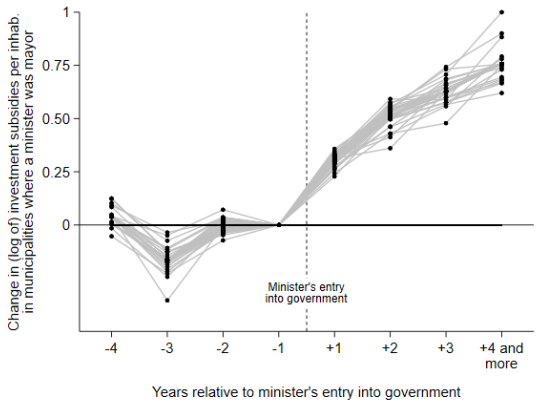
(b) Childhood municipalities of ministers.



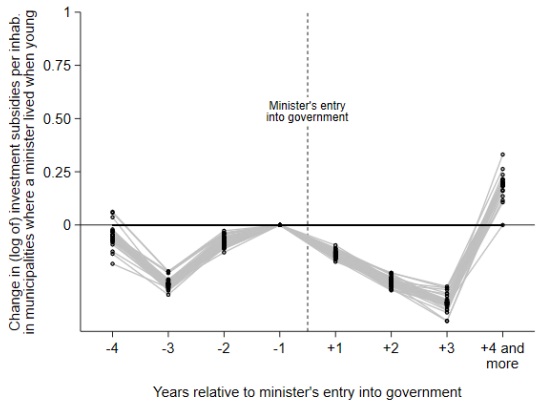
These figures display estimated coefficients of an ordinary least squares regression of the (log of) investment subsidies per inhabitant received from the central government on municipality and year fixed effects and series of dummy variables for years relative to the entry into and exit from the government of ministers connected to a municipality. 95% confidence intervals constructed from 1,000 bootstrap replications.

Figure A7: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministries following minister's entry into and exit from the government, removing municipalities one-by-one.

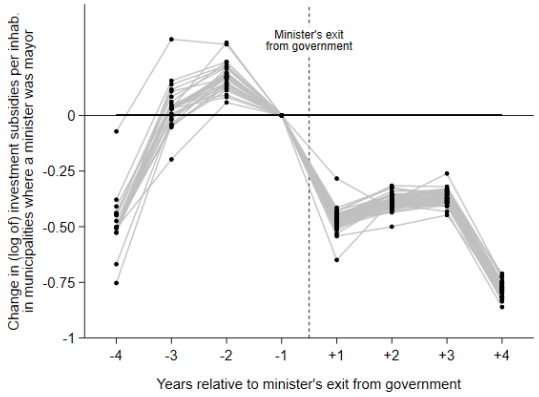
(a) Municipalities where a minister was mayor, treatment start.



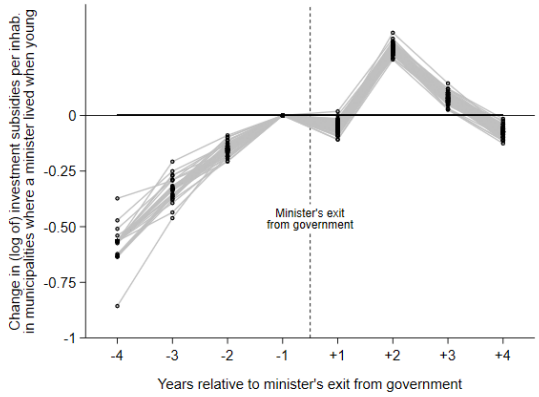
(b) Childhood municipalities of ministers, treatment start.



(c) Municipalities where a minister was mayor, treatment stop.



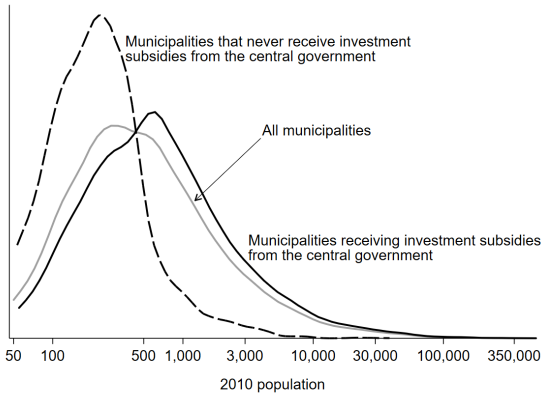
(d) Childhood municipalities of ministers, treatment stop.



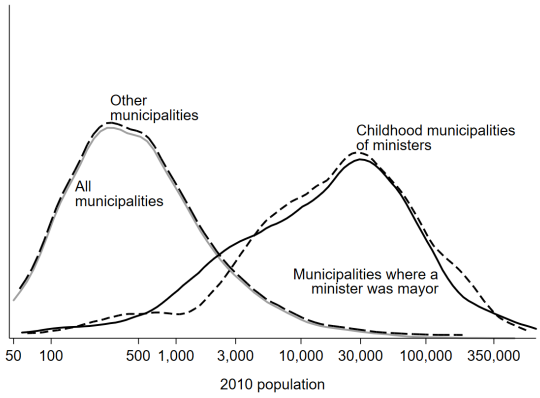
These figures mimic Figures 5(a)–6(b) but plots series of estimates obtained when removing treated municipalities one-by-one. See notes to Figures 5(a)–6(b).

Figure A8: Distributions of municipalities' size depending on links to ministers and on receiving investments subsidies from the central government.

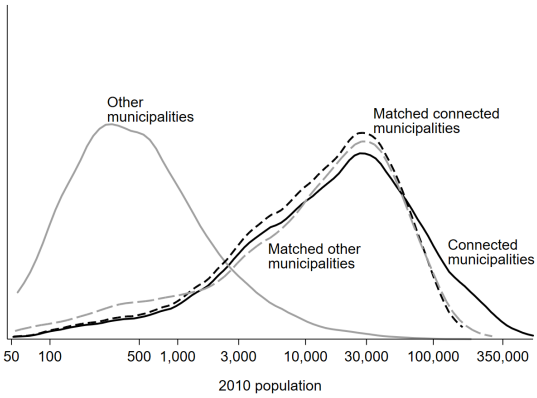
(a) Size distributions of municipalities depending on received subsidies.



(b) Size distributions of municipalities depending on links to ministers.



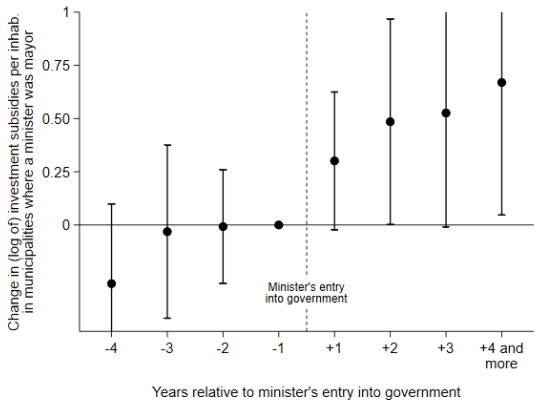
(c) Raw and matched size distributions of municipalities depending on treatment status.



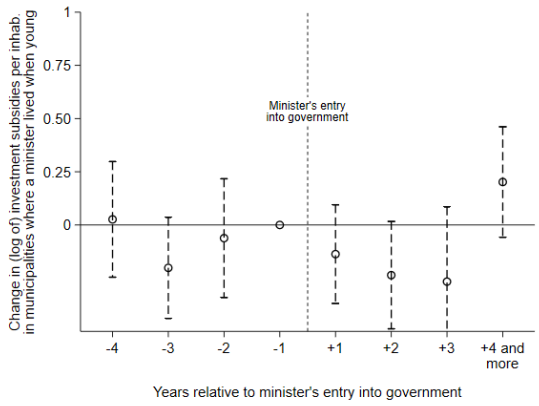
Distributions constructed using 2010 population. The full history of ministers' appointments over the 1995–2021 period is used to categorize municipalities depending on links to ministers. The full history of investment subsidies received from the central government over the 2002–2017 period is used to categorize municipalities depending on whether they ever received subsidies or not. In sub-figure (b), the grey line that plots the distribution for "all municipalities" is slightly vertically shifted for representation reasons. The actual distribution can actually not be distinguished from the distribution for "other municipalities". In sub-figure (c), a municipality that is linke to a minister by any of the two types of links is considered as "connected". "Matched" municipalities are selected using propensity score matching. See the text for more details.

Figure A9: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's entry into and exit from the government: Sun and Abraham (2021) treatment effects.

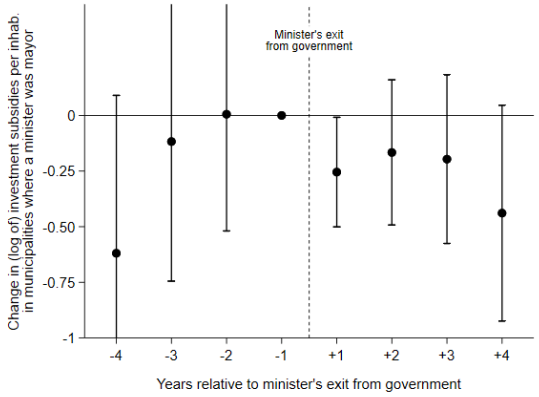
(a) Municipalities where a minister was mayor, treatment start.



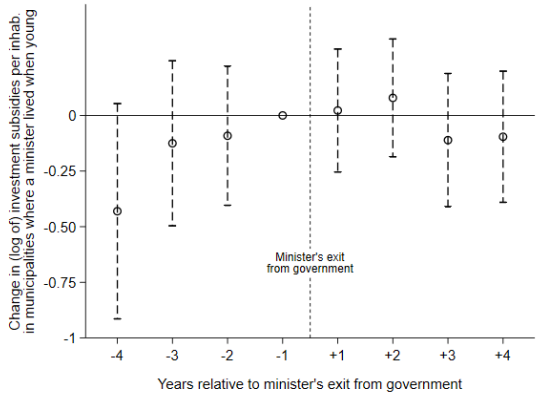
(b) Childhood municipalities of ministers, treatment start.



(c) Municipalities where a minister was mayor, treatment stop.



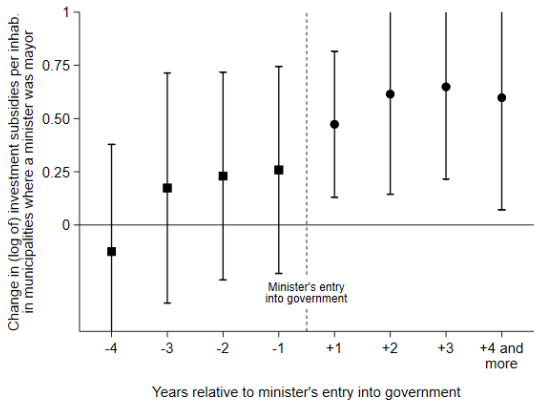
(d) Childhood municipalities of ministers, treatment stop.



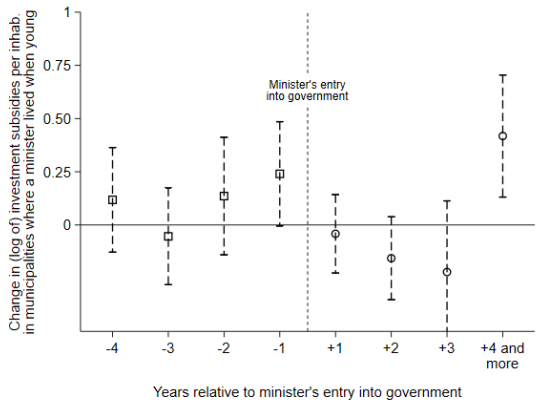
Treatment effects estimated using the methodology of Sun and Abraham (2021). 95% confidence intervals constructed standard errors clustered at the municipality level. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years form $t+4$ to $t+8$ (the longest observed time in treatment), where t is the time at which the treatment starts. Bounds of some confidence intervals are truncated for representation reasons.

Figure A10: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's entry into and exit from the government: Borusyak et al. (2024) treatment effects.

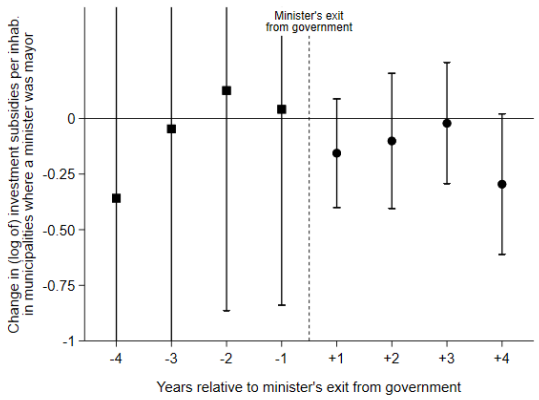
(a) Municipalities where a minister was mayor, treatment start.



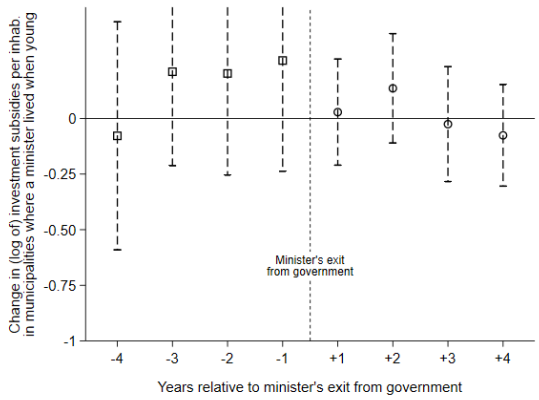
(b) Childhood municipalities of ministers, treatment start.



(c) Municipalities where a minister was mayor, treatment stop.



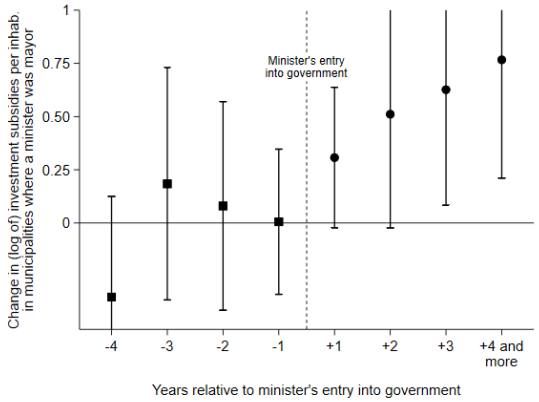
(d) Childhood municipalities of ministers, treatment stop.



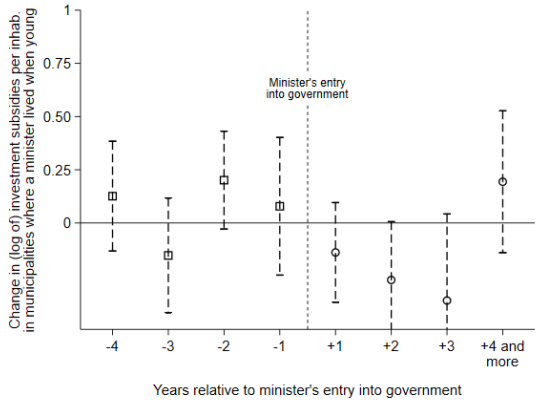
Treatment effects estimated using the methodology of Borusyak et al. (2024). 95% confidence intervals constructed standard errors clustered at the municipality level. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years form $t+4$ to $t+8$ (the longest observed time in treatment), where t is the time at which the treatment starts. Bounds of some confidence intervals are truncated for representation reasons. Pre-tretement effects, signalled by square markers, test for changes in each pre-treatment period.

Figure A11: Changes in investment subsidies received by municipalities where a minister was mayor and by childhood municipalities of ministers following minister's entry into and exit from the government: Callaway and Sant'Anna (2021) treatment effects.

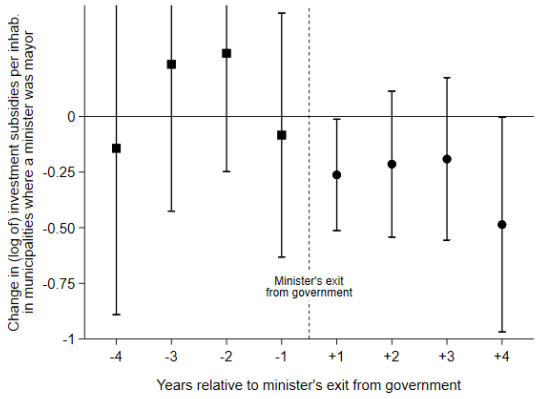
(a) Municipalities where a minister was mayor, treatment start.



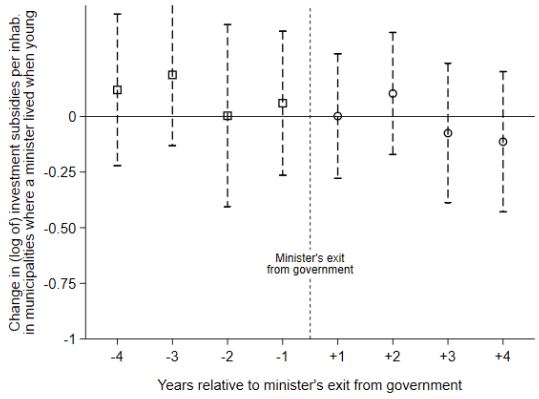
(b) Childhood municipalities of ministers, treatment start.



(c) Municipalities where a minister was mayor, treatment stop.



(d) Childhood municipalities of ministers, treatment stop.



Treatment effects estimated using the methodology of Callaway and Sant'Anna (2021). 95% confidence intervals constructed standard errors clustered at the municipality level. The *+4 and more* treatment effect is constructed as the observation-weighted average of dynamic effects estimated for all years form $t+4$ to $t+8$ (the longest observed time in treatment), where t is the time at which the treatment starts. Bounds of some confidence intervals are truncated for representation reasons. Pre-treatment effects, signalled by square markers, test for changes in each pre-treatment period.

Table A1: Participations in local elections of ministers who were mayors after their time in the central government.

Former minister will run in...		...municipal elections		
		No	Yes	All
...other	No	24.65%	7.04%	31.79%
local	Yes	41.55%	26.76%	68.31%
elections	All	66.20%	33.80%	100.00%

The sample is restricted to (former) ministers who were mayors. The total number of observations is 142. A (former) minister is considered as participating in "municipal elections" if she will run, after her time in the central government, as head of list in the same municipality as the one in which she was mayor. A (former) minister is considered as participating in "other local elections" if she will run, after her time in the central government, for a seat in *départmental*, regional or parliamentary elections in the electoral constituency of the municipality in which she was mayor.

Table A3: Changes in investment subsidies received by municipalities where a minister was mayor following minister's entry into and exit from the government: Extensive and intensive margins.

	Municipalities where a minister was mayor	
	Extensive margin	Intensive margin
First year after	0.214	0.093
entry into government	(0.136)	(0.140)
	[0.115]	[0.507]
First year after	-0.199	-0.270
exit from government	(0.129)	(0.172)
	[0.124]	[0.117]

This table decomposes the treatment effects of the first column of Table 1. In the extensive margin column, the yearly allocated subsidies of treated municipalities who receive a positive amount of subsidies on a given year is replaced by the yearly average of investment subsidies per inhabitant received by non-treated municipalities in that year. In the intensive margin column, the dependent variable for treated municipalities is the difference between the actual dependent variable and the average constructed for the extensive margin.

Table A2: Changes in investment subsidies received by municipalities where a minister was mayor following minister's entry into and exit from the government: Heterogeneity along ministers' participation in local elections after their time in the government.

	Municipalities where a minister was mayor: Future participation in any local election		
	Minister will run in any local election	Minister will not run in any local election	Difference
First year after	0.274	0.420	-0.146
entry into government	(0.178)	(0.446)	(0.482)
	[0.123]	[0.347]	[0.761]
# of switchers / obs.	37 / 436,320	11 / 255,062	
First year after	-0.386	-0.247	-0.139
exit from government	(0.249)	(0.260)	(0.350)
	[0.121]	[0.340]	[0.692]
# of switchers / obs.	40 / 634	13 / 616	

Each cell of the first two columns reports estimates from a separate estimation. Cells of the third column report the difference between the first two columns. Treatment effects estimated using the methodology of de Chaisemartin and D'Haultfœuille (2023). See the text for more details. Standard errors and p-values, calculated from 1,000 bootstrap replications, between parentheses and brackets, respectively. The *# of switchers* is the number of treated municipalities used to identify the treatment effect. The *# of obs.* is the number of first differences of the outcome and of the treatment used in the estimation of the treatment effect. A (former) minister is considered as participating in "any local election" if she will run, after her time in the central government, as head of list in the same municipality as the one in which she was mayor or for a seat in *départmental*, regional or parliamentary elections in the electoral constituency of the municipality in which she was mayor. For ministers' entry into government, the reference period is the last year before entry of the minister into government. For minister's exit from government, the reference period is the last year before exit of the minister from government.